AskEPTBot: Your Virtual EPT Chatbot Companion!

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ABSTRACT

AskEPTBot is a virtual innovation Artificial Intelligence (AI) chatbot by utilising the strengths of the Telegram application system for diploma-level students and lecturers to seek information pertaining to the English Placement Test (EPT). This innovative product was designed to replace the inefficient traditional mode of communication to these stakeholders through the individual messaging platforms such as WhatsApp or Telegram channels. Due to the repeated occurrences of misinformation and repetitive explanations given to the interested parties, a one-stop chatbot centre was created to address the stated problems, thus reducing the information overload and massive workload faced by the lecturers or known as EPT Lecturers in Charge (LICs) who are assigned to relay continuous information to the students. The main aim of the innovation was to reduce these burdens of administrative work through the automation of the communication process involving frequent enquiries from 21 UiTM branches nationwide. This product can improve its responses through more interactions with the users because it was integrated with machine learning. The analyses of engagement metrics revealed that most interactions were centred around event-based enquiries such as payment methods with 1,654 interactions compared to non-event or content related enquiries with high levels of accuracy (94.61%). Meanwhile, the analysis of the user satisfaction survey indicated that 92 per cent of users were satisfied with the clarity of information and 82 per cent of them were satisfied with the efficiency of the chatbot. This AskEPT bot has a huge potential in terms of commercialisation through paid mobile apps advertisement apart from its capacity to be upgraded into a web-based system that will attract more advertisements from internal and external customers who want to promote their products. In terms of its novelty, this AskEPTbot stands out as a one-stop centre hub for information about EPT with its additional features of auto-promoted design of further related questions and adaptive ability for accuracy refinement. It is recommended that this application is scaled up further with real-time content and dashboard-like reports for administrative purposes to ensure its sustainable and profitable presence and usage for many years to come.

Keywords: AskEPTBot; EPT; AI Chatbot; Machine Learning; Commercialisation

INTRODUCTION

LCC111 (i.e., the newly revised label of its old code, ELC121) is a compulsory course in University Technology MARA (UiTM) for diploma-level students. They will be eligible for exemption after passing the English Placement Test (EPT). The information about this test has been communicated to the LICs and students who will sit for the test through the traditional method of communication and EPT was before the advent of AI-based Chatbot. AskEPTBot was developed on Telegram to help consolidate information about EPT in a centralised manner to support the administrative process of the test by giving auto-generated answers

to common EPT questions, hence streamlining the communication process. This critical shift to the virtual information delivery

model centred on the students managed to resolve numerous challenges related to the EPT administration.

Initially, all information about EPT was fragmented in many ways and platforms on text messaging applications between the test administrators and the students, thus causing a lack of streamlined details, duplicate promotional documentations, missed notices, and misinformation. According to Romero-Saritama et al., (2025), WhatsApp is one of the most popular online networking tools in the formal and informal settings, but it is presented with information overload because of uncontrollable traffic. Baishya and Maheshwari (2022) further adds that having

a centralised automated channel can reduce the challenges with information delivery pertaining to important dates, process and procedures, and FAQs, especially during high-stake situations or events. Therefore, the development of AskEPTBot addresses the needs and benefits of the situations.

Chatbots used by universities can effectively decrease the administrators' and lecturers' workload through the chatbots' improved responsiveness to students' common questions. These efficiency in chatbots can be attained with the system's better curation and clever escalation pathways. As argued by Labadze et al. (2023), the reports on the increased productivity in higher education were attributed to the efficient use of communication on the condition that governance and accuracy of information are given due consideration, in which AskEPTBot is striving to achieve by being a one-stop information centre to the students in the form of continuous automated chatting experience anytime and anywhere. Zendesk (2025) clarified that when repetitive questions are handled by a specific automatic system such as a machine-assisted channel, the staff can refocus on more complex and unique cases. This met the aim of the development of AskEPTBot to increase the quality of handling the pre, during, and post-test administration.

Objectives

This innovation sought to reduce the burden and workload of the lecturers in charge (LICs) as well as administrators in UiTM in handling the enquiries from students nationwide pertaining to all types of common topics. This involves thousands of enquiries from 21 UiTM branch campuses nationwide. As a result, this helps alleviate their lecturers' worries and concerns about incorrect and unupdated information they commonly had to respond to through WhatsApp. By creating an automated machine-assisted question and answer (Q&A) chatbot system, this allows their energy and time to be allocated to the EPT administration and handling process as well as time-sensitive test matters.

METHODOLOGY & PRODUCT DESCRIPTIONS

The development of AskEPTBot underwent the intricate and detailed process of understanding the capabilities of Telegram to be an automated chatbot to the students. By leveraging on the Telegram API always-on access, AskEPTBot was developed to be the first Telegram-based one-stop information centre chatbot to the students of UiTM involving test administration. Hence, it is named after the test itself - English Placement Test (EPT). It was created to assist with enquiries about EPT which included the test participation pre-requisites, the important dates and events the potential candidates need to know, the test registration and payment methods, the trial test resources before the real test days, tutorials pertaining to payment getaway methods, proof of payment and the procedures of sitting for the test conducted on the university's online student portal platform known as UFuture, and the available slots to take the tests involving 9 to 12 slots for 3 to 4 test days to be chosen by the thousands of students and assigned by the LICs, the announcement of the test results, the application of the first level English diploma code after passing the test and many more.

This chatbot provides simple and detailed information depending on the further prompts entered onto the chatbot prompt box. Due to large amounts of information handled by the system, it had gone through several trial test runs. Its conversational interface and automated responses allow for unlimited messaging experience to the students. The chatbot system is designed to have clear and quick information retrieval with structured

menus for the users to choose from after every response. This ensures a continuous guidance and dependable interaction during all situations especially when the students register for the test, make the fee payment, access trial resources, and result information. (Telegram, n.d.; UiTM Library, 2024).

To ensure clarity and accuracy of the information, the system developer was given details regarding the inquiry categories and types of inquiries.

Table 1: Enquiry Category and Type of Enquiry

No	Enquiry Category	Type of Enquiry
1	Significant Event-based Enquiries on AskEPT Chatbot	Telegram Group Link Sharing
		Payment Procedures
		Payment Status Validation
		Trial Test Paper Access
2	Significant Non-Event Enquiries (General Inquiries) on AskEPT Chatbot	EPT Test Format
		Tutorials on EPT
		Important Dates for EPT
		Introduction to EPT

As shown in Table 1, there are two broad types of enquiry categories. The development of the content was based on a knowledge-base-first approach by curating and selecting the most common information and mapping it into two types of intents: 1) **event-based** and 2) **non-event**. When an enquiry is prompted, this creates a potential flow of interactive chats within a window period of two minutes. If left idle with no follow-up enquiries after the first response, the session will be automatically renewed into a new chat.

The chatbot system will detect if the first enquiries falls in either of the two broad categories to suggest prompts with more specific possible enquiries to the users. Event-based enquiries include time-related tasks such as registration period, payment methods, payment validation process, trial test resources access. Meanwhile, the non-event category entails questions about common FAQs (test format, tutorials, dates, and brochures and marketing materials about EPT, etc).

In addition, AskEPTBot comes with detailed reports that can be generated manually from the back-end operation system. This includes engagement metrics such as number of users, number of sessions and interactions, containment periods, and response time, apart from interactive optimisation information (Intercom, 2023; Quickchat AI, 2025). These metrics were selected to measure the engagement details shown by AskEPT users because the metrics offer a detailed and complete analysis of the users' activity in terms of entering to use the AskEPTBot, the frequency of interactive prompts, and the length of their interaction.

To check whether the use of AskEPTBot is helpful and effective to the users, a specific satisfaction survey was used. The survey was an existing survey adopted from the past study which has been validated to have fulfilled the adequate psychometric requirements. It is a questionnaire survey with Likert-scale items to measure user perceptions of AskEPTBot Interactiveness, Content Precision, and Interaction Speed. The questionnaire was pre-tested with a small group of students to ensure clarity and reliability of the items (Silva & Canedo, 2022).

Thus, AskEPTBot was equipped with this usefulness survey questionnaire, which is a simple and easy-to-rate user experience survey embedded into the last end of the chat thread accessible through a different auto-prompted platform throughout the accessible period of the AskEPTBot. The survey is important to see the users' perceptions of the AskEPTBot's levels of information clarity, speed, interaction pace, appropriateness,

and the users' expectations as well as their overall user experience and satisfaction levels towards the quality of the chatbot usage. According to Kommunicate (2025), this type of survey is important to be integrated to evaluate the product capabilities and changes in terms of the user's engagement with any observed frictions.

FINDINGS & COMMERCIALISATION

Figure 1: Finding on User-Interaction Ratio for One Month

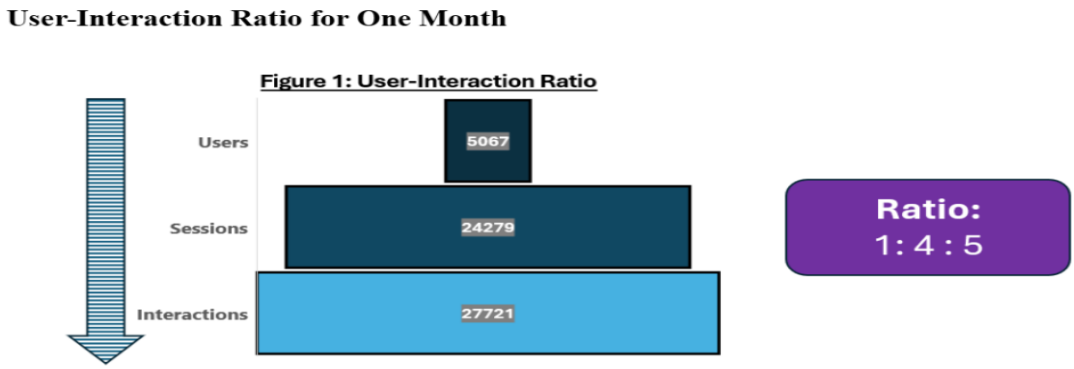

Figure 1 above shows the finding based on the engagement metrics analysis on the User-Interaction Ratio in one month period. One user can generate one or more sessions in which one session contains one or more interactions. An interval duration for a 2-minute inactivity automatically redirects the users to a fresh new chat session, closing an earlier one as one completed session. The engagement data revealed that there are 5,067 users who interacted in multiple sessions within this duration. A total of 24,279 sessions with 27,721 interactions, thus generating a user-session-interaction ratio to a ratio of 1:4:5. This increasing pattern suggests a returning usage pattern within a brief window period among users which were typical for situations related to deadlines in which AskEPTBot was revisited to create chained interaction tasks compared to single interaction queries. According to a report by Quickchat AI (2025), these behavioural patterns of sessions per user are consistent with normal and healthy engagement levels involving multi-step flows of generated interactions when human intervention is not included.

Figure 2: Finding on Overall Users for Event and Non-event Based

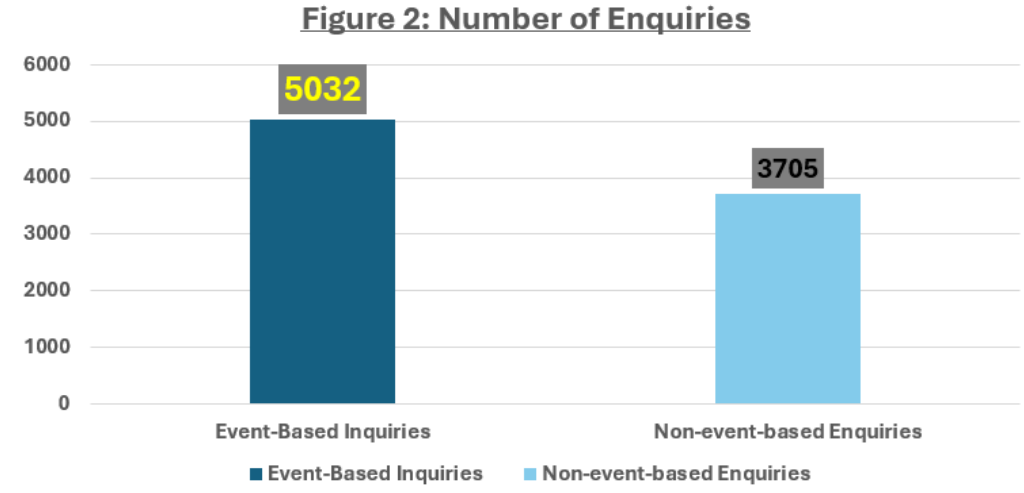

Figure 2 shows the finding based on the engagement metrics analysis on the overall users' enquiries in terms of event-based and non-event-based enquiries. It was discovered that event-related enquiries with 5,032 units

of occurrences surpassed the non-event enquiries with 3,705 units of occurrences within the observed period. The difference between the two types of enquiries is 1,327 counts. If converted into percentages, event-based enquiries made up 57.60 per cent compared to non-event ones making up the remainder of 42.40 per cent. This finding suggests that time-bound situations such as registration, payment, and validation periods prompted more enquiries from the users than general information-related enquiries such as information about EPT and its requirements. According to a report by Intercom (2023), time-constraint information has the plausibility of driving the triggers for more enquiries from users. According to Zendesk (2025) pertaining to the perspective of system design, displaying the system dialogs to be centred towards important events increase the first-attempt resolution, thus reducing follow-up interactions from users, making this pattern a most widely accepted style of information design in AI-assisted environments.

Figure 3: Finding on Engagement Rate (Event-Based)

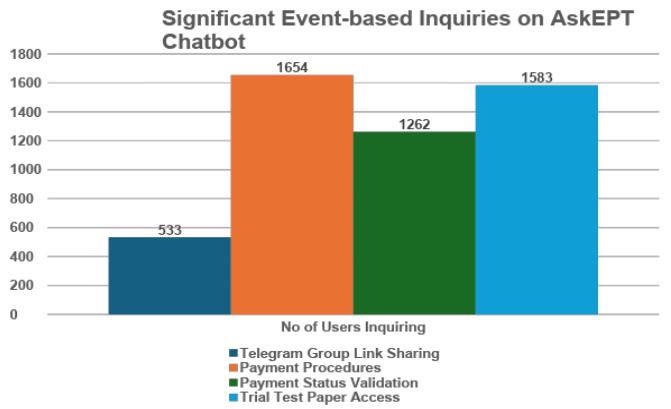

Figure 3 shows the finding from the engagement metric analysis on the types of specific enquiries related to event-based category. It was revealed that event categories recorded high volumes for Payment Procedures (n = 1,654), Trial Test Paper Access (n = 1,583), Payment Status Validation (n = 1,262), and Telegram Group Link Sharing (n = 533). It can be suggested that the dominant record of enquiries on payment matters indicate the significant impact of having an automated payment system in which the link is retrievable from the AskEPTBot compared to enquiries pertaining to the various telegram links created to cluster potential candidates into specific channels based on their branch campus administered by their campus LICs for more targeted information sharing.

Figure 4: Finding on Engagement Rate (General Enquiries)

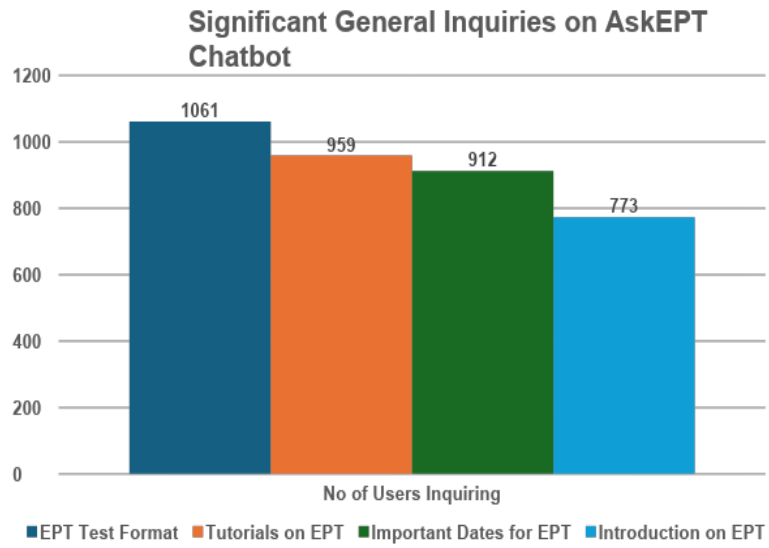

Figure 4 shows the findings from the engagement metrics analysis on engagement rate for non-event intents (general enquiries). Enquiries focusing on EPT Test Format (n = 1,061) recorded the highest volumes

compared to enquiries focusing on Tutorials (n = 959), Important Dates (n = 912), and Introduction to EPT (n = 773). This data indicates that information related to the test format is rather unfamiliar to the users, hence generating the most volumes of enquiries for a proper orientation before sitting for the tests. This information is considered timeless details the student users need to be equipped with to prepare themselves in advance, hence having a chatbot that can answer standard enquiries on EPT reduces numerous burdens and brings about a great workload relief to the EPT administrators and LICs. The scaffolding system remains a continuous and important driver to the development of self-service chatbots in higher education if the details are consistently updated and prices (Labadze et al., 2023; Gökçearslan et al., 2024).

Figure 5: Finding on Engagement Rate (Response Accuracies)

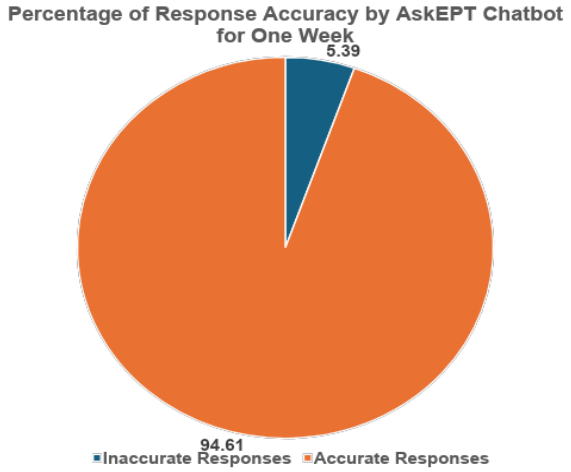

Figure 5 shows the finding from the engagement metric analysis on the response accuracies of the engagement. Based on a one-week sampled data, it was reported that AskEPTBot managed to achieve 94.61 per cent accurate responses in providing information to the users. This left the inaccurate responses with 5.39 per cent only. This is due to the strong machine learning performance of AskEPTBot in improving its clarity, corrections, citation practices based on the old data provided by the users, making it an important aspect of an automated chatbot technology (Yau et al., 2024; Shiferaw et al., 2024). In addition, routine updates and audits with retrieval capacities for high-stake situations assisted with the accuracy of the information supplied to the users, thus preserving trust and confidence for follow-up reconnections and contacts during numerous occasions.

Figure 6 & 7: Finding on Usefulness Perception towards "Easy to Understand Response" & "Find Chat Response Slow"

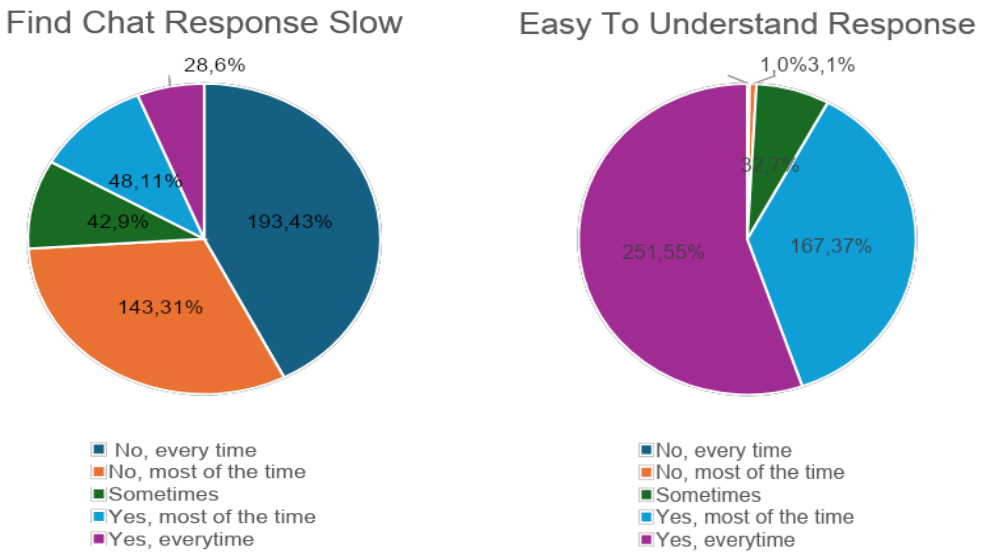

Figure 6 and 7 show the findings based on a usefulness survey on two specific questions in the usefulness survey: 1) "Easy-To-Understand" and 2) "Find Chat Response Slow". It was revealed from the survey responses that users indicated the ease to understand the content of AskEPTBot with high ratings (251/454 times or 55.3 per cent and 167/454 or 36.8 per cent) compared to the negative options ("Sometimes", "No, most of the time", "No, every time"), making their positive ratings to score a total of 92.1 per cent. This finding suggests that AskEPTBot answers obtained by the users are highly understandable to them.

Meanwhile, responses to the survey item on the slowness of the chat responses revealed that users expressed their disagreement with this survey item. The users disagreed that AskEPTBot generated slow responses with the every-time disagreements from 193/454 of them or 42.5 per cent and most-of-the-time disagreements from 143/454 of them or 31.5 per cent, making a total of 74 per cent disagreements. This finding suggests that AskEPTBot are perceived to be efficient in providing quick answers to their enquiries. These perceptions are supported by Intercom (2023) and Zendesk (2025) that clear and quick responses are two critical drivers of the usefulness of an AI chatbot system in their conversational experience with the users. This pattern also implies that easy-to-follow and efficient content integrated in the copywriting of chatbot answers help increase the perceived utility of the chatbot product during their system-user conversations.

Figure 8 & 9: Findings on Usefulness Perception towards on "Get Appropriate Interaction Pace" & "Get Appropriate Response"

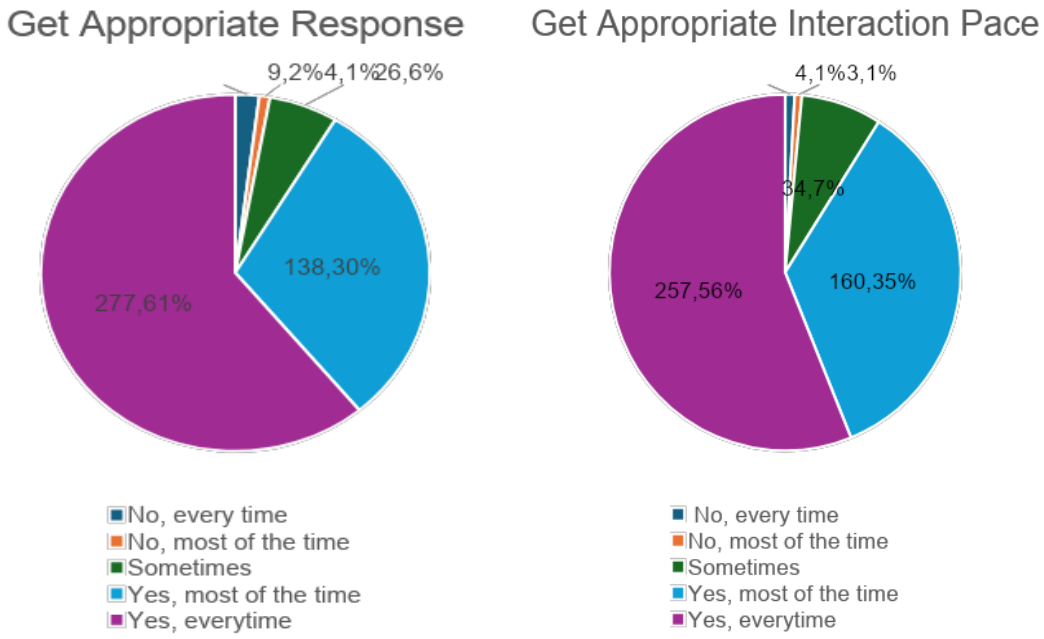

Figure 8 and 9 show the findings from the usefulness survey on the perceptions of the users towards two more items: 1) "**interaction pace was appropriate"** and "**responses were appropriate".** It was found that the student users perceived the appropriateness of the interaction pace with 257/458 or 56.1 percent of them agreeing this to happen every time and 160/458 or 30.4 per cent agreeing this to happen most of the time. The combined two top two ratings generated a total of 417/458 or 91.04 per cent indicating their favor towards this perception. This finding suggests that AskEPTBot has the suitable pace of interaction and responses in line with their prompting speed.

Furthermore, they also showed that they received appropriate responses with 277/458 or 61.0 per cent of them agreeing this to happen every time they prompt and 138/454 or 30.4 per cent of them agreeing this to happen most of the time. The combined percentage of the top two ratings is 415/458 or 90.6 per cent expressing their overall favor towards this item. It can be suggested from the finding that AskEPTBot could provide relevant information that can help them address their concerns.

These conclusions are aligned with Al-Shafei (29025) and Ladadze et al. (2023) that effective conversation pace and response fit increases the satisfaction of the users to repeat their usage of AI Chatbot. Therefore,

designing response interaction speed and content suitability in AI Chatbot helps sustain the flow of interaction through a multiple-step process in educating the users with information needed.

Figure 10 & 11: Findings on Usefulness Perception towards "Meet Expectation" and "Overall Efficiency Rating"

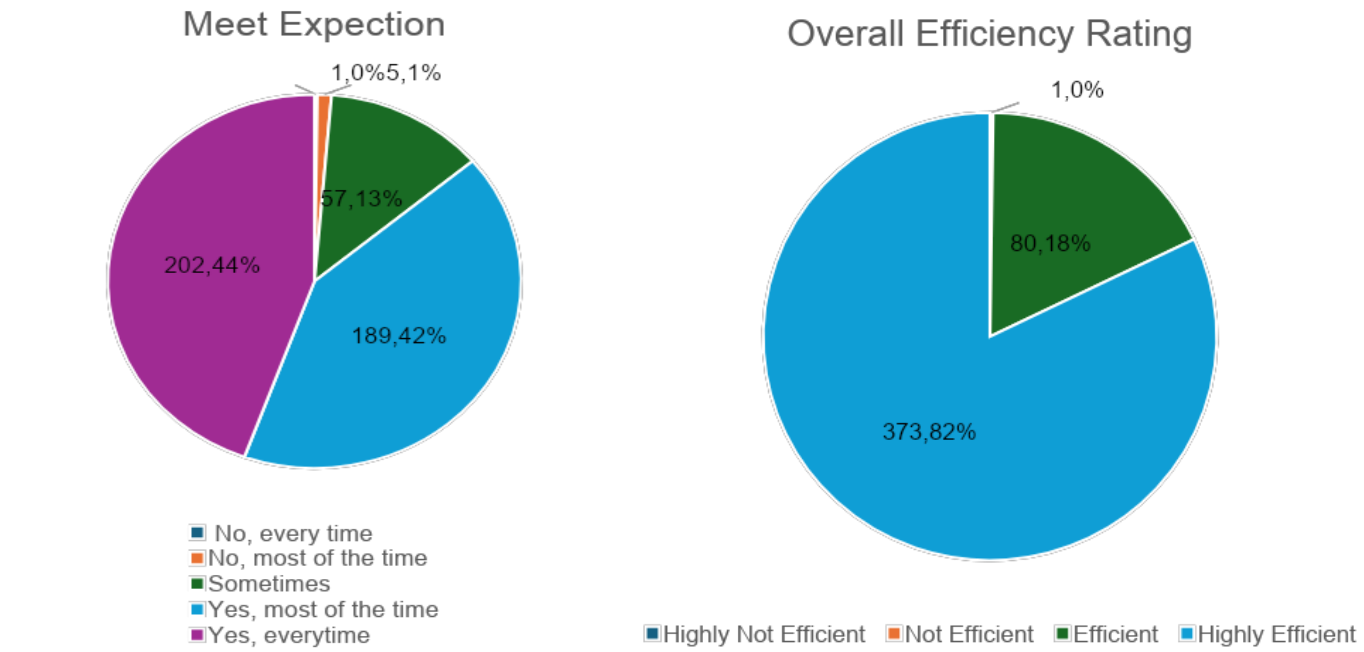

Figure 10 and 11 show the findings from the usefulness survey on the perceptions towards two more items: 1) "Meet Expectations" and 2) "Overall Efficiency". It shows that 202/454 or 44.5 per cent of the respondents agreed that the AskEPTBOt met their expectations every time and 189/458 or 41.6 per cent agreed most of the time that this chatbot met their expectation. This finding suggests that AskEPTBot managed to generally meet the expectations and needs of the student users in delivering their enquiries.

In addition, the perception survey also revealed that 373/454 or 82.2 per cent of the respondents were satisfied with the overall efficiency of AskEPTBot every time they used the conversational application. Meanwhile, 80/458 or 17.6 per cent agreed most of the time that the application managed to address their questions. The combined percentage of the two top ratings is 99.8 per cent, indicating a huge majority of the student respondents were generally happy and satisfied with the usage of this chatbot application in providing information they need. It can be suggested from both findings that the application did serve the purpose and intention well to the users. This conclusion is consistent with Stockholm University (2024) and EdTech Magazine (2025) on the importance of student chatbot to be designed for its purposes based on its needs in higher education contexts so that its follow-up usage will be sustainable in the long run.

Based on the findings from the engagement metrics and the useful perceptions survey, the project assisted with the next potential course of action regarding the commercialisation values of AskEPTBot. There are two commercialisation values that can be potentially enjoyed from this AskEPTBot.

Commercialisation Value 1: Monetising from download (mobile application)

The first commercialisation value is monetisation from downloads on the upgraded mobile application. The AskEPTBot, once upgraded into its own mobile application version, can include a freemium-with-subscription model. In the application version. For student users who feel that they need to get more EPT-selective resources and more specialised materials who can help them excel in the test, they will be able to do that at a cheap price. As substantiated by AppsFlyer (2024), this method will help the faculty to generate income which proves to be common in the industry of mobile applications. This method is acceptable if the educational materials application monetizes moderately and reasonably that can be used to fund a continuous upgrading of the application for a better and greater immersive experience with the chatbot and its application. Median

(2024) maintains that this strategy and form of monetisation is the resilient approach to the system administrators which is substantially growing in non-gaming realms. For EPT situations, apart from allowing free downloads for standard content in ensuring fairness to other users, paid downloads with a light fee could also allow offline access and priority access during strict or high-traffic situations.

Commercialisation Value 2: Monetising from advertisements (web-based)

Another commercial value to be drawn from this AskEPTBot is the monetisation of the advertisements from the advertisements on the free version of the applications and its website. The student users without subscription can still use the application, but with some limitation in terms of the compulsory views of the advertisements before they can get access to the materials and selected applicable materials.Two levels of selective materials which are meant for add-view versions and full paid version of the upgraded plans. The usage of in-app or web advertisements as a form of monetisation continues to be the way the advertisement administrator e employs in their applications worldwide. According to Statistica (2025), it is projected that this method of monetisation will reach nearly USD390 billion and Oberlo (2024) indicate that this will be a steady growth. In the educational context, AskEPTBot may employ non-intrusive advertisement policy with clear information indication and disclaimers about the usage of the application prior to the application installation.

SUMMARY & CONCLUSION

It can be concluded from the findings and commercialization discussion that AskEPTBot has high interaction volumes among its student users in which on average one student had a minimum of 4 sessions and five interactions. Most enquiries were centred on the questions related to event-based type compared to general enquiries with almost 95 per cent accuracy of answers given to them. In terms of survey, student users expressed their ease of understanding, speed of response, appropriateness of response, appropriateness of the interaction pace and answers meeting their expectations. These high ratings towards these aspects are also reflected in their overall rating of the usefulness of AskEPTBot to them. Sustained and moderate gains can be obtained from the commercialisation of AskEPTBot through the paid downloads of the upgraded version to application-based product as well as the advertisements posted on the application and its website, thus making these primary propositions for the continuous and sustainable development of AskEPTBot.

NOVELTY & RECOMMENDATIONS

There are several novelties that can be identified with AskEPTBot and recommendations of its future version and usage. These novel and recommended features will help propel AskPTBot to a different level to the future student users.

Novelty 1: One-stop centre (knowledge base app-based tool)

The first novel feature is that AskEPTBot is positioned to be a one-stop centre for information and knowledge to the EPT-interested students without causing them to be bombarded with unstructured, unfiltered, repetitive, and fragmented information from various sources and persons in charge. AskEPTBot has successfully consolidated their materials required weeks before and after the test administration. It is also accessible in a conversational manner through a specific telegram channel handle that can be used not only by the students but also the other administrative staff who act as the connecting points to the students. As a result, the staff can focus their concerns and assistance on more critical cases or unique situations with better understanding of the structure and the details of EPT. In addition, the integrated model has lowered the administrative cost and effort previously endured through the traditional or conventional methods. According to Labadze et al. (2023) and Gökçearslan et al. (2024), this method of communication and integration is a great approach to centralisation leading to faster resolutions and reduction of the staff workload with improved maintenance of its content revision and versioning.

Novelty 2: Auto-prompted questions and auto-responses

Furthermore, AskEPTBot is unique with its auto-prompted choices of the follow-up enquiries that the users may be interested in. Auto-prompted choices reduce ambiguity by increasing the speed in capturing their intent for first-attempt resolutions, while auto-responses reduce critical phrasing times such as during peak hours of usage activity. Research shows that structured dialog and service scripts improve users' satisfaction levels especially when clear escalation rules and empathetic tone are provided (Al-Shafei, 2025; Intercom, 2023). This pattern decreases cognitive thinking load and avoids unnecessary back-and-forth interactions.

Novelty 3: Machine learning for accuracy gains with engagement

Next is the novel feature of machine-learning technology. Speedy information retrieval models driven by machine learning technology due to the growing usage of AskEPTBot helps improve response accuracy and coverage with sustained essential quality control. According to Yau et al. (2024), continuously recent evaluations of automated system information underscore the importance of accuracy monitoring, reducing delusional information risks, and validation of domain sourcing before responses are given to the users, thus sustaining their authenticity. Thus, AskEPT is well-equipped with such learning capabilities which are consistently incremental apart from being paired with proper and strict governance of the chatbot system administration.

RECOMMENDATIONS

It is recommended for future improvement of the usage of AskEPTBot that the commercialisation of this chatbot include more precise forecasts or results from pilot trials to substantiate its extended practicality. This can be done by adopting a pilot approach through freemium-first with test light subscriptions for specific times (AppsFlyer, 2024; Statista, 2025). AskEPT is seasonally conducted before each new semester begins. Therefore, such an implementation can be done in phases involving selective events, certain focused intents, and moderate-stake information instead of abrupt overall implementation. By common practice, specialised chatbot gives a greater priority to high-traffic intents (payment, trial access, validation) for answer consolidation by including sources, citations, visuals, and screenshots (Yau et al., 2024; Stockholm University, 2024). Thus, this detailed information will assist in increasing clarity to the users. According to Intercom (2023) and Quickchat AI (2025), the chatbot system is highly recommended to have quality dashboards and reports with the purpose of tracking accuracy, containment, and errors, and fallbacks. AskEPTBot may have such features through weekly or monthly reviews. before EPT windows.

Adding a deeper examination of possible challenges, which include scalability across different contexts and concerns about data privacy, would provide essential balance. This can potentially be done by expanding evergreen content such as updated format, more informative tutorials, and more specific dates with structured playbooks or short slips is helpful for the improvement of the system (Labadze et al., 2023). In the case of AskEPTBot which is seasonal in nature, this can be implemented for the new cohorts and done in batches. For risky, unresolved or sensitive enquiries, Gökçearslan et al. (2024), the chatbot can integrate system-driven escalation triggers to ensure the queries are not left unattended. This allows the AskEPTBot administrators to be notified of such situations and take necessary actions outside of the chatbot system. In future, such triggers can be considered in the next round of system updates to be included as part of the input for future automation processes.

Finally, a competitive comparison with other educational chatbot systems would also help position AskEPTBot within the broader academic discourse. Such an analysis could highlight unique strengths and weaknesses, offering insights into areas where the system excels or requires improvement for a greater academic impact. Additionally, this comparison would provide readers with a clearer understanding of how AskEPTBot aligns with current trends and innovations in educational technology.

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