Assessment of using chatbot in academic advising from undergraduate students' perspectives and a proposal for developing it

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Abstract:

Chatbots become increasingly popular in the human-machine interactions because humans enable to communicate with the system by the human language, Therefore, the use of educational chatbots is in the beginning, especially in Egypt, consequently, this study aims to assess of using chatbot in academic advising from undergraduate students' perspectives and a proposal for its development, regarding the assessment process, the study uses a mixed method approach was adopted to increase robustness through triangulation. Several forms of data collections were used: assessment scale, focus group sessions, and questionnaire, further, use a chatbot system which is Chatfuel AI that connect with telegram app which will service requests for academic advising information such as courses descriptions, GPA calculation, grade information, attendance information and financial information, regulations, etc., the participants were undergraduate students in second year at faculty of education , Ain shams university, Egypt (n=48), the results reveal that students' perceptions regarding using chatbot were mostly beneficial and helpful to them in academic advising because of various reasons: saving time, quick respond to questions, Chatbot helps students by delivering accurate information about the bylaw, save effort, easy to use, consequently, students recommend to use it officially and the faculty support it in many areas beside academic advising, based on the results the researcher propose a development model of using chatbot in academic advising.

Keywords: Chatbot, generative AI-Chatbot, academic advising, students' perspectives.

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تقييم استخدام روبوتات المحادثة في الإرشاد الأكاديمي من وجهة نظر طلاب المرحلة الجامعية ومقترح لتطويره

الملخص:

أصبحت روبوتات المحادثة شائعة بشكل متزايد في التفاعلات بين الإنسان والآلة لأن البشر قادرون على التواصل مع النظام باللغة البشرية، لذلك فإن استخدام روبوتات المحادثة التعليمية في البداية وخاصة في مصر، وبالتالي يهدف هذا البحث إلى تقييم استخدام روبوتات المحادثة في الإرشاد الأكاديمي من وجهة نظر طلاب المرحلة الجامعية ومقترح لتطويره، فيما يتعلق بعملية التقييم، تم اعتماد البحث على المنهج الوصفي والمنهج التجريبي، وتمثلت أدوات البحث في: مقياس التقييم، وجلسات المجموعة المركزة، والاستبيان، وتم تطبيق استخدم نظام chatbot من خلال موقع Chatfuel للذكاء الاصطناعي الذي يتصل بتطبيق Telegram الذي سيخدم طلبات معلومات الإرشاد الأكاديمي مثل توصيف المقررات، وحساب المعدل التراكمي، ومعدل الدرجات، ومعلومات الحضور والمعلومات المالية، واللوائح، وما إلى ذلك، وكان المشاركون طلاب المرحلة الجامعية في السنة الثانية في كلية التربية، جامعة عين شمس، مصر (٤٨) طالب وطالبة، وأظهرت النتائج أن تصورات الطلاب فيما يتعلق باستخدام روبوتات المحادثة الذكية كانت في الغالب مفيدة لهم في الإرشاد الأكاديمي لأسباب مختلفة: توفير الوقت، الرد السريع على الأسئلة، يساعد Chatbot الطلاب من خلال تقديم معلومات دقيقة عن اللائحة الداخلية، توفير الجهد، سهولة الاستخدام، وبالتالي، يوصي الطلاب باستخدامه رسميا ويدعمه الكلية في العديد من المجالات إلى جانب الإرشاد الأكاديمي، بناء على النتائج، يقترح البحث نموذجا تطويريا لاستخدام chatbot في الإرشاد الأكاديمي.

الكلمات المفتاحية: روبوتات المحادثة الذكية–الذكاء الاصطناعي التوليدي– الارشاد الأكاديمي– وجهة نظر الطلاب.

1 Introduction

Chatbots become increasingly popular in the human-machine interactions because humans enable to communicate with the system by the human language, which is a very intuitive and user-friendly (Ondáš, et al., 2019)[2]. Further, chatbots can provide information instantaneously without searching and hide its complexity (Cunningham-Nelson, 2019).

According to Vanichvasin (2022), chatbot technology is considered a powerful tool that can be used in higher education contexts, with a positive impact on student learning and satisfaction. The use of chatbots by students has developed gradually in recent years, as education moves towards online and blended models (Kooli, 2023).

Moreover, Jung, et al (2020) define Chatbots as computer programs that help students communicate with computers through text or voice interactions.

Therefore, in this study, chatbot defines as generative AI software program designed to interact, facilitate, and mentor second year undergraduate students at faculty of education, Ain shams university in academic advising using text to provide information that could support, help students, and facilitate their academic concerns.

Consequently, Chatbots are rapidly becoming widespread in numerous fields, and offer exclusive interactions with compatible learning system features, improving the limitations of current learning systems (Kuhail, et al., 2023). Thus, Educational chatbots consider as the future of technology integration in the field of education, and on the increase due to their ability to deliver a personalized learning experience and provide a cost-effective method to engage students (Yang & Chen, 2023).

Further, Hwang & Chang (2021) expose that the research on chatbots in education is in the early stage of development and is growing steadily, besides, it is worthy of more investment by researchers in education technology.

Therefore, the use of the educational chatbots is on the rise, with most applications emphasized on teaching and learning, administration,

[2] The researcher follow the APA (American psychological Association) 7 edition.

assessment, academic advising, and research and development, regarding, the advantages of using chatbots in education include integration of content, quick access, motivation, engagement, personalization, and immediate feedback (Kerneža, 2023).

Further, chatbots are responsible for offering guidance, answering questions, In the educational context, the role of chatbot in educational context include: tutors who guide and support the learning process of individual learners; evaluators who check the learner's progress and diagnose performance; respondents who answer learners' questions; communicators who mediate instructors and learners through interaction with learners; and fellow learners who exchange everyday conversations (Jung, et al., 2020).

In this study, chatbot defines as generative AI software program designed to interact, facilitate, and mentor second year undergraduate students at faculty of education, Ain shams university in academic advising using text to provide information that could support, help students, and facilitate their academic concerns.

Beyond that, chatbot systems in education can bring personalized online learning and greater accessibility to learning materials, which students can access from anywhere and at any time (Okonkwo & Ade-Ibijola, 2021).

Due to remarkably high potential of chatbot technology and only few studies on chatbots in education in higher education context in Egypt, therefore, this study aims to use chatbot technology to assist undergraduate students in academic advising and assess using the chatbot from students' perspectives.

According to Okonkwo and Ade-Ibijola (2021) chatbot technology is used in various areas of education, including teaching and learning (66%), administration (5%), assessment (6%), advisory (4%), and research and development (19%).

Regarding the Advisory aspect is consider a crucial aspect to deliver advice to students on academic issues thereby helping them to make decisions on their academic programs or activities, for instance, Ho et al (2018) design a chatbot to help for obtaining official and

informal information, rearranging priorities, and making compromise in the decision.

Academic advising conducted in situations in which an academic advisor guides undergraduate student about social, personal, or academic question. Besides, Advising is a process in which academic advisor and student enter a dynamic relationship respectful of the student's concerns (NACADA, 2017).

Academic advising is defined as a process in which academic advisors provide ongoing guidance, information sharing, and academic and non-academic support to enhance students' higher education experiences and to promote their success (Obaje & Jeawon, 2021).

Chatbots have been around for years and have been used in various fields such as education. This study focus is on assessment the use of chatbots in the field of academic advising from students' perspectives at faculty of education, Ain shams university in Egypt and design a proposal for developing it.

Research problem

The research problem determines the following:

1. From the researcher experience which worked as lecturer at faculty of education, Ain shams university in Egypt, the academic advising unit is set up recently since 2021, as well as the undergraduate system (credit hours system), therefore, the staff members as academic advisors are faced a challenge to mentoring students. They use a hierarchy way to mentor students, in other words, the academic advisors need to revise the academic advising unit by using the official email to answer the students concerns or questions, due to they don't have the sufficient information about the system, and the process is very slow, so students have to email the academic adviser and the academic advisor forward the email to the academic advising unit, and the unit will answer the questions after two working days. Moreover, some academic advisors have struggled to use official email, thus they use WhatsApp instead of email to connect with students. However, they must use email to contact the academic advising unit.

2. Apply pilot study on (20) students were an interview which aim to determine their obstacles and challenges regarding academic advising, and how academic advisors delay responses on their concerns. The results of the interview showed that 90% of students have challenges on delaying responses on their questions and response, some responses weren't accurate, and advisors weren't available for them.
3. From the previous studies, According to Heryandi (2020) expose that with chatbot, a college can supply facilities for students to get information about academic system easily, cheaply, and can be accessed anytime, Kuhail, et al. (2023) indicated that chatbots are rapidly becoming widespread in numerous fields and offer exclusive interactions with compatible learning system features, improving the limitations of current learning systems, additionally, Yang & Chen (2023) claim that educational chatbots are considered the future of technology integration in the field of education, and their ability to deliver a personalized learning experience and provide a cost-effective method to engage students is increasing, furthermore, Hwang & Chang (2021) revealed that research on chatbots in education is in the early stage of development and is growing steadily; in addition, it is worthy of more investment by researchers in education technology.

Therefore, the research problem determined entitled "undergraduate students have challenges and concerns about the bylaw, the regulations and other concerns"

The main question is "what is of the reality of using chatbot in academic advising from undergraduate students' perspectives and a proposal for developing it"

From the previous main question, this study sought to answer the following research questions:

RQ1: What are the criteria for assessing using chatbot in academic advising?

RQ2: What are undergraduate students' perspectives toward using chatbot in academic advising?

RQ3: What is the proposal of developing chatbot in academic advising based on undergraduate students' perceptions?

Research assumptions:

This study sought to examine the following assumptions:

"Using chatbot in academic advising was adequate 80% from undergraduate students' perspectives"

Research purpose:

This study aims to:

1. Assess using chatbot in academic advising from undergraduate students' perspectives
2. Preparing a proposal for developing using chatbot in academic advising from undergraduate students

Research delimitation:

The major of students was in biology and geology in second year. first semester academic year 2023/2024.

Research importance:

This research contributes to the following:

1. Researchers: by delivering a criterion for using chatbot in academic advising and a proposal for developing for using chatbot in academic advising.
2. Educational institutions and academic advising units, because this research focuses on the uses of chatbot in the educational field and how students benefit from it, especially in academic advising.

2 Literature review

2.1 Chatbots in education

2.1.1 Definition, and classifications

Generative AI-chatbots have become essential to the educational technology, complementing other digital learning tools. Generative AI-Chatbots do not need specialized equipment as they operate on web-based platforms, making them adaptable and accessible across multiple devices (Kuhail, et al., 2023).

Moreover, Chatbot defined as a computer program using different strategies and algorithms, designed to interact with users using natural language or text in a way that the user thinks he is having dialogue with

a human, to produce an effective response for the user (Hussain, et al., 2019).

Further, Vanichvasin (2022) defines a chatbot as a software program, which acts like a human when interacting with via message or voice over the internet to simulate a conversation in a scripted way, understand human languages.

Moreover, Pérez et al (2020) state that chatbot considered as a tool combines artificial intelligence (AI) and natural language processing or other technology, which allows to interact to a certain level of conversation with a human interlocutor through text or voice.

Additionally, Heryandi (2020) indicates that Chatbot can be used as an alternative method of serving data requests from stakeholders in a university. Chatbot will provide information faster and cheaper than through academic staff.

Moreover, Chatbots provide personalized support by delivering step-by-step procedures for problems, thus, may help to improve students' problem-solving skills, in addition, the increasing availability of chatbot technology has the potential to improve education outcomes (Koo, 2023). Further chatbots improve students' learning achievement and enjoyment and reduce their learning anxiety (Hsu, et al., 2023).

Further, Chatbots have grown significantly as Natural Language Processing (NLP) technology improved, chatbots became more sophisticated, allowing for more complex interactions and greater customization. As generative AI and new generation chatbots are still quite new and speedily developing technology, and not all institutions are often not fully aware of their abilities in service automation (Ilieva, et al., 2023).

In this study, chatbot defines as generative AI software program designed to interact, facilitate, and mentor second year undergraduate students at faculty of education, Ain shams university in academic advising using text to provide information that could support, help students, and facilitate their academic concerns.

Chatbots are classified into several categories based on different criteria, e.g., knowledge domain, mode of interaction, the usage, and

the design techniques that are typically employed in building these chatbots (Hussain, et al., 2019).

According to Dsouza et al (2019) there are two main categories of conversational frameworks used to build chatbots are retrieval-based and generative-based AI. retrieval based chatbots find matched responses from a database of intentionally awkward conversational phrases, which is the main distinction between the two.

Besides, a retrieval-based chatbot uses a rule-based approach which utilize a selection of responses from ranking data with pre-programmed answers rather than generating a new response. it is responsible for matching pre-programmed answers with text messages, based on the input text without creating new texts, a dialogue system with a knowledge base that contains a considerable number of question-answer pairs was developed to select suitable responses, where clever analyzing of user input with hardcoded phrases and premade templates are used to generate the reply (Almansor & Hussain., 2020).

Accordingly, the retrieval-based chatbot is not the best option If the scope is too big and the chatbot is a crucial part of a service, in cases where a chatbot needs to be built fast, there is limited scope, and personalized customer interaction is not needed, retrieval-based chatbots are sufficient and more accurate (Dihyat & Hough, 2021).

Above and beyond, generative based AI chatbots are use a variety of machine-learning algorithms, neural networks and, lately, generative transformer models to automatically generate responses instead of selecting them from the underlying model(Lim & Makany, 2024), the main task of a chatbot is to produce an appropriate response by anticipating natural language input provided by humans., the generative-based chatbots use neural-network that is trained on large datasets so that, it can generate appropriate and correct responses (Agarwal & Wadhwa, 2020).

Consequently, a generative AI chatbot is responsible for generating appropriate responses drawn from user input via natural language processing and deep machine learning (Vanichvasin, 2022). Accordingly, the generative AI-based chatbot is considered the best option for robust and scalable conversational agents, However, the

knowledge base needs to keep up with users (Følstad & Brandtzaeg, 2020).

Therefore, the use of new generation AI-chatbots in education is rapidly expanding due to their ability to process and understand natural language at an unprecedented level. In addition to their natural language processing abilities, AI chatbots are also extremely multipurpose. They can be trained to achieve an inclusive range of tasks for assisting of teaching and learning, supporting some in-class activities and a variety of out-of-class and some in-class activities (Ilieva, et al., 2023).

In this study, the researcher will embrace generative AI chatbot which is Chatfuel- AI connected with telegram application because it is robust and scalable conversational agents and generating personal conversation with updating new text with entered specific data about academic advising information, students will concern about questions related to academic advising, and will use telegram application to contact with students, the researcher entered data related to the academic advising and the chatbot will generate responses according to data automatically.

2.1.2 Chatbots for academic advising

Academic advising is to mentor students on their academic journey by offering suitable techniques for addressing students' needs and concerns while supporting the goals and mission of the institution (Lucien, 2021).

Further, academic advising refers to supporting students as they determine a program of study that will satisfy university and academic major graduation requirements and will meet their intellectual and career interests (Springer & Tyran, 2022).

Technology has a constructive place in academic advising. In years past much of the work, such as transcript evaluations and oversight of programs of study, was done by hand. These administrative characteristics of academic planning were time consuming, fraught with error, and limited the advisor's time for one-on-one interactions with

students. Technological advances over the past two decades have increased precision and effectiveness (Troxel et al.,2021).

Consequently, academic advising issues are important for stakeholders in a higher education institution. Students are involved in these stakeholders; higher education institutions have a system that can be used by students to access academic information. universities use web-based services to offer academic information. but it is still considered complicated since it must involve a troublesome authentication process (Heryandi, 2020).

Considering, Academic advising is a challenging and time-consuming task. It requires well-trained dedicated professionals who give one-on-one consultations with students. Additionally, academic advising is essential to the success of students. Moreover, it increases student loyalty and prospective student recruitment. Although, in practice, advisers sometimes spend considerable time on answering repetitive questions that could be incorporated into a chatbot system (Alkhoori et al., 2020).

Regarding, Ain shams university in Egypt, the academic advising unit is set up recently since 2021, as well as the undergraduate system (credit hours system), therefore, the staff members as academic advisors are faced a challenge to mentoring students. They use a hierarchy way to mentor students, in other words, the academic advisors need to revise the academic advising unit by using the official email to answer the students concerns or questions, due to they don't have the sufficient information about the system, and the process is very slow, so students have to email the academic adviser and the academic advisor forward the email to the academic advising unit, and the unit will answer the questions after two working days. Moreover, some academic advisors have struggled to use official email, thus they use WhatsApp instead of email to connect with students. However, they must use email to contact the academic advising unit. According to Heryandi (2020) expose that with chatbot, a college can supply facilities for students to get information about academic system easily, cheaply, and can be accessed anytime.

Further, D'Silva et al. (2020) designed a Chatbot that can assist students in better understanding himself/herself as well as help with suitable jobs, allowing them to make more educated decisions about career and education.

Therefore, the use of educational chatbots is in the beginning, especially in Egypt, and there are studies reveal the benefits and challenges of using it, however this study is trying to assess using chatbots from undergraduate students' perspectives and a proposal for developing it, and expose a future requirement, studies of using it in higher education.

Regarding, this study will use Chatfuel-AI in designing and implementing Telegram applications that students were accustomed to without needing to install any extra application installed , and because they already use it for communicate , so they're familiar with telegram, further the Chatfuel-AI used AI technology with data entry from the researcher as well , so it combine between the data entry and the AI responding , so it makes responses enrich the students' experiences.

On the other hand, the chatbot language will be in Arabic language because it is the mother language of students, and they could not ask or understand the received responses if it were in English, they could express their ideas or concerns about certain issue or challenge.

2.1.3 Criteria of assessment chatbots

In order to understand the opportunities and challenges in using chatbots to support an inclusive online environment, Gupta & Chen (2022) indicate that chatbots provide the opportunity to support students who are disadvantaged, with diverse life environments, and with varied learning styles.

Nevertheless, there were negative perceptions of the educational chatbot, Çakmak (2022) indicates that there were negative perceptions and attitudes toward the chatbot interaction. Students reported facing difficulties in being understood precisely.

Chatbots have been around for years and have been used in various fields such as education. This study focus is on assessment the use of chatbots in the field of academic advising from students'

perspectives at faculty of education, Ain shams university in Egypt and design a proposal for developing it.

Regarding the assessment of chatbots, Santos, et al (2022) clarify that there are two assessment criteria, one is scalability refers to the way a chatbot design deal with the increase of users, interactions, and content contained in the chatbot, and the other one is usability refers to the actual use of a chatbot and users' ability to achieve their desired tasks. Considering, the requirements of designing chatbot include, accurate knowledge, tactic for answering, representation and predefined responses to reply when user input is not understood (Vanichvasin, 2022).

Further, Kuhail et al (2023); Abbas et al (2022) indicate that there are four essential criteria to assess a chatbot which are: subjective satisfaction, usefulness, usability, and engagement, additionally (Hew, et al., 2023) emphasize that the most important two criteria to users are a perceived usefulness and ease of use.

Moreover, Ondáš et al (2019) indicate that there are two crucial criteria to assess a chatbot which are usefulness of the service and perceived quality.

Further, according to Al-Sharafi et.al (2022) study they reveal that to achieve the sustainable use of chatbots occur through the following criteria: expectation confirmation, perceived usefulness, satisfaction, knowledge sharing, knowledge acquisition, and knowledge application, and those factors should take into account when design or develop chatbots, the results of study exposed that knowledge application has the most considerable effect on the sustainable use of chatbots with 96.9% normalized importance, followed by perceived usefulness (70.7%), knowledge acquisition (69.3%), satisfaction (61%), and knowledge sharing (19.6%).

According to Prioleau (2020) there are five essential criteria to assess chatbot which are: access, helpfulness, time, design, and overall quality of resolution.

Besides, Jung et al (2020) mention that, to assess the use of chatbot in an educational context, there are six vital elements:

Recognition, Problem response, Conversation, feedback, Shortening, and consistency.

Above and beyond, Mohammadi (2015) expose that there are four criteria to assess chatbot, firstly, Perceived ease of use, which defined as the degree to which a person believes that using a chatbot would be effortless, secondly, Perceived usefulness, that a key determinant of intention which encourages users to adopt more innovative and user-friendly technologies, thirdly, Intention to use which describe as the possibility that an individual will use new technology, finally, Satisfaction which is The extent to which user believe that their needs, goals, and desires have been fully met.

Beyond that, Wollny et al (2021) indicate that there are five important criteria to assess chatbots in the educational field which are learning success, motivation, usability, technical correctness, psychological.

To sum up, several studies indicates a common criteria to assess chatbot, and this study will focus on the following four essential aspects: Student's motivation and desire to use the chatbot, The usefulness of using a chatbot, Easy to use chatbot, and Student satisfaction with the use of chatbot, and this study will embrace those aspects because several studies indicates those the most crucial elements to effective assess using chatbots among users, and because the study aims refer to assess using chatbots from students' perspectives.

3. Methodology

3.1 Participants

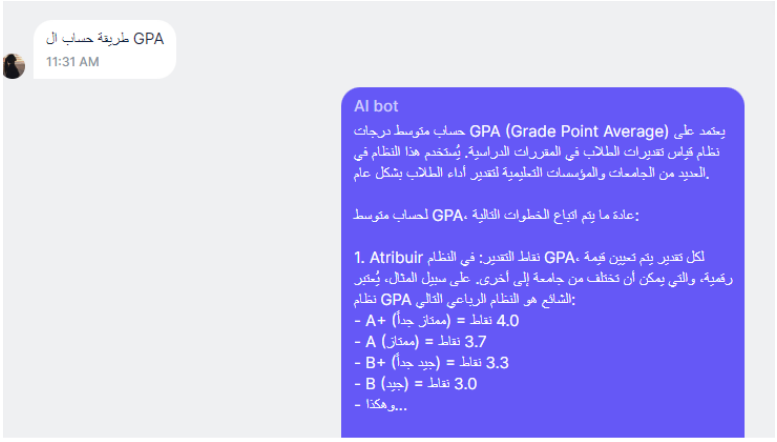
The study took place from September 2023 to December 2023. This study aims to use a chatbot system which is Chatfuel AI and will service requests for academic information such as courses, GPA calculation, grade information, attendance information and financial information, regulations.

The researcher entered data related to the bylaw to integrate with the AI responses that generated from Chatfuel-AI, in addition, the communicate language was Arabic because this is the mother language,

and the researcher couldn't collect an accurate data with English language, so the instruments and the chatbot as well were in Arabic, and the figure 1 shows an example of a dialogue in Arabic between Chatfuel-AI chatbot and student through telegram application.

Figure 1

The dialogue between the Chatful chatbot and student in telegram application



3.2 Measurements:

According to Kuhail et.al (2023) there are several methods to evaluate chatbots for instance: evaluation study, focus group, experiment, and questionnaires, mostly Likert scale closed-ended questions, but a few questionnaires also used open-ended questions.to measure subjective satisfaction, usefulness, usability, and engagement.

Additionally, Yang & Chen (2023) use questionnaires for quantitative analysis and interviews for qualitative analysis and behavioral analysis for evidence based to investigate perceptions and intentions about using chatbots.

Moreover, Ondáš et al (2019) use questionnaire to evaluate chatbots by collecting the user opinion about usefulness of the service and the perceived quality, the questionnaire consists of eight questions, five questions require to write an answer, and three questions require to choose one of the options. Additionally, Pérez et al (2020) use questionnaires to evaluate the quality of chatbots from students' perception about it.

Further, Hew, et al (2023) design and conduct individual interviews and open-ended surveys were used respectively to measure perceptions and design a five-point scale questionnaire to evaluate students' perceived usefulness and ease of use of the chatbots.

Additionally, Abbas et al (2022) study, they used several methods: a mentimeter, an online survey, three focus group sessions (two with mature students and one session with the DSMs) and a semi-structured interview to measure the effects of chatbots on student engagement in higher education.

Further, Çakmak (2022) design an open-ended questionnaire to collect students' perceptions towards using chatbots and investigate the effect of chatbot-human interaction.

According to Prioleau (2020) study that examines the effectiveness of implementing a chatbot solution to supplement existing student support or service models on campus, specifically for transfer students. This survey had multiple choice to understand how the students learned about the chatbot at the college and open-ended questions to supply more context to their responses.

Therefore, in this study, the researcher use assessment scale contains closed- questions, questionnaire contains an open question and an online focus group discussions with students to analyze their assessment of using chatbot in academic advising based on four dimensions were Student's motivation and desire to use the chatbot, the usefulness of using a chatbot, Easy to use chatbot, and Student satisfaction with the use of chatbot.

Further, all instruments were conducted into Arabic because the chatbot was in Arabic language, therefore the instruments translated into Arabic to be more efficient to express their ideas without language barriers, so it will give the researcher more accurate and sufficient information about the performance of using chatbot in academic advising.

The assessment scale consists of twenty-six closed questions, it was a five-point Likert-scale, ranging from 1 (i.e., strongly disagree) to 5 (i.e., strongly agree), was administered to collect their perceptions of

using chatbot in academic advising. A Likert scale was used to assess a scale of opinions (from poor to excellent) and describe the four dimensions of chatbot assessment. The Likert scale applied to the five variables for measures to quantitatively evaluate. The table shows the score of each dimension and the total score of scale.

Table 1

Distributions of questions in the four dimensions of scale assessment

Dimensions	Questions	N of questions	Score
Student's motivation and desire to use the chatbot	1-4	4	20
The usefulness of using a chatbot	5-14	10	50
Easy to use chatbot	15-21	7	35
Student satisfaction with the use of chatbot.	22-26	5	25
Total		26	130

On the other hand, the questionnaire consists of fifteen opened questions about their perspectives in using chatbot in academic advising that related to four dimensions. and the table below shows the distribution of questions on the four dimensions of questionnaire.

Table 2

Distributions of questions in the four dimensions of questionnaire

Dimensions	Questions	N of questions
Student's motivation and desire to use the chatbot in academic advising	1,2	2
The usefulness of using a chatbot in academic advising	3-8	6
Easy to use chatbot in academic advising	9-12	4
Student’s satisfaction with the use of chatbot in academic advising	13-15	3

Further, the focus group discussion includes ten open questions for each student about assessing using chatbot in academic advising and the questions were related to the four dimensions of assessing chatbot. and the table below shows the distribution of questions on the four dimensions.

Table 3

Distributions of questions in the four dimensions of focus group discussion.

Dimensions	Questions	N of questions
Student's motivation and desire to use the chatbot in academic advising	1	1
The usefulness of using a chatbot in academic advising	2-5	4
Easy to use chatbot in academic advising	6-8	3
Student's satisfaction with the use of chatbot in academic advising	9, 10	2

3.3 Data collections

This study aims to assess using chatbot platform in academic advising through undergraduate students' perceptions and a proposal for developing it.

A mixed methods approach was adopted to increase robustness through triangulation. Several forms of data collection methods were used: focus group sessions, assessment scale, and questionnaire. where positive and negative experiences with chatbots were gathered as free-text descriptions and were processed in a content analysis. to assess using chatbot in academic advising based on the four dimensions were Student's motivation and desire to use the chatbot, the usefulness of using a chatbot, Easy to use chatbot, and Student satisfaction with the use of chatbot. All the data collection instruments, responses were in Arabic language because it is the native language and it will be easier to understand and express feelings, opinions, and perspectives with Arabic, consequently, it will reflect on the accurate of data.

Regarding the assessment scale, it was a five-point Likert-scale, ranging from 1 (i.e., strongly disagree) to 5 (i.e., strongly agree), was administered to collect their perceptions of using chatbot in academic advising.it delivered in online way, therefore it is created by google forms , forms because it is not requires and official email it just with Gmail and all students have a smart phone registered with a Gmail, therefore it was easy way for students.an and there is the link of online

scale: https://docs.google.com/forms/d/e/1FAIpQLScxnlgoZ7tfPeUqI7xhKS-dyZusmrLRYMEZdcLvpFdsk7SgEg/viewform?usp=sf_link

In the questionnaire, consists of two sections: collecting demographic information about students such as email, name, major, and the second section about their perspectives in using chatbot in academic advising that related to four dimensions were Student's motivation and desire to use the chatbot, the usefulness of using a chatbot, Easy to use chatbot, and Student satisfaction with the use of chatbot. The questions were open questions and created in an electronic way, the online questionnaire created by google forms because it is not requires and official email it just with Gmail and all students have a smart phone registered with a Gmail, therefore it was easy way for students.an and there is the link of online questionnaire: https://docs.google.com/forms/d/e/1FAIpQLSelrEq1JB4eTm95pizTpTsyECCQC-Hrt9x4V7SKlJ7anfOfDA/viewform?usp=sf_link

Students were invited to take part in the focus groups by creating a WhatsApp group and sending the meeting link through it. Seven students participated in each session. Each session lasted for an hour and a half. All sessions were hosted on Microsoft Teams because it was the official application that faculty use with online lecture, therefore all students familiar with it and all of them use it already to attend their online lectures, thus, it installed already on their phones, and it is easy to use. and were video recorded. Thematic analysis was undertaken to analyze the collected feedback.

3.3.1 Reliability and validity

To test reliability of chatbot assessment scale was piloted at an earlier stage with undergraduate students and the following table shows a reliability analysis of the instrument by using IBM SPSS software, assessed by calculating the Cronbach's alpha confident (Cronbach, 1951), The coefficients show that the items for chatbot assessment have acceptable internal consistency, almost all values of reliability exceeded the generally accepted minimum of 0.70 (Nunnally, 1978), and the following table illustrate the value of each dimension and the scale as a whole.

Table 4

Reliability Statistics of chatbot assessment scale

Chatbot assessment scale	Cronbach's Alpha	N of Items
Student's motivation and desire to use the chatbot in academic advising	0.83	4
The usefulness of using a chatbot in academic advising	0.91	10
Easy to use chatbot in academic advising	0.93	7
Student's satisfaction with the use of chatbot in academic advising	0.90	5
Chatbot assessment scale as a whole	0.96	26

Considering the reliability, the last version of the chatbot assessment scale contains twenty-six items distributed on the four aspects, and the reliability test illustrates a strong coefficient of the scale.

To test validity of chatbot assessment scale was piloted at an earlier stage with undergraduate students and the following table shows a validity analysis of the instrument by using IBM SPSS software, assessed by calculating Pearson confident, The coefficients show that the items for chatbot assessment have acceptable internal consistency, almost all values of validity exceeded the generally accepted minimum of 0.70 (Nunnally, 1978), and the following table illustrate the value of scale dimensions.

Table 5

Validity Statistics of chatbot assessment scale

Chatbot assessment scale	Pearson	Sig
Student's motivation and desire to use the chatbot in academic advising	0.71	<0.01 sig
The usefulness of using a chatbot in academic advising	0.96	<0.01 sig
Easy to use chatbot in academic advising	0.92	<0.01sig
Student's satisfaction with the use of chatbot in academic advising	0.91	<0.01 sig

4. Results

This section presents the study findings. The researcher shows the statistics of assessment scale and the content analysis of questionnaire and focus group discussions.

4.1 Results of assessment scale:

Firstly, the results of assessment scale, table 1 illustrate the descriptive statistics of students' responses to the four dimensions of using chatbot in academic advising.

Table 6

Descriptive Statistics

Dimensions	N	Min	Max	Mean	Std. Deviation	Score
Student's motivation and desire to use the chatbot in academic advising	48	4	20	16.37	4.28	20
The usefulness of using a chatbot in academic advising	48	10	50	40.06	10.59	50
Easy to use chatbot in academic advising	48	7	35	30.10	7.13	35
Student's satisfaction with the use of chatbot in academic advising	48	5	25	20.06	5.17	25
Total	**48**	**26.**	**130**	**106.60**	**26.02**	**130**

The table above shows that the mean score of Student's motivation and desire to use the chatbot in academic advising dimension equal 16.37 and 80.81 %, the mean score of the usefulness of using a chatbot in academic advising dimension equal 40.06 and 80.12%, the mean score of Easy-to-use chatbot in academic advising dimension equal 30.10 and 86 %, finally the mean score of Student's satisfaction with the use of chatbot in academic advising dimension equal 20.06 and 80.24 %, to sum up, the highest dimension was the easy to use chatbot in academic advising, the rest three dimensions were approximately equal students motivation and desire, students' satisfaction and the usefulness of using chatbot.

And the relation between students' responses of each dimension and the whole scale responses calculated by Pearson equation, and the results shown in the table below.

Table 7
Relation between students' responses of each dimension and the whole scale responses

Dimensions	Pearson Correlation	Sig
Student's motivation and desire to use the chatbot in academic advising	0.936	<0.01
The usefulness of using a chatbot in academic advising	0.98	<0.01
Easy to use chatbot in academic advising	0.95	<0.01
Student's satisfaction with the use of chatbot in academic advising	0.93	<0.01

The significant of the relation between students' responses for each dimension and the scale as a whole is statistically significant, which indicates the validation of their responses and that there is a relation between their responses for each dimension and the whole scale.

4.2 The results of questionnaire:

4.2.1 Undergraduate students' perceptions about Student's motivation and desire to use the chatbot in academic advising:

For this dimension, there are two questions that aim to determine students' opinion regarding using chatbot in near future, and if they recommend others to use chatbot in academic advising and why. all responses were positive and encourage to use chatbot in academic advising, most of responses were mentioned the following reasons for their motivation regarding using chatbot in academic advising which were: saving time, quick respond to questions, the quality of information that delivered by chatbot, and the easy of using chatbot, and here are some samples of students' responses.

"اكيد توفير للوقت مع الارشاد الاكاديمي عشان هما ف اغلب الوقت مبيبقوش فاضيين"

اعتقد انه سيكون له تأثير ايجابي ع الطلبه لانه يوفر وقت الطللب للذهاب لاداره الكليه للاستفسار عن شئ وايضا توفير جهد لدكاترة الكليه ع الرد لجميع اسئله الطلبه"

The previous response mention that he or she likes to use chatbot because it saves time specially when the most of academic advisors were not available all time.

"بالطبع، بسبب سهوله التواصل و الرد السريع و الاجابات النافعه التي ستقدم لهم".
"نعم ،لانه سريع في إجابته ومفيد ويجواب بشكل صحيح فيما يخص الإرشاد من وجهة نظري"
"نعم انصح باستخدامه، وذلك لأن الروبوت لديه كميه معلومات كثيره يمكنك الاستفاده منها وايضا سريع جدا فى الرد".

The previous responses were state that they will encourage others to use chatbot in academic advising because it is quickly responding to their questions, the information that delivered were accurate about the academic advising, and it is easy to use and to have a friendly conversation with it.

4.2.2 Undergraduate students' perceptions about the usefulness of using a chatbot in academic advising:

In this dimension, there are six questions aim to determine how chatbot helps students in responding to their questions, students' opinion about the benefits of using chatbot in academic advising, features that students want to add to chatbot to be more beneficial to them, how students use chatbot ,if students need to revise to academic advisor on the same questions, and the quality of delivered information from chatbot. Students' responses that the most useful factors about using chatbot in academic advising were saving time and effort, very quickly to respond to questions, the accuracy of information, and it is easy to access and use it in any time anywhere. And here are some samples of students' responses.

"توفير وقت ومجهود للطالب والمرشد الأكاديمي"

In the above quote, the student mentions that one of the benefits of using chatbot is saving time and effort for student and the academic advisor as well.

الفوائد أنه فى أى وقت عند حدوث مشكله يمكنك ان تبعت له رساله و هو سيقوم بحلها وبالرد السريع على عكس ان يكون هناك مرشد شخص بشرى ستنتظر عندما يقرأ الرسالة و من الممكن ان لا يراها فى اليوم ذاته.

Another quote states that using chatbot in academic advising is beneficial. It responds any time, and the responding was quick, otherwise the academic advisor could not respond in the same way.

Regarding the situations that students feel that using chatbot is very useful to them, and write an example to elaborating the usefulness of delivered information from chatbot, students mention different situations and questions, most of them mentions that chatbot help them in answering the following aspects: information related to calculating GPA, describing the credit hours system, the steps of paying the fees and how to pay the underground service fees, information about academic courses, how to register in academic courses and the first semester schedule of courses, information about bylaw, and the links of the university platform and how to deal with Moodle platform. And are some samples of students' responses.

"سألته عن كيفية تسجيل المقررات وبالفعل أجاب على سؤالي بشكل بسرعة و قال لي جميع الخطوات لتسجيل أي مقرر".

The previous quote describe that he/ she ask chatbot about the way of register in academic courses and the chatbot answer quickly with a detailed steps and it was extremely helpful.

"كنت ابحث عن اجابه لسؤال معين وهو كيف يتم حساب ال Gba الخاص بى ولقد اجابنى سريعا وايضا بوضوح تام".

In the quote about student describe that he/she asks about calculating the GPA, and the chatbot answer very quickly with a clear description.

"عن تجربة شخصية ساعدني في معرفة كيفية دفع مصروفاتي وما المدة المحددة لذلك".

In the quote above student mentions that he / she asks about how to pay the fees of the semester and what is the deadline for payment and chatbot was helpful in answering.

Additionally, asking students about any feature they would like to add to make using chatbot in academic advising more usefulness, students' responses suggest two types of features, feature related to expand the using of chatbot not only for academic advising but also for courses and knowledge regarding it or anything related to the faculty like announcements , meetings, training sessions and so on, the second feature related to the ability to read the pictures and the recordings from students and answer them for instance, make chatbot receive voice

recordings from students and answer their responses without typing a text, further using screenshot to elaborate the answering and receive screenshots from students as well. And here are some samples of students' responses.

"يمكن أن يكون لجميع شؤون الكلية ليس فقط الإرشاد الأكاديمي"

In the previous quote, the student suggests expanding using the chatbot for the faculty information not just academic advising.

"أن يربط الروبوت الطلاب بوحده القبول والتسجيل ذكلك عن طريق أن يقوم الطالب بحجز ميعاد مسبق عبر الروبوت لزياره الوحده للقيام مثلاً بختم اوراق مثلا أو اي شي، وبهذا ينظم الروبوت مواعيد الطلاب في مواعيد مختلفه لتفادي الازدحام في الوحده".

Another suggestion about feature of expanding using chatbot and the student suggest connecting chatbot with the registration and acceptance unit to arrange appointment with the unit, so chatbot could be the connection between the unit and students.

"انه يقرأ الصور لو بعتناله سكرين شوت عن حاجة في المنصة مثلاً زي المصاريف او رسوم لحاجة معينة يدينا تفاصيل عنها مثلا".

The quote above suggests adding a feature related to the ability of chatbot related to read screenshots from students and respond based on it.

"نعم انه اذا طلب منه احد شرح ولم يفهم الشرح على الروبوت أن يبعث للطالب ڤويس توضيحى لان هذا يوفر الجهد على الطالب".

In the quote above the student suggests adding a feature to chatbot related to sending a voice recording if some students could not understand the text and it will save the student effort in reading.

Moreover, questions relate to the students' need to revise academic advising in the same questions they have asked to chatbot, and the most responses were no they don't need to revise the academic advisors, and here are some samples of students' responses.

"لا بالتاكيد .. لانه يسهل علي عوضا عن ارسال بريد الكتروني المرشد يمكنني سؤال هذا وكأنني احادث صديق لي".

In the quote above student mention that he / she does not need to revise the academic advisor because it takes more time in sending an

email to academic advisor and it will not respond at the same time, additionally chatbot act friendly regarding chat with students.

4.2.3 Undergraduate students' perceptions about Easy-to-use chatbot in academic advising:

In this dimension, there are four questions aim to determine how students able to reach and connect to the chatbot, how much time it takes to respond in students' concerns, if it easy to use among students, and what challenges students faced during using chatbot in academic advising. students' responses were describing the easy of using chatbot by telegram application and it is easy to download and use it, additionally the time of responding was very quickly, on the other hand some students describe some challenges in using chatbot, some question they couldn't explain clearly so they couldn't have an accurate answer. And here are some samples of students' responses.

"لم اواجهه اي تحديات وكانت تجربه جميله ".

The student quote described that he / she did not face any challenges and it was an enjoyable experiment.

"نعم لانه يوجد علي يرنامج تليجرام المتوفر اعتقد لكل الطلاب في مجالات دراسية اخري او لاسباب اخري و ايضا من لا يملكه يمكن تحميله من مصدر سهل مثل جوجل بلاي و يمكن ايضا سؤاله باللهجة العامية".

The quote above elaborates that it is easy to reach and chat with chatbot by using telegram application because students use the app for other reasons and if anyone did not have the application, it is easy to download it.

"بالطبع سهل فهو لا يستغرق وقت كبير لحل مشاكلي اجابه اسئلتي ومتاح لي في اي وقت استطيع أن اسأله".

Another quote emphasizes the easy to reach chatbot and it is available all the time any time as well, also it did not take time to answer students concerns.

"بضع ثواني والمشكلة تحل ف ١٠ دقائق بالكتير".

In the quote above, the student mentions that the time of responding is seconds and to solve totally his/ her problem it takes 10 minutes.

"عدم مقدرتي علي توصيل بعد الأسئله له".

In the quote above student mention that he/ she has challenge in their ability to describe their issues or concerns in text, so he/ she could not explain their questions very well.

4.2.4 Student's satisfaction with the use of chatbot in academic advising

In this dimension, there are three questions aim to illustrate students' satisfaction, enjoying and impression regarding using chatbot in academic advising, students' responses were describing their satisfaction regarding using chatbot in academic advising and they recommend using it in official way and the faculty support officially using chatbot in academic advising, and about their impression students feel satisfied and enjoying. students mentioned several reasons to feel these positive feelings regarding using chatbot for instance it is delivered an accurate information maybe some academic advisors did not know all information like chatbot, it is easy to use, very quickly in responding, it saves time and effort, and immensely helpful to students. And are some samples of students' responses.

"بالطبع، كان من الجيد التعامل مع برنامج آلي يمكنه اخباري بعملومات عن الكلية لربما لا يعملها الكثيرين من المرشديين الأكاديمين ذات أنفسهم و بشكل سلس و سريع"

In the quote above, the student states that he/ she feels enjoying for sure and it was good to deal with this technology because chatbot could tell me information in a simple and quick way about the faculty maybe a lot of academic advisors did not know.

"أوافق عليه اكيد ولكن ليس كليا لانه يلغي دور الأكاديمين ويلغي التواصل البشري بين الطلبه والدكاتره".

In the quote above student elaborate that he/ she is satisfied in using chatbot but he/ she afraid from it will reduce the academic advisors' roles consequently it will eliminate the human connection between students and staff members.

"كان انطباعا جيدا احببت الفكره جدا وان شاء الله يتم التطوير بها اكتر لتكون أكثر أفاده لكلا من الطلبه والدكاتره".

In the quote above, he / she state that he/ she had a good impression regarding using chatbot and he/ she like the idea of using it in academic advising and he/ she hopes to be developed and expand among students to spread the usefulness of it for students and staff members as well.

4.3 The results of focus group discussion:

4.3.1 Undergraduate students' perceptions about Student's motivation and desire to use the chatbot:

Regarding this dimension the researcher ask students about their desire of continue using chatbot in academic advising and why, the responses were positive and encourage to use chatbot in academic advising, additionally students' agreed to continue using chatbot because it helps them by delivered accurate information about the bylaw, save time and effort, easy to use , the responding was fast, and it will help the academic advisors as well in responding a lot of questions and concerns from students.

4.3.2 Undergraduate students' perceptions about usefulness of using a chatbot:

In this dimension, researcher asks students four questions about the usefulness of using chatbot in academic advising, evaluate the information deliver by chatbot, challenges, and suggestions to develop using chatbot in academic advising. Responses elaborate that chatbot responding fast and they can ask it any time anywhere , any question students will able to ask without afraid of not responding or delay, about the information were accurate, arranged in steps, detailed, correct, and very helpful to students, regarding challenges all students mention that they didn't face any challenges, about suggestions, some students suggest to be able to send a voice record and the chatbot be able to understand and responding according to recording , others suggest to expand the area of using chatbot not only for academic advising but also for technical support , IT unit, and registration and acceptance unit in faculty of education- ASU, in addition, others suggest that chatbot could expand to anything related to the faculty of education and related to undergraduate students such as, training

courses , scholarships , how students could study and manage their time effectively, also some students suggest to have a chatbot to all units in the faculty of education because it facilitates receive different services to students, additionally one students suggest to use a WhatsApp application beside telegram because the WhatsApp is more familiar application than telegram among students, and chatbot could use to arrange an appointment with students and different units in the faculty if they need a direct help or to delivered papers.

4.3.3 Undergraduate students' perceptions about Easy-to-use chatbot:

Regarding this dimension, researcher asks students three question about how chatbot helped them, if they had any obstacles, and responding time, the responses illustrate that the chatbot respond quickly in the same time of sending questions and it is convenient to all students, and they didn't have any obstacles in sending and receiving messages, some mentioned that the language is Arabic not the Colloquial Arabic and it maybe was a bit challenge to them, further how chatbot helped students mentioned situations of asking chatbot about courses descriptions, calculating GPA, how to register their courses, log into Moodle LMS and go for courses, credit hours system ,the academic warning, the distribution of scores in each course, how to register and pay services in the UMS (university management system), the steps of pay the registration fees, how to get the e books, and the community service center specially about literacy project that obligates students to achieve based on the bylaw.

4.3.4 Undergraduate students' perceptions about Student satisfaction with the use of chatbot:

In this dimension the researcher asks students two questions to illustrate their perception about their satisfaction of using chatbot in academic advising and their enjoyable, the responses describe that all students were satisfied and enjoying using chatbot in academic advising and they opened to use technology to facilitate any services that will eventually help them to get better services.

5 Proposal for developing a chatbot in academic advising based on undergraduate students' perceptions.

Based on analysis of results, the following proposal was indicated that students have a desire and motivation regarding using chatbot in academic advising, and form their perspectives they realize the usefulness of chatbot in academic advising, they describe the use of chatbot in detailed and for them it was easy to use it or the telegram application, finally they feel satisfied and enjoyed using it, the following table expose each dimension and conclude students' perception regarding each dimension.

Table 8

Dimensions of using chatbot in academic advising and main point students mentioned

Chatbot criteria assessment	Students' perceptions about using chatbot in academic advising
Student's motivation and desire to use the chatbot	Students encourage to use chatbot in academic advising for the following reasons: 1-delivering accurate information about the bylaw. 2-save time and effort. 3-easy to use. 4-quick respond to questions.
usefulness of using a chatbot	Students conclude from their perspectives the following usefulness aspects for using chatbot in academic advising: 1.responding fast. 2.The information was accurate, arranged in steps, detailed, correct. 3.helpful to students. 4.easy to access and use it at any time anywhere. 5.saving time and effort.
Easy to use chatbot	Students conclude the following features regarding using chatbot in academic advising: 1-Chatbot responds quickly at the same time as sending questions and it is convenient to all students. 2-easy to download telegram and use it. 3-The language is Arabic not Colloquial Arabic and it was a bit challenging to them, some questions they could not

Table 8
Dimensions of using chatbot in academic advising and main point students mentioned

Chatbot criteria assessment	Students' perceptions about using chatbot in academic advising
	explain clearly so they could not have an accurate answer. 4- The most aspects that students use chatbot to ask about: • courses descriptions. • calculating GPA. • how to register for academic courses. • log into Moodle LMS and go for courses. • credit hours system. • the academic warning. • the distribution of scores in each course. • how to register and pay services in the UMS (university management system). • the steps of paying the registration fees. • how to get the e books. • the community service center specially about literacy project that obligates students to achieve based on the bylaw. • how to pay the underground service fees. • the first semester schedule of courses. • the links of the university platform. • how to deal with Moodle platform.
Students' satisfaction with the use of chatbot	• Satisfied and enjoying using chatbot in academic advising. • Recommend using it in official way and the faculty support officially using chatbot in academic advising, students feel satisfied for the following reasons: 1-deliver accurate information maybe some academic advisors did not know all information like chatbot. 2-easy to use. 3-very quickly in responding. 4-saves time and effort. 5-helpful to students.

5.1 Develop using chatbot in academic advising based on students' perceptions:

Overall, the suggestions form students' perspectives could divide into two themes, technical theme, and non-technical (functional) theme, the technical theme include suggestions related to use a WhatsApp application beside telegram because the WhatsApp is more familiar application than telegram among students, design a chatbot to understand the voice messages instead of texting only and respond according to recording, connect chatbot with the Moodle LMS to be easy to reach it, make a chatbot able to read pictures and respond according to it.

On the other hand, the non- technical (functional) theme include expand the area of using chatbot not only for academic advising but also for technical support, IT unit, and registration and acceptance unit in faculty of education- ASU, expand the information that covered by chatbot , not just the academic advising information but also a general information such as training courses, scholarships, how students could study and manage their time effectively. and anything related to the faculty of education, connect chatbot with others units in the faculty of education for instance IT unit, registration and acceptance unit, etc. to provide services to students related to the other units and make it more easier to students to deal with all issues faced them during the academic years, Chatbot could be used to arrange an appointment with students and different units in the faculty if they need direct help or to deliver papers.

Accordingly, the following proposal for developing using chatbot in academic advising.

Table 9

Proposal for developing using chatbot in academic advising based on students' perceptions

Technical	Non-technical (functional)
Using WhatsApp application because it more familiar application to students	Include some advice related to time management and studying courses
Connect chatbot link with Moodle LMS to be easier to reach	Use chatbot with other services such as, it services and technical support

Table 9
Proposal for developing using chatbot in academic advising based on students' perceptions

Technical	Non-technical (functional)
Design a chatbot to receive voice messages and understand it and respond according to it.	Connect chatbot with academic advisors, so if any student wants to meet the advisor, so chatbot could arrange a convenient appointment to both student and the advisor
Design a chatbot to read the pictures from students and respond according to it	Include information related to scholarships, training courses, summer camps that will help students to improve their academic achievements.

6 Discussion, and conclusion:

According to results which reveal that in students' motivation and desire to use the chatbot dimension results indicates that undergraduate students feel positive and encourage to use chatbot in academic advising, additionally, students mention the following reasons for their motivation regarding using chatbot in academic advising which are: saving time, quick respond to questions, Chatbot helps students by delivering accurate information about the bylaw, save effort, easy to use, and it will help the academic advisors as well in responding to a lot of questions and concerns from students. and that agreed with (Alkhoori et al.,2020) which indicate that advisers sometimes spend considerable time on answering repetitive questions that could be incorporated into a chatbot.

Further, in usefulness of using a chatbot dimension, results expose that the useful factors about using chatbot in academic advising are: saving time and effort, very quickly to respond to questions, the accuracy of information, arranged in steps, detailed, correct, very helpful, about accessibility, it is easy to access and use any time anywhere, any question students will able to ask without afraid of not responding or delay, and that agreed with (Ondáš, et al., 2019) study which results show that students consider chatbot in received information was attractive and helpful. The main reasons are that this form of obtaining information saves their time, enables them to find

information without searching the web and makes obtaining information more comfortable.

Moreover, students mention different situations and questions that chatbot help them in answering the following aspects: information related to calculating GPA, describing the credit hours system, the steps of paying the fees and how to pay the underground service fees, information about academic courses, how to register in academic courses and the first semester schedule of courses, information about bylaw, and the links of the university platform and how to deal with Moodle platform.

Regarding ease to use chatbot dimension, students describe the easy of using chatbot by telegram application and it is easy to download and use it, and that consent with (Heryandi, 2020) results expose that with chatbot students can get information about academic system easily, cheaply, and can be accessed anytime, in addition (Hew, et al., 2023) study , results indicates a positive learners' perspectives regarding ease of use and usefulness, additionally chatbot respond quickly in the same time of sending questions and it is convenient to all students, further, students mentioned situations of asking chatbot about courses descriptions, calculating GPA, how to register their courses, log into Moodle LMS and go for courses, credit hours system ,the academic warning, the distribution of scores in each course, how to register and pay services in the UMS (university management system), the steps of pay the registration fees, how to get the e books, and the community service center specially about literacy project that obligates students to achieve based on the bylaw, additionally, students didn't have any obstacles in sending and receiving messages, on the other hand some students mentioned that the language is Arabic not the Colloquial Arabic and it maybe was a bit challenge to them to understand, some question they couldn't explain clearly in Arabic, so they couldn't have an accurate answer.

Additionally, results of Student satisfaction with the use of chatbot dimension indicates that students were satisfied and enjoying using chatbot in academic advising. and this results agreed with (Hsu et al.,

2023) that revealed using chatbot improved students' learning enjoyment as well as reducing their learning anxiety Moreover, Students describe their satisfaction of using chatbot in academic advising and they recommend using it in official way and the faculty support officially using chatbot in academic advising, students mentioned several reasons to feel these positive attitudes regarding using chatbot for instance, it delivers an accurate information maybe some academic advisors didn't know all information like chatbot, easy to use, very quickly in responding, saves time and effort, and very helpful. and that agreed with results of (Yang & Chen, 2023) which indicates that preservice teachers were intent to use chatbot because the immediate respond.

6.1 Limitations and future research directions

There are several limitations of this study that warrant caution when interpreting the study findings. Overall, the sample size was relatively small. Furthermore, the majority of this study's participants were female and that is the case in the whole faculty most of students were female, additionally the major of students was in biology and geology, they are in second year, moreover, in this study the researcher uses Chatfuel- AI connected with telegram application.

For future studies could include a large size of participants and use a different sample with different variables, additionally, examine teachers' perspectives towards using chatbots in teaching and learning, further, could include different majors and students in different academic years as well, and use different application to create a chatbot.

Data availability the datasets generated during and/or analysed during the current study are available from the authors on reasonable request.

Declarations

non-financial interests to disclose.

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