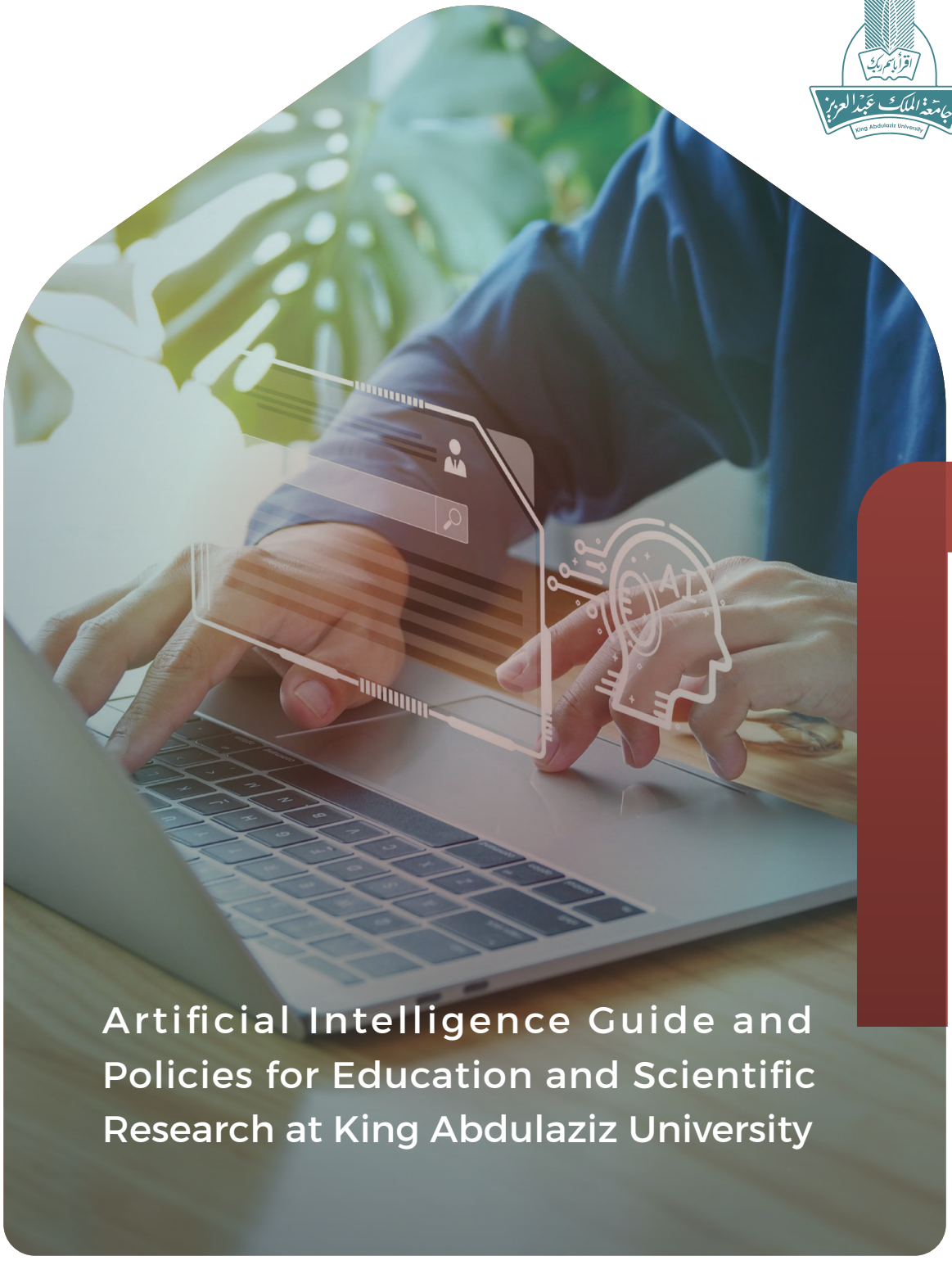

Artificial Intelligence Guide and Policies for Education and Scientific Research at King Abdulaziz University

Center for University Education DEVELOPMENT
مركز تطوير التعليم الجامعي
First Edition 8-2024

Center for University Education Development,

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Artificial Intelligence Guide and Policies for Education and Scientific Research at King Abdulaziz University

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Introduction

In light of the remarkable technological progress in recent decades, artificial intelligence (AI) has played a vital role in various fields, including education. This development has prompted many educational institutions, including King Abdulaziz University, to adopt and utilize smart technologies in education and scientific research to enhance the quality of education and improve academic performance.

This manual aims to provide clear policies for the use of artificial intelligence at King Abdulaziz University, reflecting a concerted effort to build strategies related to this field. It outlines the necessary steps to effectively and sustainably integrate these technologies by defining AI and explaining how it impacts university education, with a focus on the institutional perspective of King Abdulaziz University.

This Guide is an initiative of the Center for University Education Development, driven by an interest in identifying the educational and research development needs of King Abdulaziz University. It reflects the desire to effectively contribute to developing strategies for integrating smart technology into the university and implementing it into the educational system and research processes. Additionally, the Center is committed to providing support and guidance to faculty members and students by organizing training courses and workshops that enhance their understanding and skills in using smart technology effectively. This Guide was developed through cooperation with experts comprised of university faculty members and informed by the views of success partners from various relevant sectors of the university. It reflects the alignment with national and global principles, which effectively contributes to enhancing academic and research excellence at King Abdulaziz University.

This manual also covers a set of key principles for the use of artificial intelligence, including ethical responsibility, educational and research principles, and principles of continuous development and evaluation. These provide a comprehensive framework for the university to integrate AI technology into its academic and research activities.

By providing specific models for the use of smart technologies in various aspects of the educational, research, and administrative processes, this manual will help identify the practical steps necessary for adopting artificial intelligence at King Abdulaziz University, which will improve the efficiency and effectiveness of academic and administrative work.

Undoubtedly, this manual will help faculty members develop innovative and effective teaching strategies based on smart technologies, which can improve the quality of interaction with students and motivate them toward active, continuous learning. The manual also offers a framework for integrating smart technology into scientific research, fostering innovation and discovery across various fields of expertise.

For students, this manual serves as a resource to explain how they can benefit from smart technologies in their academic journey. It helps them understand how to use artificial intelligence in the learning and assessment processes, while also developing their skills, and increasing their engagement with lesson content and educational activities.

This manual is designed to be an important tool for directing efforts and unifying visions in the use of artificial intelligence techniques and tools at King Abdulaziz University, strengthening its position as a leading university in education, scientific research, and community service.

Definitions

1

Artificial Intelligence

Artificial intelligence, as defined in this policy guide, refers to a set of technologies, systems, and tools that aim to develop programs capable of performing tasks typically considered central to human intelligence. Artificial intelligence is also based on data analysis, machine learning, and computational thinking to make intelligent decisions and carry out tasks automatically, and continuously.

2

Generative Artificial Intelligence

Generative AI is a type of artificial intelligence that uses machine learning techniques and deep neural networks to mimic human creativity. It creates new data, or original content such as text, images, or videos.

3

Artificial Intelligence Tools

It refers to software, libraries, platforms, or applications that provide resources for building, deploying, and managing artificial intelligence systems, such as TensorFlow, PyTorch, Scikit-learn, and Keras.

4

Artificial Intelligence Techniques

The methodologies, algorithms, and methods used to create artificial intelligence systems, including machine learning, deep learning, natural language processing, computer vision, reinforcement learning, and specialized systems.

5

End-User AI Tools

These are AI applications, or tools, designed for specific user groups such as faculty, students, researchers, and administrators. These tools are usually developed with the goal of providing practical solutions, automating tasks, or enhancing decision-making processes, typically without requiring users to have specialized knowledge in AI.

Definitions

6

Machine Learning

It is one of the branches of artificial intelligence that is concerned with making the computer able to learn on its own without prior experience, so that it can predict and make the appropriate decision, faster.

7

Deep Learning

It is a method used in artificial intelligence that teaches computers to process data in a way inspired by the human brain. Deep learning methods are used to automate tasks that typically require human intelligence, such as describing images or transcribing an audio file into text.

8

Artificial Neural Networks

It is a machine learning algorithm that attempts to mimic the work of neurons in the human brain for the purpose of learning. At first, the results appear inaccurate, but after a certain iteration of the data, the network adjusts itself so that the results become more accurate.

9

Natural Language Processing

It is a subfield of artificial intelligence that studies the interactions between computers and human language, and is concerned with giving computers the ability to understand audible text and spoken words as well as humans do.

10

Responsibility & Accountability

It is usually defined as making use of technologies, tools, resources, and information in a manner characterized by safety, ethical evaluation, and a sense of responsibility. In the context of policy related to artificial intelligence in education, responsible use can be defined as making use of artificial intelligence techniques and tools in educational and research processes in a way that ensures compliance with national and international laws and regulations. Responsible use also includes paying adequate attention to ethical issues and ensuring that these technologies and tools do not violate the rights of individuals or cause any harm to society.

Definitions

11

Justice and Fairness

In education, ensuring fairness and avoiding bias when using AI-based educational tools is crucial and requires careful consideration to ensure equitable outcomes for all students. This concept is defined as a set of measures that are adopted to mitigate the biases present in the algorithms and datasets used by these tools. These measures are taken in order to prevent any discrimination or unfair treatment based on factors such as race, gender or socio-economic status.

12

Transparency & Explainability

Transparency and explainability in AI refers to the accessibility and understanding of processes, decisions, and outcomes generated by AI systems related to dimensions of the educational process. Transparency involves making the processes of AI algorithms and models visible and understandable to all stakeholders. This allows users to understand the factors that influence the results and evaluate the reliability and fairness of the system.

13

Privacy and Data Protection

Privacy and data protection in the context of using AI in teaching and learning refers to protecting personal user information and ensuring that it is handled responsibly and securely throughout its life cycle. Privacy involves respecting the right of individuals to control their personal data; including its collection, use and disclosure; while data protection involves implementing measures to prevent unauthorized access, misuse, or loss of data. This includes adhering to relevant laws and regulations governing the collection, and storage of personal information, as well as adopting best practices for data security and privacy through design principles incorporated in the development of artificial intelligence systems.

14

Safety & Security

Safety and security in the context of AI-based education refers to ensuring that these various forms of technology are designed, implemented, and used in a way that prioritizes the physical and emotional well-being of students and teachers while maintaining the integrity and confidentiality of educational data. This also includes identifying mitigations of potential risks and vulnerabilities in AI systems to prevent accidents, cyber threats, or unintended damage.

Section One

Artificial Intelligence in Education: The Institutional Perspective of King Abdulaziz University

1 What you Should Know About Artificial Intelligence (AI)

The cognitive and practical field of artificial intelligence (AI) has received increasing attention in recent years as a transformative field of science in computing and data analysis. Due to its various potential uses, including: education, research, and applied and industrial fields, AI has become part of everyday life. In essence, the term artificial intelligence refers to the development of computer systems or algorithms that can perform tasks that typically require human intelligence and complex thought processes, such as problem solving, decision making, and understanding natural language. Such technologies aim to mimic human skills and performances by training them to learn from data, recognize patterns, and make predictions and decisions, independently.

The scope of knowledge associated with artificial intelligence includes different applications and multiple technologies, each with its own set of capabilities. For example, machine learning (ML) techniques focus on designing and training classification, clustering, or predicting algorithms by subject-matter experts to produce accurate results on specific tasks, based on data from different types and formats; usually prepared by experts. On the other hand, deep learning (DL) develops the so-called artificial neural networks (ANN) to model complex patterns of data and is particularly suitable for certain tasks, such as image and speech recognition. This field is distinguished from machine learning by the ability of its models to self-learn and process data more quickly, and accurately.

Recent innovations in Generative AI have pushed the field to new heights. Natural language processing (NLP) models, such as GPT-3, GPT-4, and GPT-4o from OpenAI and Gemini, from Google, have demonstrated remarkable capabilities in understanding and generating language, revolutionizing the way we interact with technology and contributing to advancement in language design, i.e. Chatbots, language translation, and content creation. This innovation was not limited to designing generative artificial intelligence models for languages; it went beyond that, as we currently find smart models for generating images, and audio and video with high accuracy, such as DALL-E from OpenAI, with a quality comparable to human-produced content.

2 The Impact of Artificial Intelligence on University Education

Artificial Intelligence has made great strides in the field of education, reshaping the way we practice teaching, how we learn, and the mechanisms for measuring its outcomes. Consequently, artificial intelligence has become one of the most effective tools in making changes in education, and it has demonstrated its role in achieving the main objectives of public and higher education institutions.

During recent years, specifically since the development and provision of access to generative artificial intelligence models, various forms of AI technology have become part of the main components of the educational process currently seen in higher education by providing innovative solutions to long-term challenges, enhancing educational and training experiences, whereby opening new horizons.

In addition to supporting independent learning, academic research, and automating administrative tasks, different AI applications implemented in education range from activities related to designing customized educational materials and interactive educational activities, to applications that assess students, professors, and other members of the teaching staff employed at the institution. Integrating AI into education is not without challenges and requires a re-evaluation of traditional learning models and a shift towards constructivist learning methods, with an emphasis on application and project-based learning that puts students at the center of the educational process.

These challenges include issues of fairness inherent in built-in biases present in artificial intelligence systems, as well as privacy concerns regarding the use of data to train these systems. Higher education institutions must adopt a methodology to encourage faculty members to critically evaluate how artificial intelligence is used in all educational practices, and to clarify expectations about its use to ensure that it supports learning objectives rather than undermining them.

3 Artificial Intelligence at King Abdulaziz University

It has become necessary to have a unified road map and a comprehensive and flexible framework that specifies the governing policies and principles of artificial intelligence to beneficiaries of educational services in higher education in order to adopt ethical practices and assume thoughtful integration between these technologies and educational objectives. This can be accomplished by focusing on supporting the educational objectives, risk mitigation, and ensuring equitable access for all students. From this standpoint, King Abdulaziz University has been interested in building an integrated intellectual system that reflects its view on the importance of artificial intelligence, and acknowledges its role in advancing academic research and administrative procedures at the university.

This quest is supported by the vision and mission of King Abdulaziz University where the framework is represented in the objectives of the university outlined in the fourth strategic plan 2022-2025 (Tomouh i.e. Ambition). This strategic plan includes a set of initiatives in the realm of academic excellence, research, innovation, entrepreneurship, and positive societal impact while ensuring the sustainability of gains. The objectives of the university can only be achieved by keeping pace with developments/advancements made in all fields, including the rapid progress of artificial intelligence of all types, and in particular, the advancement seen since 2022 with the emergence of Generative AI tools.

Therefore, King Abdulaziz University aspires to lead its stakeholders, including faculty members, researchers, leaders, and administrative and technical staff, in a systematic way to acquire competency in using AI in accordance with national and international guidelines, frameworks, and regulations. This can be accomplished by developing both general and unified policies for the use of artificial intelligence in education, training, research, and administrative processes, to provide distinguished services to the beneficiaries of its programs.

The Institutional Perspective of King Abdulaziz University Regarding the Use of Artificial Intelligence in Education and Scientific Research

Early education

- Dynamic learning experiences
- Integrating artificial intelligence into teaching

Ethical artificial intelligence

- Responsible use of artificial intelligence
- Ethical guidelines

Excellence in scientific research

- Artificial intelligence in pioneering research
- Enhancing the quality of research

Smart management

- Artificial intelligence in management
- Automation of administrative tasks

Collaborative use of artificial intelligence

- Collaboration between faculty members and students
- Artificial intelligence projects and research

Knowledge of artificial intelligence

- The impact of skills and knowledge on artificial intelligence
- Workshops and seminars

Graduates prepared for the future

- Preparing students for an AI-enhanced world
- Job readiness

Global leadership

- Leadership in artificial intelligence education
- International recognition

Objectives of this Guide

King Abdulaziz University realizes that AI has the potential to significantly contribute to, and enhance the processes of teaching, learning, academic research, and administration. It is from this standpoint that the university took the initiative to design this comprehensive Guide entitled "Artificial Intelligence Guide and Policies for Education and Scientific Research" which aims to layout a systematic approach to the use of artificial intelligence in various academic, administrative, and research fields within the university. By setting clear goals and guidelines for the use of artificial intelligence, this Guide serves as a manual for AI users and sets an ideal standard for practice which supports the core values of the university, which are: to enhance innovation, and to positively increase the educational experience for students, faculty, and staff. Accordingly, the general objectives of this Guide are as follows:

1. To provide a unified and sustainable framework for the use of artificial intelligence techniques and tools at King Abdulaziz University, allowing for the codification of inputs and outputs in the educational, research, training, and administrative processes that may benefit from its use.

2. To support the adoption of artificial intelligence tools and techniques in education, research, and training programs by providing clear instructions with specific outcomes.

3. To introduce the basic principles adopted by King Abdulaziz University to govern the use of artificial intelligence applications and tools from the institutional perspective of King Abdulaziz University, in line with its vision, mission, and strategic objectives, and in accordance with national and international regulations.

4. To Identify and establish the necessary policies related to the use of artificial intelligence; whether those policies relate to security, privacy, providing training and support, or any other aspect related to using smart technology in a sustainable and responsible manner.

5. To provide multiple models for incorporating the use of artificial intelligence in the field of education, formulating regulations related to learning, academic research, development, and administration.

Objectives of Artificial Intelligence Guide and Policies for Education and Scientific Research in King Abdulaziz University

Provide goals and guidelines

Direct users towards ideal practices

Provide a comprehensive and structured approach

Employing artificial intelligence in academic activities

Employing artificial intelligence tools in administrative activities

Employing artificial intelligence tools in research activities

Identify distinctive contributions

Promote education

Enhance learning

Promote academic research

Strengthen management

Create a unified and sustainable framework

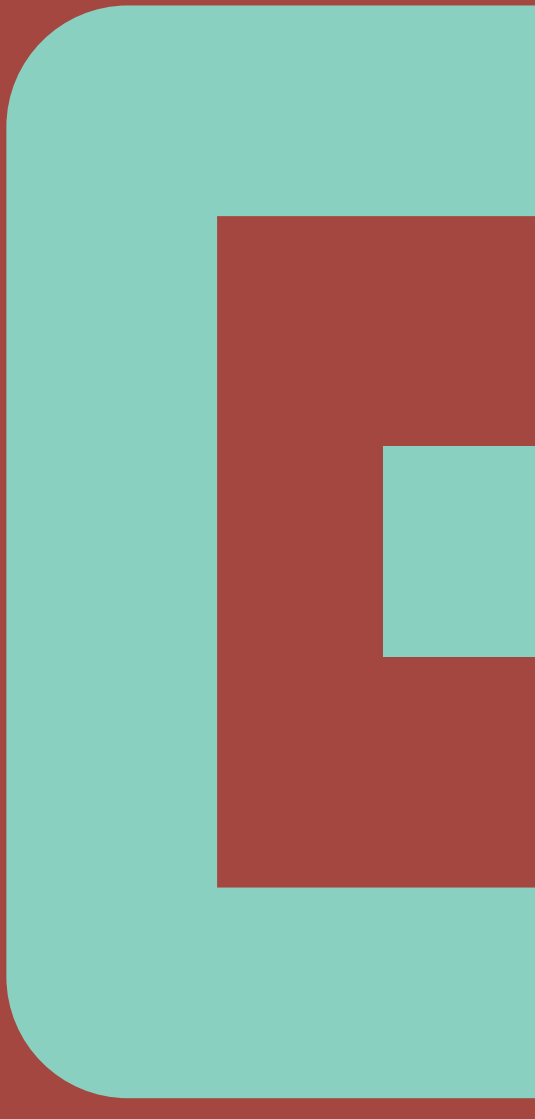
Applying artificial intelligence techniques in the university

Regulating inputs and outputs in educational, research, training, and administrative processes

Encourage innovation

Improving the overall educational experience

AI projects and research



Section Two

Methodology for Preparing the Policy Guide

Developing a guide of the use of artificial intelligence at King Abdulaziz University represents a strategic initiative by the institution aimed at enhancing the culture of innovation and technological progress. This guide also includes a systematic approach to integrating the use of artificial intelligence tools and applications into various academic disciplines, research and administrative activities. Accordingly, this section specifies the stages and methodology stages used in preparing the guide. This methodology consists of three main stages, which take into consideration the unique position of the university, ensuring its demands and aspirations are met; and leveraging existing national benchmarks for using AI, while also considering the best global practices, and the valuable lessons already learned from those initiatives.

1 National References for King Abdulaziz University AI Policy

This document reviews seven basic principles: integrity and fairness, privacy and security, humanity, social and environmental benefits, reliability and safety, transparency and explainability, accountability and responsibility. The first stage in creating this guide consisted of analysing the data retrieved on national standards related to the principles governing AI and digital education issued from the years 2023 & 2024 i.e. "Principles of Ethics in Artificial Intelligence - 2023" issued by The Saudi Data and Artificial Intelligence Authority (SDAIA). Another document analysed was: "Generative Artificial Intelligence in Digital Education - 2024" which addressed a range of potential use cases in higher and public education, in addition to the ethical use of artificial intelligence. It summarized a significant set of challenges, such as the possibility of over-reliance on these tools, and the poor quality of content produced. These documents also discussed AI technology design, lack of human communication, and potential bias and errors in the outputs of generative AI applications. The most significant future direction for the use of AI in education, as identified in this document, depends on its alignment with educational objectives, and whether or not it focuses on developing critical and analytical skills. This guide also emphasized the importance of developing policy and ethics models, which can serve as a basic building block in the educational and research system in any educational institution.

The specifications laid out in another national reference, "National Framework for Artificial Intelligence in Digital Education" (2023), issued by the National Center for E-Learning Specifications included leadership, curriculum design and content development, teaching and learning, evaluation and performance monitoring, ethics of responsible use, technical standards, protection and data privacy, student support, professional development, and continuous assessment and improvement. Although this framework is related to digital education, the educational practices referred to also apply to regular learning programs in a way that supports the adoption of artificial intelligence in a systematic manner.

Based on the analysis of data obtained through national references dealing with the use of AI, including those mentioned above: the following aspects were all addressed in this guide: educational, research related issues, the development of human capabilities, and continuous improvement.

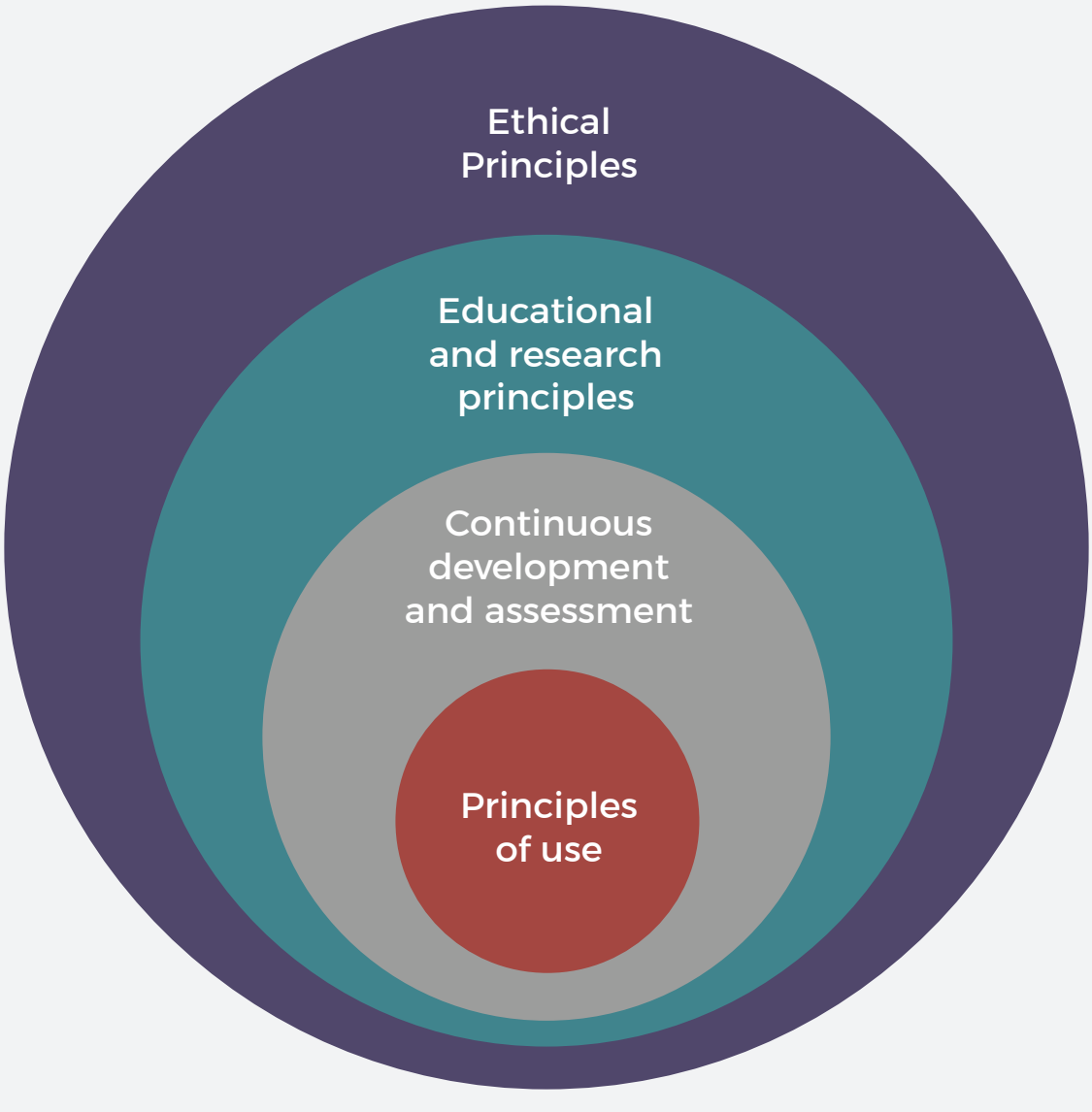

Ethical Principles
Educational and research principles
Continuous development and assessment
Principles of use

Figure (No. 1)

2 Benchmarking with International Institutions

The second stage set a benchmark with international institutions. It consisted of a detailed analysis of the principles, directives, and policies set for the use of artificial intelligence issued by specialized international bodies and organizations, such as Russel Group, UNSECO, US Office of Educational Technology, UK Department for Education, as well as other documents issued by the top 10 universities according to the Times Higher Education classification. Appendix No. (1)

These institutions have developed a body of documented practices in this regard, including published principles and policies, and a set of guidelines for faculty and students that address different aspects of AI use in higher education. The entities responsible for issuing these documents range from information security teams and university educational development centres, to specialized university colleges, which indicates a broad institutional commitment to the ethics, security, and pedagogy of AI.

This further reflects the approach of each institution and its unique academic culture and priorities. Yet, common themes emerge, such as emphasis on academic integrity, ethical use of generative AI tools, and protection of data privacy. For example, the "New Guidelines for the Safe Use of AI" issued by the Oxford Information Security Team, and the "Guidelines for the Use of Generative AI Tools" from the Dean's Office at Yale University, indicate concerted effort to navigate the complexities of AI in a responsible manner and anticipate the future of these technologies in the educational process. The benchmarking conducted reveals a landscape in which leading global entities are actively involved in monitoring the challenges and opportunities presented by artificial intelligence. Appendix No. (1)

By aligning its public policies for the use of artificial intelligence with these standards, King Abdulaziz University aims to ensure that its use is characterized by responsibility and accountability and reflects a moral commitment to employing this technology in education, research, and in the areas of professional development and leadership, while maintaining the highest standards of integrity and transparency.

3 Setting the Principles for Using AI at King Abdulaziz University

In the third stage of the methodology, the outcomes of the previous two stages were utilized in formulating general ethical principles associated with the use of artificial intelligence at King Abdulaziz University. These principles represent a strong commitment to institutional and ethical values in the application and use of artificial intelligence in teaching and learning, academic research, and administration. These principles serve as guiding pillars for the university, faculty members, students, researchers, and all employees to strike a balance between reaping the benefits of technology while maintaining ethics and values in the core areas of university operations. We are confident that these principles reflect the dedication of the university to implementing and promoting the concepts of equity, privacy, transparency, accountability and empowerment to achieve sustainable and ethical progress in the use of artificial intelligence techniques and tools.

Integrating artificial intelligence into operations made by educational institutions represents a major leap in the development of teaching, learning, training, research, and administrative activities, King Abdulaziz University took the initiative to formulate a set of principles upon which the use of artificial intelligence is based in order to advance in its transformative journey towards adopting emerging technologies in academic fields. These principles are divided into three basic classifications: principles of ethical and responsible use, principles of educational and research use, and principles related to continuous development and assessment.

A. Principles of Ethical and Responsible Use of AI

Justice and Fairness

King Abdulaziz University promotes the values of equality and justice when employing artificial intelligence tools in teaching, learning, training, and research. This ensures that all categories of beneficiaries; including faculty members, students, and administrative staff, have access to resources and opportunities that support the acquisition of artificial intelligence competency correlating to their specific specializations.

Privacy and Data Protection

King Abdulaziz University is spreading awareness among all its employees on the importance of maintaining data privacy when using artificial intelligence technologies and tools in educational, training, and research, as well as emphasizing information security associated with its various systems in accordance with the regulations of the Saudi Data and Artificial Intelligence Authority (SDAIA).

Transparency

King Abdulaziz University provides students, faculty, and stakeholders with clear and comprehensive information on how to use artificial intelligence in educational, training, research, and administrative processes. This includes a transparent explanation of AI models and algorithms, their roles, and their impact on content creation. The academic and administrative community will be involved in discussions about ethical and educational considerations related to artificial intelligence, ensuring transparency in both its applications and impacts.

Responsibility and Accountability

King Abdulaziz University implements all processes related to accountability, and maintains strict control over the systems, applications, and models of artificial intelligence being used. The measures are used in order to prevent bias, support justice, and protect the privacy of student data by conducting regular assessments, and preparing insightful reports on the impact of artificial intelligence on teaching, learning, training, academic research, and administrative processes.

Intellectual Property Rights

King Abdulaziz University owns the rights to the educational content that is created by its employees using artificial intelligence applications managed by the university, in accordance with relevant national regulations, contracts, agreements, or policies. In the event that joint educational content is created between King Abdulaziz University and another educational institution, the university and the other educational institution jointly own the rights to the educational content that is created using artificial intelligence applications owned by either university, in accordance with the terms of the agreements specified therein.

Principles for the Ethical Use of Artificial Intelligence at King Abdulaziz University

Privacy and Data Protection

Privacy and data security

Information security in accordance with SDAIA regulations

Justice and Fairness

Commitment to equality and justice

Equal access to AI skills

Responsibility and Accountability

Maintain responsibility and supervision

Prevent bias and support equity

Transparency

Clear information about the role of artificial intelligence

Engagement of the academic and administrative community

B. Principles of Implementing AI in Education

1. **Alignment with educational objectives and learning outcomes:** King Abdulaziz University is keen to enhance the connection and alignment between the use of artificial intelligence applications and tools and the learning objectives and outcomes of programs, educational courses, curricula, and training programs. The competencies of using these tools are enhanced within the pedagogical and educational framework adopted by the university and based on the ability of these technologies to contribute meaningfully to the most basic mission of the university; to provide high-quality education.

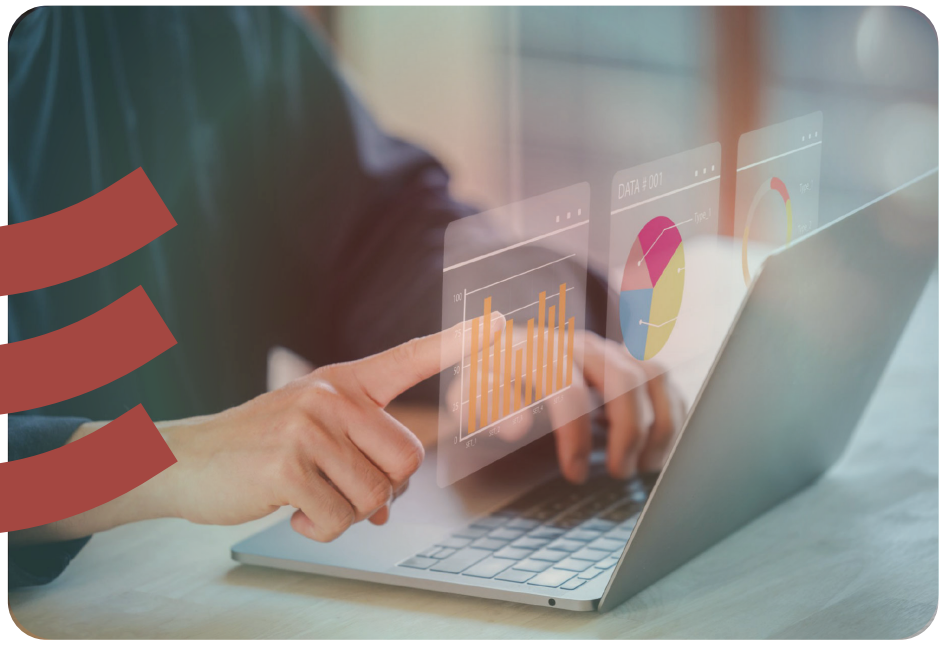
2. **Students at the focus of the educational process:** King Abdulaziz University works diligently to support the adoption of artificial intelligence applications and tools so that the learner is the focus and the main beneficiary of their employment. In this context, academic programs will be supported in adopting artificial intelligence applications to design unique educational experiences and enhance them in a way that is compatible with student needs, interests, and learning styles.

3. **Empowering colleges and academic departments:** King Abdulaziz University is determined to have colleges, academic departments, and programs implement national and university directives and policies related to the use of artificial intelligence applications and tools in the educational process. While encouraging their use they will simultaneously provide them with flexibility in designing and implementing the policies, and tailoring them to meet the demands of their fields and in accordance with the needs of students affiliated with the colleges and academic departments.

4. **Empowering faculty members and other teaching staff:** King Abdulaziz University works to empower and support its faculty members in making informed choices regarding the integration of artificial intelligence into their educational and training practices. The university believes that artificial intelligence is an assisting technology, and not a substitute for their unique educational experience and abilities. This commitment ensures an environment in which faculty members are encouraged to innovate, explore and design their own teaching methods, while simultaneously preserving the fundamental human element of education: the lasting bond between teacher and student.

5 **Authenticity and Academic Integrity:** King Abdulaziz University will work to address academic concerns related to plagiarism, fraud, and intellectual property rights that may arise from the use of artificial intelligence applications and tools. It pledges to maintain a vigilant stance against any actions that affect the integrity and ethics of the educational and research environment. This commitment extends to promoting a culture of integrity, where faculty members, students, and researchers are educated about the importance of authenticity and ethical behavior in their academic and research products. From this standpoint, the university will continuously evaluate and adapt its strategies to protect the academic integrity of the institution in the face of advanced technologies, ensuring the sustainability of the application of its authentic values, which are at the center of its educational and research mission.

6 **Empowering Learners:** King Abdulaziz University is focused on ensuring student participation in decision-making regarding their educational experiences, as it pledges to uphold the principle of informed consent when it comes to AI-enhanced learning. Consequently, awareness will spread among faculty members regarding the importance of observing student capabilities and providing them with resources to implement the requirements of the educational process that benefit from artificial intelligence applications and tools.



C. Principles of Implementing AI in Research

1. **Accuracy and reliability of data:** King Abdulaziz University emphasizes the importance of verifying the accuracy and reliability of data when using generative artificial intelligence tools in academic research. The university encourages researchers to review the results and compare them with reliable scientific sources to verify their authenticity, and similarly, document the data sources used and verification procedures to ensure transparency and ease of tracking.

2. **Interdisciplinary research:** King Abdulaziz University encourages interdisciplinary cooperation in research that uses generative artificial intelligence tools, through which the university seeks to integrate knowledge and expertise from different fields such as computer science, statistics, social sciences, and medicine to achieve more comprehensive and accurate results.

3. **Keeping pace with development:** King Abdulaziz University focuses on the need to enable researchers to acquire the necessary knowledge and skills in the field of generative artificial intelligence. It provides continuous development opportunities through workshops, and training courses related to the use of artificial intelligence tools, enhancing efficiency and ensuring the optimal use of these technologies in academic research.

4. **Continuous assessment of research outcomes:** King Abdulaziz University stresses the importance of critical assessment of the results reached by researchers using generative artificial intelligence tools, as critical analysis contributes to improving the quality of research and ensures its reliability at the local and international levels.

5. **Ethical use and data privacy:** King Abdulaziz University attaches great importance to compliance with the highest standards of ethics when using generative artificial intelligence tools, and this includes respecting intellectual property rights, protecting the privacy of the data used to train the artificial intelligence models, and the methodologies used in analysis. This enhances confidence in academic research and maintains academic integrity. Researchers should also adhere to policies and laws related to data protection, and avoid using data in a way that could cause harm to individuals, or society.

D. Principles of Implementing AI in Continuous Assessment and Development

1. **Digital culture in artificial intelligence:** King Abdulaziz University works to promote digital literacy and enhance a deep understanding of artificial intelligence applications and tools among all its beneficiaries and users at the university. The university offers comprehensive qualification and training paths that ensure users acquire basic competencies in the fields of artificial intelligence, learn about its advantages and potential challenges, with a focus on ethical considerations. This commitment includes providing categories of learners with continuous learning competencies and preparing for future careers in a world dependent on artificial intelligence, while enhancing their global citizenship in this field.

2. **Professional Development:** King Abdulaziz University provides continuous support to faculty members, researchers, and members of the administrative and technical staff by providing them with the basic training and resources necessary to gain a thorough understanding of artificial intelligence applications and tools with the goal of enabling end users to harness these technologies effectively in their educational, research, and administrative practices. The commitment extends to ensuring that they are always up to date on the latest and best practices and emerging technologies in the ever-evolving AI landscape.

3. **Continuous Assessment:** King Abdulaziz University focuses on implementing continuous review of the regulations related to the educational and research process at the university. These regulations are related to study and examinations, controlling students' behavior, and regulations for student rights and responsibilities, besides other training and administrative practices based on artificial intelligence. The impact of artificial intelligence on teaching, learning, academic research, and administrative workflow is regularly evaluated by beneficiaries from all categories.

4. **Exchange of knowledge and expertise:** King Abdulaziz University seeks to enhance communication and engagement with stakeholders in the local and international communities to facilitate the exchange of knowledge and experiences of AI practices incorporated in education. The university aims to continuously develop the fields of applied research, promote cooperation and mutual progress in technological innovation, and improve the quality of life within communities using artificial intelligence techniques and tools.

5. **Social responsibility:** King Abdulaziz University is interested in social responsibility in the use of artificial intelligence. The university prioritizes addressing societal needs and issues through the ethical and responsible use of artificial intelligence, focusing on community well-being, promoting inclusivity and equity, and ensuring transparency and accountability. Thus, King Abdulaziz University aims to enhance its practices in the field of artificial intelligence and make a positive contribution to society while enhancing trust and cooperation with stakeholders.

Section Three

AI Application in Education and Scientific Research at King Abdulaziz University

The third section deals with the various methods of use that King Abdulaziz University presents to users as a set of ideal practices. These approaches embody the diverse application of artificial intelligence in the academic, research, and administrative fields of the university, which represent unique approaches to responsible and ethical practices to leverage AI to enhance efficiency, effectiveness, and innovation in core operations within the university.

First: AI Application in Education and Scientific Research at King Abdulaziz University

Based on benchmarks as well as through a review of relevant literature, it was noted that there is a multiplicity and diversity of ideal practices for using artificial intelligence in education. In this guide, King Abdulaziz University primarily aims to develop and ensure the quality of the educational process within an environment supportive of employing artificial intelligence applications, and tools. This section of the guide adopts an approach that focuses on the main components of the educational process: including content design, assessment tools, and evaluation methodologies, as well as aspects related to learner preparation and support, as these proposed practices aim to improve the educational experience while ensuring compatibility with learning outcomes and academic standards of integrity. By exploring these practices, the university seeks to demonstrate how AI applications and tools can be strategically harnessed to foster a dynamic and adaptable learning environment, contributing to its key goal of academic excellence.

1- Designing Educational Content and Curricula

1.1 **Alignment with learning outcomes:** Faculty members who use artificial intelligence to design a course component, should verify that the content being composed is related to and compatible with the learning outcomes of the programs and courses being taught. Moreover, they should evaluate its relevance to the course and the extent of its compatibility with the educational level and skills required of the students.

2.1 **Accuracy of information:** During the instructional design process of the courses, faculty members should ensure that the facts and information provided by artificial intelligence are accurate and reliable. This requires a comprehensive review of the content generated by artificial intelligence, and ensuring that it is consistent with the facts and knowledge cited in specialized sources and references. This is essential in order to ensure the quality and integrity of course content.

3.1 **Up-to-date information:** Faculty members should periodically verify that the educational content created by artificial intelligence reflects the latest developments and research in their respective field. Although artificial intelligence models are supportive tools in creating course content, their data may become outdated later, especially in rapidly developing fields. Therefore, faculty member must enhance and enrich any content created by artificial intelligence with developments in their field of specialization on a regular basis.

4.1 **Critical Evaluation:** Faculty members should critically evaluate the information and data sources used by AI service providers in training AI models and applications, as AI models may have limitations in the quality, comprehensiveness, and accuracy of the content created due to the type of data upon which these models were trained, and the timeframe within which they operate.

5.1 **Disclosure of the use of artificial intelligence:** Faculty members should inform educational stakeholders if all or part of the educational content has been authored using artificial intelligence in order to define the role of this technology in developing educational materials and enhancing the learning process. This step is to ensure clarity and transparency in the teaching process. It further enables students to understand how advanced technology is used in the educational environment, leading to their understanding of the impact of artificial intelligence in their fields of study.

6.1 **Inappropriate or biased content:** Faculty members should review the content that is designed by artificial intelligence to verify that it does not violate any national, religious, cognitive or legislative sources in the field of specialization. They should also verify that it is free of bias, as studies have shown that AI tools may generate content, which may feature some degree of linguistic, cognitive, ethnic, and/or religious bias, or content that is not consistent with the established principles of the Kingdom of Saudi Arabia for societal and religious norms.

7.1 **Educational media:** Faculty members who use AI to design educational media such as images, animations, video and audio should verify that these authored resources do not rely on artificial intelligence models that infringe on the intellectual property rights of the works, or that such media does not contain bias or violations. When AI material is used within the course content, it is important to note that the AI models were co-authored.

8.1 **Creative works:** Faculty members who use artificial intelligence to design creative works, such as books, academic references, educational games, educational video scenarios, and other types of products in which the artificial intelligence model may obtain data linked to intellectual property rights, or could be subject to laws related to data privacy or otherwise; whether at the national or international level, must verify and cite the technology used in creating the works. They should also disclose the level of AI engagement to ensure the quality of the teaching and learning process where these works are used.

2- Designing Educational Activities

2.1 **Developing higher-order thinking skills:** Faculty members use artificial intelligence to design tools for evaluating educational activities such as: (tests, assignments, and projects) in a way that works to enhance students' critical thinking, problem solving, and creative thinking skills, and not merely automate the process of designing educational activities. This demands that these activities support deeper student engagement with educational content and requires them to analyse and collect information in innovative ways.

2.2 **Ensuring academic integrity:** Faculty members should design assessment tools and educational activities that challenge students to demonstrate their knowledge and skills acquired from educational experiences, so that students would not rely on superficial responses generated by artificial intelligence, which result in fraud or plagiarism. This requires designing tests, assignments, and other academic activities in a way that requires practicing critical thinking and analytical skills and applying concepts to new or complex scenarios, which artificial intelligence cannot easily simulate, or solve. In addition, the faculty member should regularly discuss and emphasize the value of academic integrity, especially in contexts where AI is used. This includes educating students about the importance of creative thinking and the ethical implications of relying on artificial intelligence in their work.

2.3 **Equity and Accessibility:** Faculty members should verify that AI-generated assessments meet the diverse needs of all students, including students with disabilities. Flexible design principles are used to formulate assessments, enabling students to engage according to their individual preferences and abilities in ways that ensure compatibility of AI-designed assessments with assistive technologies for such groups.

Rules Regulating the Use of AI in Education at King Abdulaziz University

Designing educational activities

Enhancing analytical skills
Creating educational activities to develop critical thinking

Academic Integrity
Designing assessments that support academic integrity and ethics

Equity and accessibility
Ensure equal opportunities in education for all students

Designing educational content and curricula

Educational integration
Enhancing content design with artificial intelligence

Accurate and up-to-date information ensuring accuracy and continuous update of content

Transparency and up-to-date information ensuring accuracy and continuous updating

Respect intellectual property and clearly document sources and sharing

3- Assessment and Evaluation

3.1 **Alignment with learning outcomes:** When using artificial intelligence to design assessment tools (tests, assignments, etc.), faculty members should ensure that diverse and customized questions are generated that are aligned with the course learning outcomes. They should plan to provide detailed feedback and verify accuracy and fairness of assessment tools, and recognition of the advantages and limitations of artificial intelligence in this context.

3.2 **Comprehensiveness of the assessment process:** faculty members should take into account that their AI based evaluation tools are part of a comprehensive methodology of evaluation that also contains traditional and interactive evaluation methods to obtain a complete view of student achievement and performance.

3.3 **Quality of assessment criteria and rubrics:** When artificial intelligence is used to build assessment rubrics in formative or summative activities, test plans, items or question banks, faculty members should review the tools that were designed or generated by artificial intelligence to verify their accuracy, comprehensiveness, their alignment with learning outcomes and their ability to measure student performance, in a way that serves the educational process.

3.4 **Automated correction:** When using artificial intelligence to automatically correct student written work, a faculty member must design evaluation rubrics, which determine the expected level of student mastery of skills related to courses. Samples should further be human-verified and appropriate feedback should be provided to students to assure reliability of the assessment process.

3.5 **Formative assessment:** When artificial intelligence is used in designing and measuring the outcomes of formative assessments, faculty members should include diverse methods in their design such as case studies, simulations, applied educational scenarios, and other types of activities, which can be enriched by artificial intelligence. This way, student engagement and interaction with academic content can be ensured, and learning outcomes can be achieved.

3.6 **Instructions and guidelines:** Faculty members who employ artificial intelligence in the processes of designing educational activities and assessments should provide continuous support to students by providing instructions that facilitate appropriate implementation of assessments. Based on the results and feedback provided by these applications, faculty members should further provide students with suitable extra-curricular learning resources.

3.7 **Analysis of assessment data:** Faculty members who use artificial intelligence should crosscheck course learning outcomes with AI analysis data. Course learning outcomes should be aligned with the program learning outcomes and previous data in order to ensure accuracy and reliability.

3.8 **Privacy of assessment and evaluation data:** When using artificial intelligence in the evaluation processes, student information or their university performance data must not be fed into artificial intelligence models. Artificial intelligence service providers may infringe upon data privacy by using data to train their models in tasks such as generating question banks and other assessment material whose components are supposed to be confidential.

3.9 **Complaints:** Faculty members who use artificial intelligence to evaluate student work and provide feedback should set clear mechanisms for receiving student complaints and related grievance cases in accordance with the procedures specified in the academic program.

3.10 **Limited capabilities of artificial intelligence in assessment and evaluation:** Faculty members must be aware of the limits of artificial intelligence in the context of student evaluation owing to the fact that such techniques and tools can only be considered as assisting tools not a substitute for human practice and expertise in the evaluation processes. While acknowledging their effectiveness in fully automating certain educational processes, there remains a significant need for human intervention in other situations.

Ten Guidelines for Using Artificial Intelligence in Assessment and Evaluation at King Abdulaziz University

Formative assessment Design

Assessments that enhance engagement

Automated correction

Evaluation criteria with human verification

Quality of assessment tools

Quality and accuracy of tools reviewed

Comprehensiveness of the evaluation

Integration with traditional evaluation methods

Alignment with learning outcomes

Design assessment tools consistent with learning outcomes

Accurate feedback and fairness

Limited capabilities of artificial intelligence

Recognizing the limits of artificial intelligence

Complaints

Mechanisms for dealing with student complaints

Privacy of evaluation data

Maintaining the privacy of student data

Analysis of evaluation data

Accuracy and relevance of assessment data

Guidelines and instructions

Ongoing support and guidance for students

4- Preparing Students

4.1 **Enhancing learner experience:** Faculty members should provide students with the knowledge and skills necessary to effectively use artificial intelligence in their courses, or guide them to the AI training programs offered by the university.

4.2 **Building knowledge communities and exchanging experiences:** Faculty members should encourage the exchange of experiences and knowledge about AI tools and methods, whether through cooperation and participation among students in implementing activities that employ artificial intelligence, or through relevant knowledge communities at the university.

4.3 **Awareness of the importance of academic integrity:** Faculty members should direct students to the importance of applying academic integrity standards when using artificial intelligence, while realizing the importance of adhering to ethical behavior in carrying out the activities and tasks assigned to them. To achieve this, students must be educated about academic integrity, including avoiding plagiarism and proper attribution, with a particular focus on AI-generated content. Likewise, they are instructed on ethical use of data, respecting privacy, addressing biases and fairness in AI models.

4.4 **Explaining the importance of maintaining data privacy:** Faculty members should discuss data privacy considerations with students, especially when using artificial intelligence in their courses or academic research, so that students learn the importance of protecting sensitive data, respecting the privacy rights of individuals, and adhering to relevant laws and regulations.

4.5 **Disclosure and Transparency:** Faculty members should maintain effective communication with learners regarding potential updates made to the course, its content, assessment tools, and the mechanisms used for measuring student performance incurred by using AI. Students must be informed about potential concerns about intellectual property rights violations, academic integrity, cheating, so that they are constantly aware that there are transparency and disclosure procedures at the institutional level that obligate them to be transparent when using these tools.

5-Designing policies for the use of AI at course level

5.1 **Designing custom policies:** Faculty members should use institutional principles and guidelines to formulate specific, detailed policies for how AI will be used their courses, particularly regarding documentation of its use as a resource, and ensuring academic integrity.

5.2 **Disseminating policies to learners:** Faculty members should alert students to the importance of adhering to course policies when using artificial intelligence in various learning activities. They should provide students with these policies and mechanisms at the beginning of the semester.

5.3 **Course syllabus:** Faculty members should include all policies and mechanisms related to the use of artificial intelligence to the course description file, and on the course website. They should ensure that course files are constantly updated according to changes at the university and program levels.

5.4 **Plagiarism checking tools:** Faculty members should encourage students to use plagiarism checking tools using artificial intelligence to ensure that they apply standards of academic integrity, emphasizing that the output of such tools is not completely accurate, but is used as guidance to avoid plagiarism. The faculty member uses it with caution due to accuracy considerations noted above and proven through studies.

5.5 **Levels of Acceptable AI Use in the Course:** Faculty members should clearly define acceptable AI use with detailed examples in the course syllabus. The policy may include any or all of the types of permissions below depending on the nature of the course and the type of educational activities it provides :

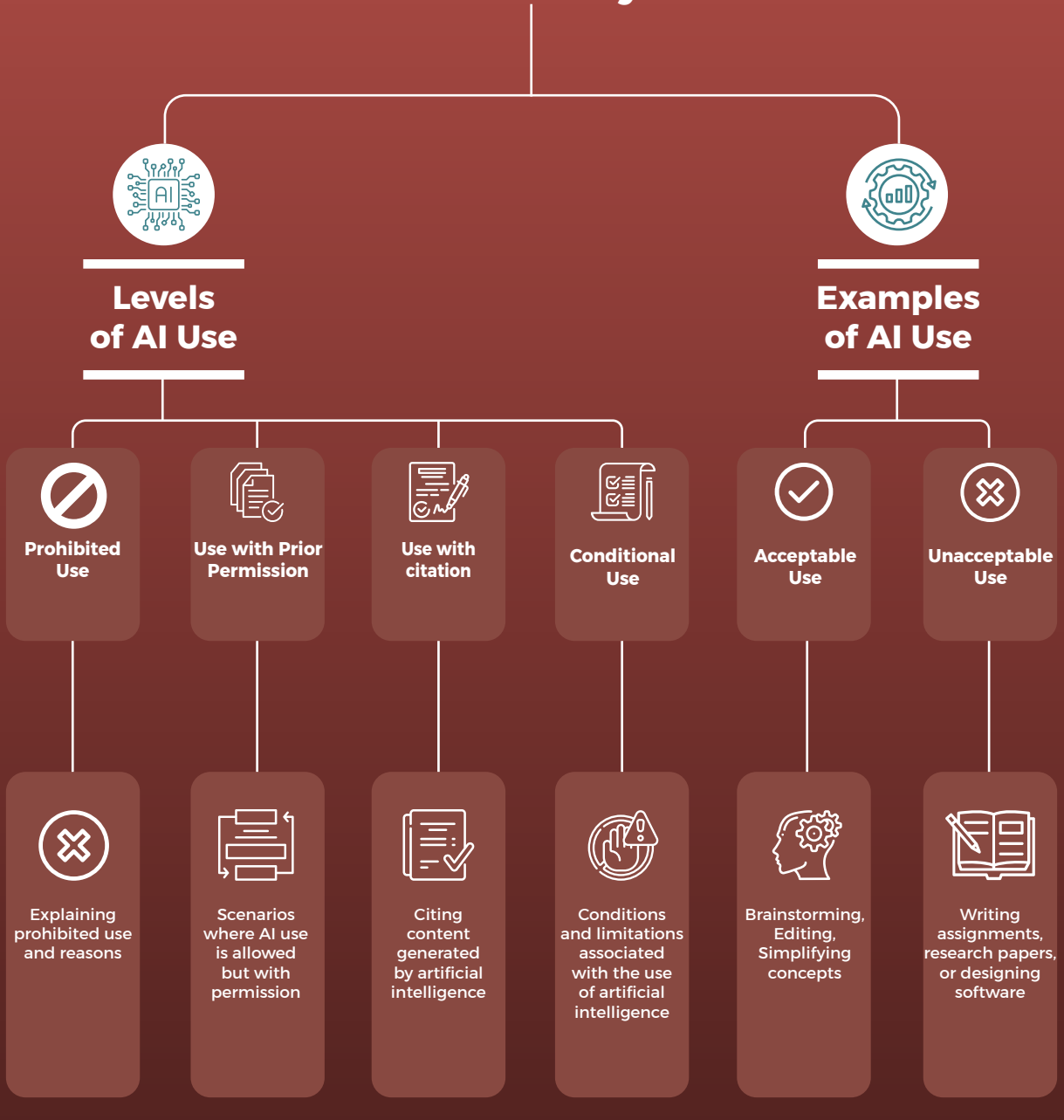
- **Prohibited Use:** Faculty members should determine whether there are any aspects of the course in which the use of AI is strictly prohibited and the rationale behind this decision.
- **Use with prior permission from the faculty member:** Faculty members should explain scenarios in which AI may be used with prior approval, detailing the procedures for obtaining permission.
- **Use with Citation:** Faculty members should explain to students the referencing systems of AI-generated content, including citation formats and any required appendices.
- **Permissible but Conditional Use:** Faculty members should explain to students whether the use of AI is widely permitted, identifying conditions and limitations on the types of tools, specific tasks, or ethical considerations relevant to the use.

5.6 **Examples of Acceptable Use:** Faculty members should discuss examples of acceptable AI use and clearly identify them in their courses, such as brainstorming for ideas, proofreading content made by students, simplifying complex concepts, translating texts, or designing media with documentation.

5.7 **Examples of unacceptable use:** Faculty members should clearly identify examples of unacceptable use of artificial intelligence in both educational activities and assessment (including tests) and discuss them with students. Unacceptable use may include: writing assignments and answering tests by generating AI texts or scientific content, writing academic papers, designing complete software, generating various media without citation, describing media such as pictures and graphs automatically, or using artificial intelligence for inappropriate literature review, or modifying media and claiming ownership, or completely rewriting assignments and research. This may require prohibiting the use of mobile devices during exams because they facilitate access to such tools.

5.8 **Determine the required documentation format:** Faculty members should introduce students to the method of citing works authored by artificial intelligence when it is permitted in their courses, and provide multiple examples of this according to the nature of the content generated.

Types and Examples of Students Use of Artificial Intelligence at King Abdulaziz University



Second: AI Application in Scientific Research

The use of artificial intelligence has become increasingly widespread in academic, revolutionizing the way researchers approach complex problems in various disciplines. There is no doubt that these tools facilitate many research practices which range from analysing large datasets to discovering patterns and predicting results to providing powerful tools that enhance efficiency, accuracy, and scope of academic research as well as research potentials and application. While these technologies offer tremendous potential to automate various aspects of the research process, they also pose challenges and raise questions regarding research integrity, intellectual property rights, originality of ideas, and ethical considerations inherent in academic research. In this guide, we will review some of the instructions for using these tools while discussing the implications of their use in academic research at King Abdulaziz University, with a focus on specific stages of the research process, such as defining research objectives, collecting and analyzing data, conducting literature reviews, choosing methodologies, research topics, analysing results, and peer-reviewing.

1- Ethics of Academic Research

1.1 **Authenticity of information:** When using artificial intelligence to conduct literature reviews, or generate and represent scientific texts and data, researchers should be cognizant that by presenting this information in their academic research they are accepting accountability regarding any claim to originality. This is of particular importance because these models have been trained on large language models, including data related to scientific research conducted by other researchers. As a result, the generated content may retrieve information from those studies without proper citation.

1.2 **Scientific integrity:** Researchers should adhere to national and institutional standards and regulations related to scientific integrity; especially when artificial intelligence is used in the various stages of research, where it is necessary for the researcher to disclose all research outputs resulting from artificial intelligence in a manner consistent with the requirements of local and international scientific publishing entities.

1.3 **Intellectual property rights:** Researchers should verify that the contents generated by artificial intelligence respect the intellectual property rights of authors, including copyrights and patents, by obtaining the necessary permissions and licenses to use existing works or develop new creative works.

1.4 **Quality of output:** Researchers should critically evaluate the sources of information and data that AI service providers use to train AI models and applications. AI models may have limitations on the quality, comprehensiveness, and accuracy of the contents generated due to the type of data on which these models were trained, the training timeframe, or limitations in the generalization of the results due to the limited scope of the model.

1.5 **Data privacy:** Researchers should ensure that all AI-based data used in their research is free from data and information that may infringe upon the privacy of groups, or individuals inside, or outside the university. This requires obtaining the necessary permissions from the committees concerned with the ethics of academic research in the university. In addition, when artificial intelligence is used to review or edit their research, they should be aware that such information becomes part of the data on which the artificial intelligence models are trained, which may violate the privacy of their data as well as their ownership rights to the research.

1.6 **Challenges and limitations:** Researchers should be transparently disclose all the challenges and limitations encountered when using artificial intelligence in academic research.

2- Ethics of Academic Research

2.1 **Generating research topics and ideas:** Researchers who use artificial intelligence to explore a wide range of potential research based on literature, current trends, and emerging areas of interest, should ensure that these ideas are related to their field of specialization, and the goals of modern academic research in the field. Therefore, they should not rely entirely on artificial intelligence to generate research ideas; without verification and/ or critical review of specialized knowledge, which could lead to research trends lacking consistency or relevance to their fields of study.

2.2 **Research objectives and hypotheses:** Researchers who use artificial intelligence to formulate the objectives of their academic research should make sure that they do not generate hypotheses, objectives, or research questions based on unrealistic or false assumptions. Generated contents must not be biased or ignore important research factors or variables. Instead, AI tools should be used to carry out review, edit, or to assist in brainstorming.

2.3 **Automated generation of research data:** Researchers should carefully review the methodology used in generating synthetic data, which simulates real data in order to ensure that synthetic data benefits from the distribution characteristics of real data. Consequently, the use of this type of data does not affect the quality of the academic research outputs nor the academic reputation of the researcher. Researchers should also disclose whether the automatically generated data used in their research aligns with the standards of local and international publishing outlets. It is important for researchers to verify that they are not using artificial intelligence to generate or design research data with the intention of deceiving or misleading, violating the standards of academic research, integrity, and therefore undermining the credibility of its results.

2.4 **Statistical processing using artificial intelligence:** Researchers should ensure that the artificial intelligence tools used to perform mathematical processes and statistical tests on their research data is capable of explaining the steps taken and is able to provide a clear interpretation of the methodology behind the execution of these processes. This ensures transparency and explainability, which is one of the most important set of principles associated with AI use in research.

2.5 **Data analysis using artificial intelligence:** Researchers who employ artificial intelligence in analyzing research data must not rely solely on automated analysis of data without verifying the validity of the results through an independent review by specialized experts in the field, so that this does not lead to the publication of low-quality research.

2.6 **Software and Model Design:** Researchers should clearly and accurately disclose how artificial intelligence has been used to develop software algorithms, both analytical and prediction models; whether entirely or partially. This should be considered in relation to intellectual property rights and scientific integrity that may conflict with the requirements of local and international scientific publishing outlets.

2.7 **Misrepresentation and misattribution:** Researchers should not use artificial intelligence to draft literary reviews that lack proper citation or attribution, as this may lead to violations related to plagiarism, where content created by artificial intelligence is presented as original work without acknowledgment of the original sources or authors.

2.8 **Decreased quality in research contribution:** Researchers should ensure that their authentic input in conducting literature reviews, writing the research, and discussing its results remains the most prominent aspect of the work. Relying on generative artificial intelligence for tasks such as literature reviews, for instance, can lead to a decline in the quality and depth of the research and its contribution. Over time, this dependency may undermine their ability to develop original and innovative research ideas, identify research gaps, and contribute meaningfully to advancements in their field of expertise.

2.9 **Peer review of academic research:** Researchers who engage in activities related to reviewing other research studies are not permitted to use artificial intelligence to provide the required feedback nor referee the research, as artificial intelligence models retain the data, and this may cause a violation of the intellectual property rights of researchers who are being reviewed.

Rules for Using Artificial Intelligence in Academic Research at King Abdulaziz University

Ethics of academic research

- **Originality of information:** Ensuring that the originality of the research is not violated
- **Scientific integrity: Clear** disclosure of research outputs
- **Intellectual property rights:** Respecting content and obtaining necessary licenses
- **Output quality:** Evaluating the accuracy of information and data
- **Data Privacy:** Maintaining the privacy of the data used
- **Challenges and limitations:** Disclosing challenges and limitations

Elements of scientific research

- **Generating research topics:** Exploring research topics
- **Formulating objectives and hypotheses:** Realistic and unbiased
- **Automated data generation:** Verifying the accuracy of the generated data
- **Statistical processing:** Ensuring transparency in statistical processing
- **Data analysis:** Validation of results by independent review
- **Software design and modeling:** Disclosing the use of artificial intelligence
- **Plagiarism and Misattribution:** Avoiding Plagiarism Violations
- **Quality of scientific contribution:** Ensuring that the research contribution is original
- **Peer review of research:** Protecting intellectual property rights

Third: AI Application in Administrative Practices and Processes

1- Building AI-Related Competencies

1.1 **Self-learning and competency development:** Employees are responsible for continuously updating their knowledge and skills in artificial intelligence, including generative AI, to stay up to date with the latest developments in the field. This involves actively participating in professional development opportunities, attending relevant training programs, and keeping informed of new trends in AI.

1.2 **Evaluation and improvement:** Employees should periodically assess the AI tools they use to ensure they are aligned with university goals and relevant to their job responsibilities. This includes evaluating the impact of technology and its effectiveness, and recommending improvements to enhance its efficiency and accuracy.

1.3 **Standardizing practices and procedures:** Employees using AI in their administrative tasks must ensure that it is employed according to the approved regulations, procedures, and policies of their sector. This applies to tasks such as data analysis and interpretation, report writing, and any other responsibilities where AI influences the process. Employees should avoid using unapproved data processing or analysis methods that might alter official procedures.

2- Data Privacy and Protection

1.1 **Compliance with Regulations and Laws:** Employees must comply with all relevant laws and regulations governing artificial intelligence and data privacy in academic and administrative contexts at King Abdulaziz University. This includes understanding and adhering to legal frameworks such as data protection laws, intellectual property rights, and any specific regulations relating to artificial intelligence in the educational sector. For example, employees must verify that no official documents are uploaded to sites that use artificial intelligence, especially those documents that contain sensitive official data, as these technologies and sites may retain and use the data for training AI models.

1.2 **Transparency and disclosure:** Employees must adhere to the principles of transparency and disclosure in their activities which utilize artificial intelligence, including providing accurate and comprehensive information about the methodology for collecting, using, analyzing, storing, sharing, and preserving data and the measures taken to ensure its protection. They must also regularly document the use of AI in the sector's reports.

1.3 **Making sensitive decisions:** Employees must avoid using artificial intelligence to make sensitive decisions that require specialized and high-level human judgment and expertise, such as hiring or dismissal decisions, decisions related to financial issues, etc.

Rules for the Use of Artificial Intelligence in Administrative Practices at King Abdulaziz University

Levels of AI Use

- **Unifying Practices and Procedures:** Adherence to regulations and procedures.
- **Evaluation and Improvement:** Evaluating the effectiveness of AI tools.
- **Self-learning and Skill Development:** Continuous updating of skills.

Examples of AI Use

- **Making Sensitive Decisions:** Avoid using AI in making sensitive decisions.
- **Transparency and Disclosure:** Providing clear and transparent information about data use.
- **Compliance with Laws:** Adherence to data protection laws.

Section Four

Roadmap to Implementing the Guide

Section Four
Roadmap to Implementing the Guide

As part of the initiative of King Abdulaziz University to encourage the adoption of a unified and comprehensive policy for using artificial intelligence in academic, research and administrative operations and activities, a well-defined and executable road map was developed. This road map was created in order to assist colleges and academic departments in adopting the policies, and documenting their practices; which in turn, supports their efforts towards achieving the university goals and relevant performance indicators. The proposed phases of the roadmap are divided into the following:

1

Surveying the opinions of stakeholders and leadership: The guide has been made available to stakeholders in various university sectors for review and feedback. This includes sharing their perspectives on its content and the possibility of adding to or developing it in alignment with the needs of each beneficiary group.

2

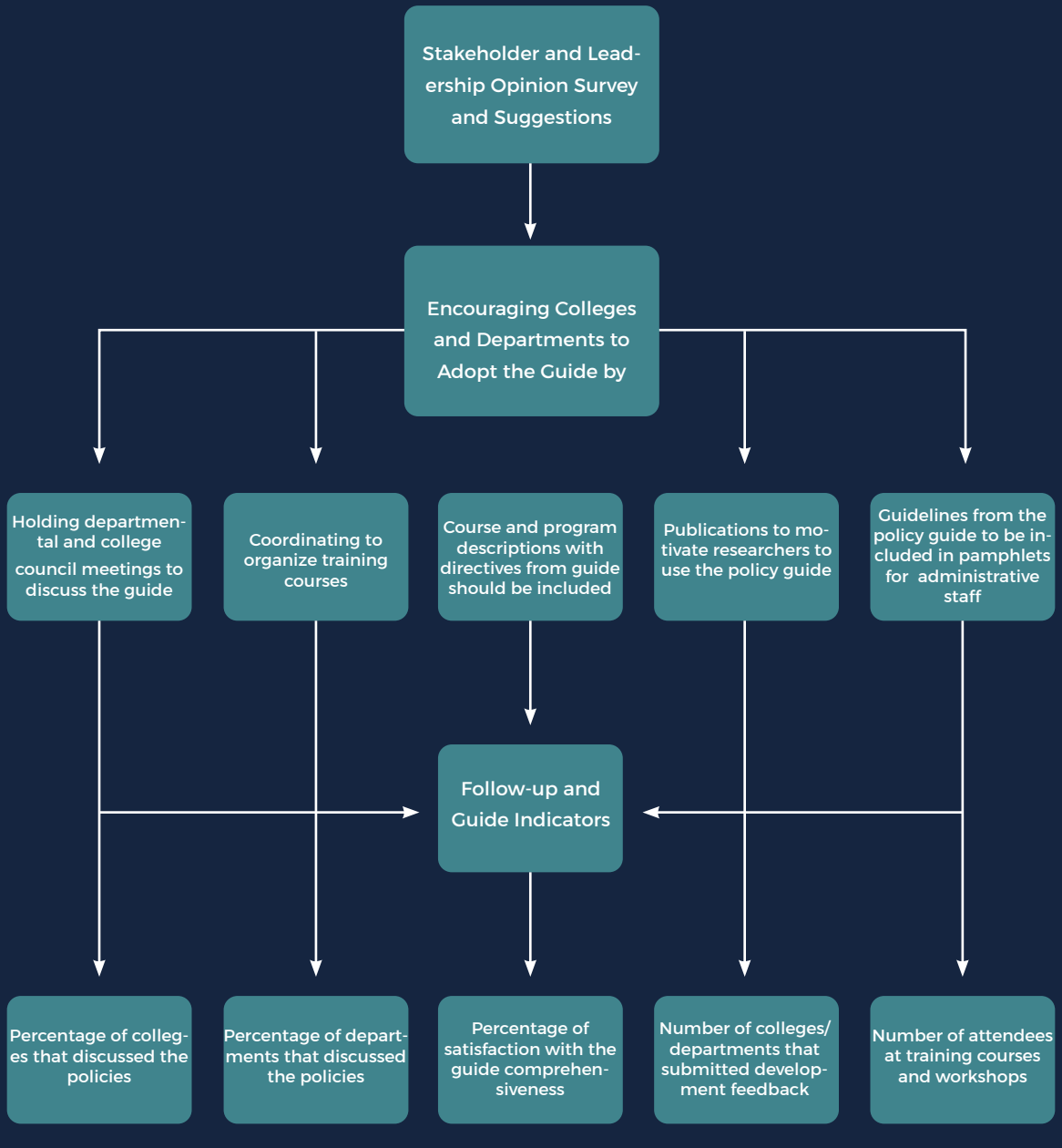
Encouraging colleges and academic departments to adopt the Guide: Here, we present the proposed procedure to implement this stage of the roadmap at the level of colleges and academic departments through the following steps:

- College/departmental councils should be held to discuss the policy and its key topics to encourage department members to adopt it in academic, research, and administrative processes.
- Coordinating with the Center for University Education Development to organize training courses and workshops aimed at enhancing the efficiency of AI users and familiarizing them with the principles of the university in this regard.
- Examples from the policy guide should be incorporated into course descriptions, syllabi, and academic assessment guidelines, and monitoring the implementation of these directives by department members, and collecting feedback.
- Educational content should be prepared to encourage researchers in the department to adopt the practices outlined in the guide within the context of academic research.
- Specific guidelines for administrative staff should be included in their job description or in awareness sessions specifically tailored for them.

3

Follow-up and performance indicators: Performance indicators related to previous activities are summarized as follows:

- Percentage of colleges that discussed the policies in their councils.
- Percentage of academic departments that discussed the policies in their councils.
- Percentage of satisfaction with the comprehensiveness of the Guide.
- Number of colleges/departments that submitted development feedback.
- Number of attendees in training courses and workshops held by the Center on the policies.



Roadmap for the Policy Guide

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A roadmap for adapting "Artificial Intelligence Guide and Policies for Education and Scientific Research at King Abdulaziz University"

University	Rank	Country	University Entity	Title of Documentation	Type of Documentation	Year of release	Target Audience	Status
California Institute of Technology	7	US	Center for Teaching and Learning and .Outreach	Guidance on the Use of Generative AI and Large Language Model Tools	Guidance	2023	Instructors	Community
California Institute of Technology		US	Center for Teaching and Learning and .Outreach	Resources for Teaching in the Age of AI	Guidance	2023	Instructors	Community
California Institute of Technology		US	Undergraduate Admissions	Ethics and AI at Caltech	Guidance	2023	Students	Community
Imperial College London	8	UK	Administration and support services	Academic Misconduct Policy and Procedure	Policy	2023	Students	Official
Imperial College London		UK	Administration and support services	Generative AI guidance	Guidance	2023	Students	Community
University of California, Berkeley	9	US	Office of the Chancellor	Appropriate Use of ChatGPT and Similar AI Tools	Guidance	2023	Instructors & Students & Researchers	Community
University of California, Berkeley		US	Research, Teaching, and Learning	Understanding AI Writing Tools and Their Uses for Teaching and Learning at UC Berkeley	Guidance	2023	Instructors	Community
Yale	10	US	Office of the Provost	Guidelines for the Use of Generative AI Tools	Guidance	2023	Instructors & Students & Researchers	Community
Yale		US	Administrative Data Governance	Yale University AI guidelines for staff	Guidance	2023	Instructors & Students & Researchers	Community
Yale		US	Poorvu Center for teaching and learning	AI Guidance for Teachers	Guidance	2023	Instructors & Students & Researchers	Community
Yale			Undergraduate Regulations	Academic Integrity	Updated regulation	2024	Students	Official

Appendix 1

Benchmarking the practices of leading global institutions, organizations, and universities to effectively monitor the challenges and opportunities presented by AI:

University	Rank	Country	University Entity	Title of Documentation	Type of Documentation	Year of release	Target Audience	Status
Oxford	1	UK	University's Information Security team	New guidance for safely using Artificial Intelligence	Guidance	2023	Students	Official
Oxford		UK	Centre for Teaching and Learning	AI in teaching and assessment	Principles	2023	Students & Instructors	Community
Oxford		UK	Centre for Teaching and Learning	Use of generative AI tools to support learning	Guidance	2023	Students	Community
Oxford		UK	Centre for Teaching and Learning	AI in Oxford: experiments, tools, and ways of working	Guidance	2023	Instructors & Researchers	Community
Stanford	2	US	Office of Community Standards	Generative AI Policy Guidance	Guidance	2023	Instructors	Community
Stanford		US	Teaching Commons	Creating your course policy on AI	Guidance	2023	Instructors	Community
WITH	3	US	None	They are more focused on supporting the realization of a global AI policy 2023-2024	Guidance	2023	Global (Policy (Makers	Community
Harvard	4	US	Office of Undergraduate Education	AI Guidance & FAQs: POLICIES FOR THE USE OF AI IN COURSES	Guidance	2023	Instructors	Community
Harvard		US	Office of the Provost	Guidelines for Using ChatGPT and other Generative AI tools at Harvard	Guidance	2023	Instructors	Community
Harvard		US	Information Technology	Initial guidelines for the use of Generative AI tools at Harvard	Guidance	2023	Instructors & Students	Community
Cambridge	5	UK	Not Defined	Plagiarism and Academic Misconduct: Artificial Intelligence	Updated regulation	2023	Students	Official
Cambridge		UK	Not Defined	AI and Education: Artificial Intelligence, assessment integrity, and implications for education	Guidance	2023	Instructors	Community
Cambridge		UK	Not Defined	Guiding Principles for Use of Generative AI	Guidance	2023	Instructors & Students	Community
Cambridge		UK	International Education Office: Examinations	The use of generative AI in coursework from November 2023	Policy	2023	Instructors & Students	Official
Princeton	6	US	McGraw for teaching and learning	Guidance on AI/ ChatGPT	Guidance	2023	Instructors	Community
Princeton		US	McGraw for teaching and learning	Generative AI Guidance	Guidance	2023	Instructors	Community
Princeton		US	McGraw for teaching and learning	AI and the Classroom	Guidance	2023	Instructors	Community

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