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Artificial Intelligence among Faculty Members in Libyan Universities: Reality, Challenges, and Future Prospects

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الذكاء الاصطناعي لدى أعضاء هيئة التدريس في الجامعات الليبية: الواقع، والتحديات، والآفاق المستقبلية

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Abstract

Artificial intelligence has become an everyday presence in many classrooms from a distant idea. Research offices are also feeling this change. Libyan universities are no exception. This is true despite the fact that the country has managed the political divide for more than a decade. The campus was damaged. The number of senior academic faculty members was steadily declining. This paper examines the way teachers across Libya are coping with this new technology. It is based entirely on published studies, national data, and government documents. No new survey was conducted for this purpose. This review combines the findings of recent Libyan studies. These studies include a survey of 314 faculty members and a separate study of 130 researchers. It is also based on a global framework. These include technology acceptance models and a standard view of technology acceptance and utilization. The picture that appears is mixed but not disappointing. The adoption of basic tools such as ChatGPT is now popular among Libyan academics. However, ethical concerns, weak infrastructure, poor training, and unclear institutional rules are slowing down deep utilization. The paper also highlights the National Strategy for Artificial Intelligence in Libya from 2026 to 2030. The strategy was launched in June 2026. He asks what this strategy means for universities in particular. The strategy itself was written with very little direct reference to higher education. The results show that Libyan faculty members voluntarily use artificial intelligence. However, these operate without any specific institutional support, written guidelines or continuous training. The dissertation concludes with concrete recommendations for the Ministries, University leadership, and Faculty Development Units. These recommendations aim to translate individual concerns into a more credible institutional capacity.

Keywords: Artificial Intelligence, Libyan Higher Education, Faculty Members, Technology Embras, Digital Infrastructure, AI Policy, ChatGPT, North Africa.

الملخص.

أصبح الذكاء الاصطناعي جزءًا من الحياة اليومية في العديد من الفصول الدراسية بعد أن كان مجرد فكرة بعيدة. كما بدأت مكاتب البحث العلمي تشهد هذا التحول، ولم تكن الجامعات الليبية استثناءً من ذلك، رغم ما مرت به البلاد من انقسام سياسي لأكثر من عقد من الزمن، وما ترتب عليه من تضرر للجامعات وتراجع مستمر في أعداد أعضاء هيئة التدريس من ذوي الخبرة.

تبحث هذه الورقة في كيفية تعامل أعضاء هيئة التدريس في الجامعات الليبية مع هذه التقنية الجديدة. وتعتمد الدراسة بالكامل على الدراسات المنشورة، والبيانات الوطنية، والوثائق الحكومية، دون إجراء أي مسح ميداني جديد. وتجمع هذه المراجعة نتائج عدد من الدراسات الليبية الحديثة، كما تستند إلى أطر نظرية عالمية، أبرزها نماذج قبول التكنولوجيا والنظرية الموحدة لقبول التكنولوجيا واستخدامها.

وتُظهر النتائج صورةً متباينة ولكنها ليست مخيبة للآمال؛ إذ أصبح استخدام الأدوات الأساسية مثل ChatGPT شائعًا بين الأكاديميين الليبيين، إلا أن المخاوف الأخلاقية، وضعف البنية التحتية الرقمية، وقلة التدريب، وعدم وضوح اللوائح المؤسسية، لا تزال تحد من الاستخدام المتقدم والفعال لهذه التقنيات .وتسلط الورقة الضوء أيضًا على الاستراتيجية الوطنية الليبية للذكاء الاصطناعي (2026–2030)، التي أُطلقت في يونيو 2026، وتناقش دلالاتها بالنسبة لمؤسسات التعليم العالي، رغم أن الاستراتيجية نفسها لم تتناول هذا القطاع بشكل مباشر إلا بصورة محدودة .
وتبين النتائج أن أعضاء هيئة التدريس في الجامعات الليبية يتبنون تطبيقات الذكاء الاصطناعي بمبادرات فردية، في ظل غياب الدعم المؤسسي المنظم، والإرشادات المكتوبة، وبرامج التدريب المستمرة. وتختتم الدراسة بمجموعة من التوصيات العملية الموجهة إلى وزارة التعليم العالي، وإدارات الجامعات، ووحدات تنمية القدرات، بهدف تحويل الجهود الفردية إلى قدرة مؤسسية مستدامة وموثوقة.

الكلمات المفتاحية: الذكاء الاصطناعي، التعليم العالي الليبي، أعضاء هيئة التدريس، تبني التكنولوجيا، البنية التحتية الرقمية، سياسات الذكاء الاصطناعي، شات جي بي تي، شمال أفريقيا.

1. Introduction

Artificial Intelligence is no longer confined to the fields of computer science. Now it's about assessment, lesson planning, and research writing. It also impacts the way students seek help with homework. Universities around the world have had to respond. Some have reacted enthusiastically. Others have responded carefully. Libya falls somewhere between these two answers. This attitude is mostly shaped by situations that have nothing to do with the technology itself.

For more than a decade, Libya's higher education has been under pressure. The civil war after 2011 damaged the division of campuses and staff. It divided the government between Tripoli and rival governments in the east. Many experienced professors of the country went abroad for posts. They are no longer numbered. Despite all this, the number of universities is continuously increasing. This growth has often been due to political or regional reasons and not due to educational planning. So when generative AI comes, it doesn't stay in a stable system. You land in an area that is still trying to regain its balance.

For this reason, this topic deserves special attention. A faculty member from Tripoli or Saba would like to try ChatGPT to prepare for lessons. The person faces different obstacles than his partner in Cairo or Riyadh. Internet access in Libya is, surprisingly, very good compared to regional standards. But it is too late to finance digital tools. Formal training and institutional policies have also lagged behind. Understanding how these situations interact is the central objective of this paper.

Several recent studies have begun to fill this gap. Most of them were published in 2025 and 2026. The survey of 314 Libyan teachers revealed three main obstacles. This was due to the expensive cost of AI software, weak infrastructure, and unclear politics (Singh & Pathal, 2025). A separate mixed-methodology study examined Libyan graduate students and teachers. I found that tools like ChatGPT and Grammarly improved search performance. Moral concerns about prejudice and plagiarism persisted (Marr & Almbrook, 2026). The third study involved 130 researchers from Libyan universities and government institutions. According to this report, AI adoption is now almost comprehensive, i.e. 96.2 per cent. ChatGPT was clearly the favorite among these tools (Alennabi et al., 2026). Overall, these results indicate rapid and informal adoption. This adoption precedes any formal institutional response.

This paper does not collect new data. Instead, it brings together what is already known. This knowledge is scattered in magazines, conference sessions, and government reports. This research adds it to the broader story of higher education in Libya. It also connects it with the country's new National AI Strategy. The goal is to make a single statement to policymakers, university leaders, and researchers. This account should show how things are, what is lacking, and what should happen next.

1.1 Background and logic

Libya's higher education sector is larger than the country's area. Estimates vary by source and year. The Ministry of Higher Education and Scientific Research oversees 24 to 29 public

universities. They are accompanied by a small and growing group of private entities (Wikipedia contributors, 2026; This expansion was rapid. In 1975, there were only two universities in the entire country. As of 2021, that number was twenty-six (Wikipedia contributors 2026). Such rapid growth rarely comes without pressure. Universities in Libya have shown promising signs. Colleges are overcrowded. The quality is unbalanced. Senior staff are still suffering from a persistent shortage.

Money is also part of the story. Libya spends a large part of its national budget on education. This figure accounts for about 16 percent of public spending. However, 91% of this amount goes to salaries (UNICEF, 2025). What is left for labs, libraries, or digital gadgets is the weak thing. In the overall education budget, higher education gets only about 12 percent. The Ministry of Education claims that 81% is for primary and secondary education (UNICEF, 2025). A faculty member can expect their department to invest in AI training programs. This economic picture illustrates that this hope is often unfulfilled.

Meanwhile, normal internet access in Libya has improved significantly. By the end of 2025, about 6.62 million Libyans were using the Internet. It constituted 88.5% of the population. Libya ranked second in Africa, behind only Morocco (DataReportal, 2026; Statista, 2025). The speed of mobile phones has also increased rapidly. This proportion has increased by about 69% in a year. The new average reached 25.48 Mbps (Libya Platform, 2025). This creates an unusual situation. Most Libyan teachers have good access to the Internet. What is lacking is at the top of the chain. Enterprise licenses, training programs, and ethical guidelines are still scarcely available. Universities have not made it clear what they expect from employees who use AI.

In this context, Libya has launched its national strategy for artificial intelligence. The strategy covers the period 2026-2030 and was launched in June 2026. The National AI Code of Ethics was launched in conjunction with it (Africa AI News, 2026). This strategy is very ambitious on paper. It sets targets such as training 10,000 employees in high-tech sectors. It also aims to digitize 70% of paper records (GIA, 2026). However, a careful reading reveals that this document is mostly related to government services. It doesn't say much about universities in particular. Faculty members are mentioned only indirectly, through general references to human abilities and education. This gap is one of the central dilemmas discussed in this paper.

1.2 Problem Statement

Libyan teachers are adopting AI tools themselves. Most of them do not wait for guidance from their universities or the ministry that is ahead of them. This is not unusual. This reflects a trend seen in most parts of the Arab world. There, individual curiosity often outweighs the preparation of institutions (Abdullah, 2024). But this raises real concerns. Without common standards, faculty may be at risk of unregulated use of AI. Occasionally, this use is appropriate. Sometimes, the distinction between support and academic lies is blurred. Without training, many employees may misuse these tools. They may miss out on benefits and risks. Without investment in infrastructure, the successes seen in other parts of the region could not reach Libya.

The issue with this paper is not whether AI is important for Libyan teachers. The evidence already says so. The real question is different. Are the surrounding systems, policies, training, infrastructure, and leadership the same as what faculty members themselves are already doing? Preliminary evidence suggests that this is not the case.

1.3 Objectives of the study

This paper has four specific objectives. First, it summarizes what is currently known about the use of AI tools by Libyan teachers. It is based on the research of each relevant Libyan found during the research. Second, it places these findings in the structural reality of higher education in Libya. This includes finances, governance, and recruitment pressures. Third, it examines a new national strategy for artificial intelligence in Libya. Evaluates the effectiveness of this strategy in meeting the needs of undergraduate faculty. Fourth, it offers

practical recommendations for three audiences. These are units of the Ministry of Higher Education, Leadership of Universities, and Faculty Development Units.

1.4 Importance of the study

Very few scholarly writings link Libya's higher education issues to the new National AI Policy. Most of the current Libyan studies focus on a single university or department. Instead, this sheet goes back to see the full picture. For the officials of the Ministry, it provides a clear description of the status of the existing faculty. This will make policy making easier. For university officials, this role is where local action can make a real difference, even if there is no new national funding. For researchers, it brings together the existing dispersed literature. Many of these are included in conference proceedings and lesser-known regional journals. Many of these sources are difficult to find in a single search.

1.5 Sheet structure

The rest of the paper is as follows: The second part examines the literature related to Libya and similar Arab countries. The third part explains the procedure for collecting and organizing secondary sources. Part IV describes in more detail the structural context of Libyan higher education. Section V presents the key outcomes, attitudes, and barriers of teacher adoption. Part VI discusses the National AI Strategy in Libya and its importance for universities. Section VII presents a broader discussion on the meaning of evidence. Section VIII makes recommendations. Section 9 concludes the paper, outlining its limitations and pathways for future research.

2. Review the literature

This section brings together the information discovered by the researchers. It covers artificial intelligence in higher education, ranging from global models to specific Libyan studies. It also covers the theoretical models that researchers mostly use. These models explain why some faculty members are rapidly adopting new technology while others are reluctant.

2.1 Global and Regional Trends in AI Adoption among Faculty Members

Faculty acceptance of generative AI has become one of the most studied topics in academic research. This has changed in the last three years. Ten studies and meta-analysis of more than 3,000 teachers from around the world have found a clear pattern. Perceived benefit and ease of use were the two strongest indicators of adoption (ResearchGate, 2026). This discovery is important for a simple reason. She points out that adoption is less dependent on age or technical skills. It mostly depends on whether or not the tool is clearly saving time.

Near Libya, a systematic review examined the adoption of ChatGPT in Arab higher education. Several co-benefits have been identified. These areas included personalized education, skills development, and academic writing and translation support (Springer, 2026). The same survey identified four recurring problems. These were difficulties and unresolved ethical questions in adapting AI tools to local teaching methods. The third problem was the lack of studies outside the wealthy Gulf states. The limited use of formal theoretical models was the fourth.

Saudi Arabia has provided the most detailed evidence in the region. A study of 244 faculty members from eight Saudi universities used a unified approach to the acceptance and use of technology. It has been proven that performance prediction and effort prediction are the two most powerful forces of adoption (ResearchGate, 2024). Social pressure from peers was less important. A separate Saudi study involving 309 lecturers and about 600 students. It found that institutional support influenced how comfortable employees felt when recommending AI tools to students (MDPI, 2025). Jordan, Bahrain and Oman provided small but consistent results. These groups usually show strong interest from young faculty. Senior staff are more cautious about academic integrity (MDPI, 2024).

The broader review covered the entire MENA region. I came to a clear conclusion. Adoption theories such as TAM and UTAUT are still underutilized in the region (ResearchGate, 2025). The same ideas are common elsewhere as well. This gap is one of the reasons why this paper

relies on these frameworks. Its consistent application in Libya helps to link local outcomes to broader regional dialogue. It avoids treating Libya as a completely separate state from its neighbors.

2.2 Studies conducted in Libya in particular

Libyan scholars have quietly produced meaningful work on the subject. Most of them have come out in the last two years. The largest and most cited study involved a survey of 314 faculty members from several Libyan universities. I found that the most significant obstacles were high financial expenditures, weak digital infrastructure, and unclear education policy. This was followed by concerns regarding data security and privacy (Singh and Patthal, 2025). The study's authors argued that these four issues should be addressed together. He argued that treating them as separate would not give the real benefit of AI in Libyan classrooms.

Another major study appeared as a chapter in Springer's 2026 collection. It was based on the Libyan Artificial Intelligence Conference. A mixed method was used in this study. Combine online questionnaires and phone interviews with graduate students and faculty (Marr & Almbrook, 2026). The central finding was clear. Tools like ChatGPT and Grammarly have really made the search work faster and improved the quality of the writing. But ethical issues, including bias, privacy, and plagiarism, were largely ignored in institutional policies. The authors called for ethical guidance, policy reforms, and targeted training. Other Libyan scholars later repeated the same three recommendations.

The third and latest study examined 130 Libyan researchers. These researchers included the fields of science, technology, engineering, mathematics, medicine, humanities, business, and environmental sciences. The study used statistical methods including factor analysis and structural equation modeling (Allenby et al., 2026). This was the main headline of the findings. About 96.2% of the participants had already used AI tools. ChatGPT was clearly ahead with 85.5%. This shows that adoption has moved beyond initial adoption to the mainstream. However, the same study found it worrisome. No part of the use of AI has been formally disclosed in the results of the research. The authors argued that training individuals in AI ethics will not work alone. "There is a need for a clear and enforceable institutional policy," he wrote.

Smaller, more specific studies add a useful structure. A paper at a conference of Sibha University examined the views of the faculty members of the institute. Use a framework for strengths, weaknesses, opportunities, and risks. The study concluded that the opportunities outweighed the risks. This was true if appropriate ethical controls and guidelines were in place (al-Hawal, 2025). A separate study at the University of Benghazi interviewed doctoral students in the English department. The study revealed the growing acceptance of AI tools. I also felt genuine concern over the absence of an institutional rulebook (ResearchGate, 2024). A study was conducted at the Al-Qaminis branch of the University of Benghazi in which 108 students were surveyed instead of faculty members. Their results still reflect the teaching staff. Students wanted clear guidance from their lecturers on responsible use of ChatGPT (Hamid & Senusi, 2025).

Another study that focused on architecture and design education in Angle. Study how tools like Midjourney and Stable Diffusion are changing learning in the studio. Teachers want these tools to grow to save time for high-level critical feedback. He wanted less time on routine painting tasks (El Basha, 2025). This study is of limited scope. But it shows how much of an impact a specialization can have on AI, even within a country.

2.3 Theoretical frameworks: TAM and UTAUT

Two models dominate research on the adoption of technology in education. The technology acceptance model was first proposed by Davis in 1989. She argues that two beliefs mostly determine adoption. This is how one considers technology to be predictable, and how easy it is to predict. The standard theory of acceptance and use of technology came out later. It

provides social impact and convenient conditions. Simplifying the situation means providing practical support, training, and infrastructure to the user (Venkatesh et al., 2003).

Both models have been applied time and again in the last three years on the adoption of AI in education. The results are usually similar. Performance forecasting and effort forecasting are the most important. Social influence plays a small but still meaningful role (ResearchGate, 2026; For Libya in particular, the concessional terms deserve special attention. This is where the country's infrastructure and funding limitations are likely to be affected. A faculty member may think that AI will really help them teach. This person can also consider AI to be quite user-friendly. However, they can still hide from something simple. An unreliable internet connection in the office can block them. There may also be a lack of institutional licensing for a paid AI tool.

Figure 1 below shows the conceptual framework derived from these two models. It was created specifically to organize the evidence from Libya reviewed in this paper. It has four inputs on the left. These are performance forecasts, effort predictions, social impacts, and availability conditions. The intent of the attitude is in the middle. The actual use of AI in teaching and research is on the right. Infrastructure, policy context, and individual differences are the strength of this path. These are not isolated reasons that work alone.

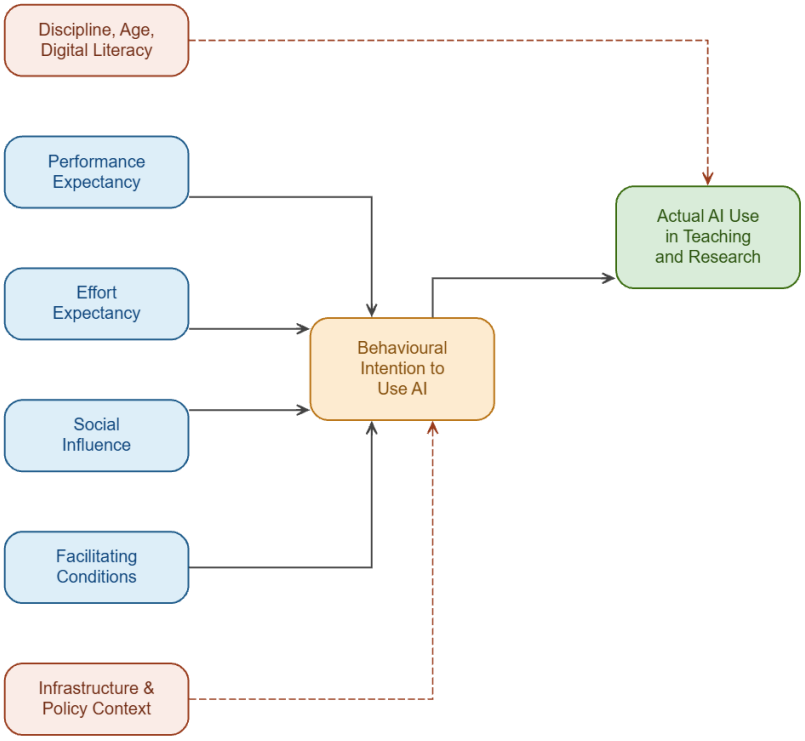

Figure 1 A conceptual framework that combines TAM and UTAUT, developed by faculty members for the use of AI in Libya.

2.4 Search Gap

Reading these studies together reveals a clear pattern. Libyan researchers have worked hard and meticulously. He measured the faculty's views on AI. They examined what was preventing teachers from overusing it. What is mostly missing is the difference. At the faculty level, there is no research linking these findings to the structural reality of Libyan higher education. These realities include funding divisions, staff shortages, distributed governance, and now a new national AI strategy. Most current Libyan papers describe AI adoption as an isolated classroom problem. This separates it from the broader system in which the classroom exists. This paper attempts to fill this gap. This guide reads at the faculty level with national policy and structural imagery, rather than taking them as two separate stories.

3- Procedures

This paper is based entirely on secondary data. No new questionnaires, interviews or questionnaires were taken for this study. Instead, research relies on published scholarly studies, government strategy documents, international statistical reports, and authoritative news coverage. All this material was collected and verified between April to June 2026.

3.1 Research design

This paper follows the design of narrative synthesis rather than rigorous systematic review. The full systemic review was not realistic here. The main reason for this is that the relevant Libyan literature is weak and fragmented. Many of these are published in conference proceedings or regional journals that are not indexed consistently. The narrative style provided something useful. The paper was allowed to include peer-reviewed studies along with the Government's strategy paper and statistical reports. These sources would have excluded any more draconian procedures.

3.2 Identification and selection of sources

The sources have been identified in several ways. These included educational search engines such as Google Scholar and ResearchGate. It also included the deployment platforms of Springer and MDPI. The official websites of the Libyan government, including the General Information Authority, were also reviewed. International data sources such as the World Bank and Data Report completed the search. The search terms combined artificial intelligence, Libya, colleges, higher education, and adoption types. English terminology and Arabic translations were used when needed.

If the three conditions are met, sources are included. First, they had to have a direct relationship with AI in an educational context. Second, they should have focused on Libya, or provided evidence comparable to the Arab or North African environment. Third, it should be traceable from a designated author, institution, or government agency. This did not include anonymous blog posts and unverifiable claims.

Figure 2 shows how the sources went through this election process. This paper traces from the initial identification to the final set used in this paper.

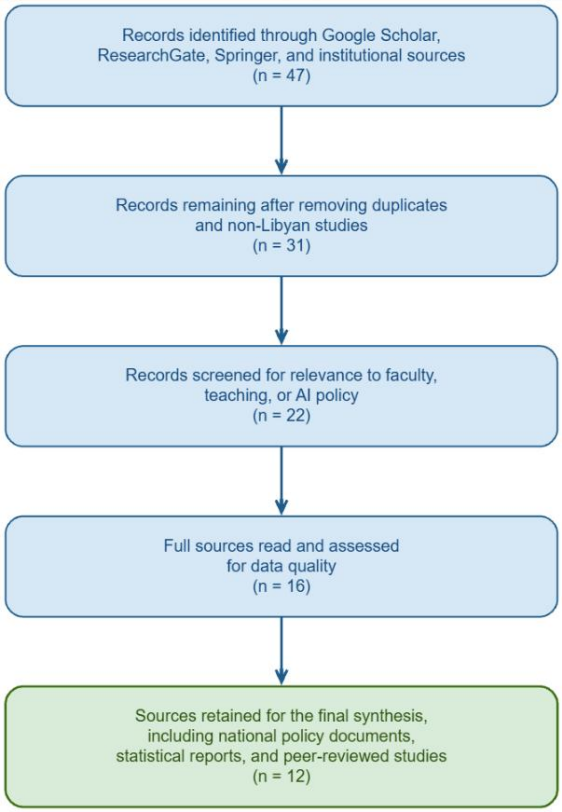

Figure 2: Identifying the source and selecting steps for this narrative structure.

3.3 Data extraction and deregulation

Four information was recorded for each included study. This was a list of the sample and settings, the method used, the results of the addresses, and any numbers reported. These figures included samples and percentages. This information was then organized into a broad range of topics. Topics included adoption rates, expected benefits, reported barriers, and policy gaps. This objective organization is the basis of the findings presented in Section V.

3.4 Limitations of the procedure

Relying solely on secondary data has clear limitations. It's helpful to talk about it openly from the beginning. Most of the Libyan studies found for this study used sports samples. Their findings do not represent every faculty member of every Libyan university equally. Several studies were also received from the universities or regions from which the participants came. This makes it difficult to compare the situation in Tripoli with that of the far-flung south. Finally, Libya's National Strategy for Artificial Intelligence was published a few weeks before this article was written. There is not much independent scholarly commentary on it yet. Their analysis here is mostly based on government and news sources, not harsh criticism.

4. The Structural Context of Libyan Higher Education

It is helpful to understand the system of teachers before looking directly at their behaviour. Technology adoption never happens in a vacuum. The combination of the rapid development of universities in Libya, weak funding, and recruitment pressures is almost everything that will be discussed later in this paper.

4.1 Development and distribution of the university system

Libya's first modern university was opened in Benghazi in 1955. One institution was serving the whole country (Wikipedia contributors 2026). Growth has been slow for two decades. By 1975, there were only two universities across the country. The expansion then accelerated. The country had access to nine universities by 2004, thirteen by 2014, and twenty-six by 2021 (Wikipedia contributors 2026). Figure 3 illustrates this development over five decades.

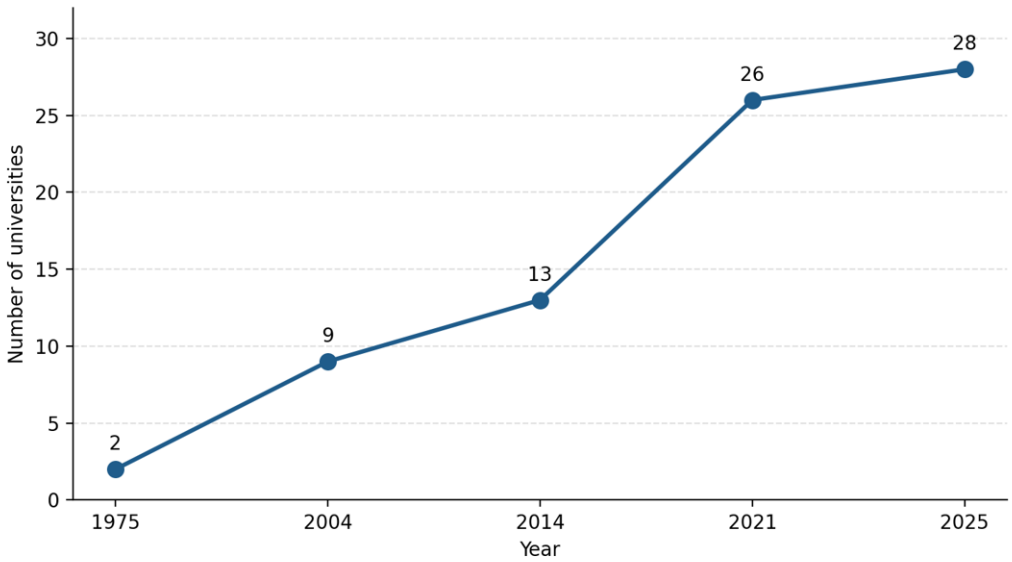

Figure 3: Increase in the number of Libyan universities from 1975 to 2025.

Much of the subsequent growth was not due to educational planning. Armed clashes broke out in 2014. Later, many regions established their own universities. This allowed residents to continue their education without having to pass through unsafe areas. It also enhanced local and tribal pride (EUI Blogs, 2022). The existing university branches were often given independence and designated as separate institutions. That's why the number of universities varies so much across different sources. An old report can be considered as the only branch of

the university. A recent report by the same branch can be considered as two or three separate universities.

The practical effect of this division is unbalanced quality. A survey of higher education in Libya in 2021 found significant differences between institutions. The number of faculty and facilities varied greatly. Some smaller universities have also faced difficulties in providing basic access to laboratories (ARJHSS, 2021). This topic is very important for a subject like AI. Artificial intelligence is based on a stable internet, advanced computers, and some technical support staff. A faculty member at the University of Tripoli works in a single-resource environment. A colleague who is working in a completely different branch in a new regional branch.

4.2 Funding and budgetary pressures

Libya generally allocates a large portion of public spending to education. This figure accounts for about 16 percent of the national budget in recent years (UNICEF, 2025). On paper, it seems generous compared to many neighbouring countries. The problem is how to distribute the money when it reaches the institutions. 91% of the total education budget is spent on salaries. That leaves only 7 percent for the rest. Investments in buildings, equipment, and technology should all come from this small space (UNICEF, 2025).

In the education sector, higher education is a relatively small partner. Primary and Secondary Schools are administered by the Ministry of Education. You get eighty-three percent of the total educational expenses. The Ministry of Higher Education gets only 12 per cent. The Ministry of Technical and Vocational Education gets 7% of the share (UNICEF, 2025). Figure 4 visually illustrates this distribution.

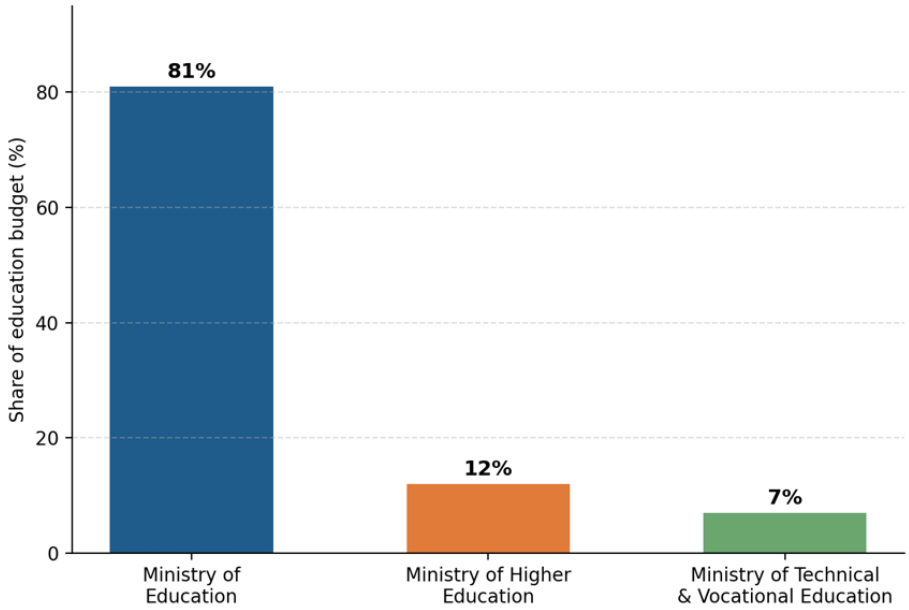

Figure 4: The share of Libya's education budget divided among the three ministries of education.

This financial pattern explains a recurring complaint. This can be seen in most of the Libyan studies reviewed for this paper. Faculty members want to use AI tools. But their departments can't afford enterprise licenses, dedicated servers or paid training programs. 91% of the available funds are already earmarked for salaries. There is little room left for investment in new technology, no matter how promising.

4.3 Employment pressures and educational migration

The shortage of teachers in Libya did not begin with the 2011 conflict. But the conflict made the situation worse. Many of the country's veteran academicians trained abroad in the 1970s and 1980s. Many of them have either left the country or retired. Not enough young staff was

ready to take their place (WENR, 2022). About 3,000 Libyan students are sent abroad annually for postgraduate studies. Almost half of them never return. This trend is mainly due to economic conditions, security concerns, and limited opportunities for domestic employment (GroWikipedia, 2026).

This is important for AI adoption in a fairly straightforward way. Senior faculty often have institutional memory. He mentors young colleagues. It influences the culture of the sector in terms of new technology. Faculty that moves towards less experienced staff can lead to a complete shortage of these people. The people who usually lead the training may not be there. Several Libyan studies indirectly point to this gap. They point to the general absence of institutional leadership on the subject. This is different from active resistance to AI (Marr & Almabrouk, 2026; Allenby et al., 2026).

4.4 Digital Infrastructure: A More Promising Picture

Not every aspect of Libya's picture is disappointing. Access to the Internet has improved significantly. Now it is better than most parts of the African continent. As of October 2025, an estimated 6.62 million Libyans were online. It constituted 88.5% of the population. Only Morocco topped the entire continent, at about 92 percent (DataReportal, 2026; Statista, 2025). Figure 5 places Libya with Morocco and regional averages.

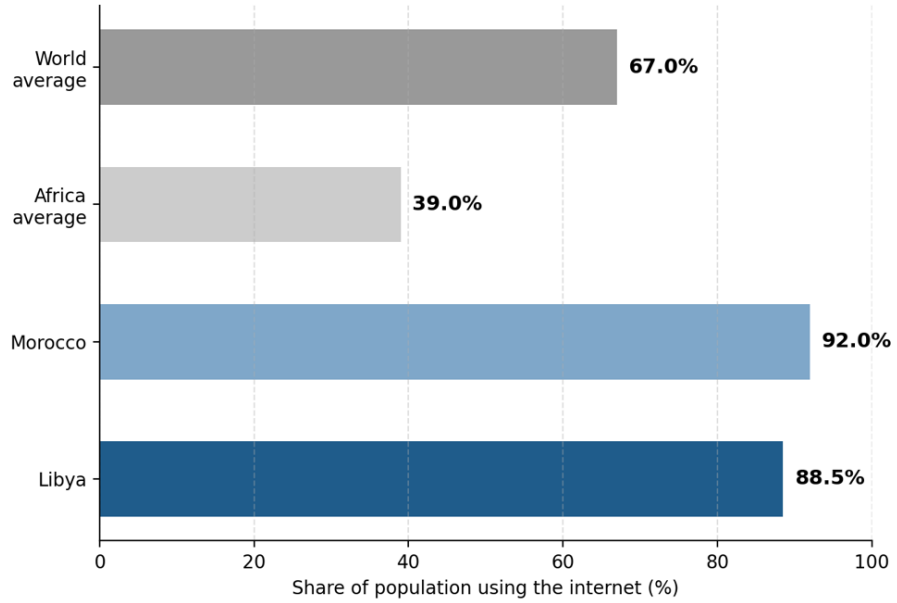

Figure 5: Internet penetration in Libya compared to Morocco and the 2025 regional average.

The quality of the connection has also improved rapidly. Mobile internet speeds in Libya increased by 69% in the 12 months to August 2025. The new average reached 25.48 Mbps. It was a meaningful leap from previous years. At the time the speed was around 2 or 3 Mbps (Libya Platform, 2025; Plus of the Internet Society, 2026). Figure 6 shows this rapid improvement over year.

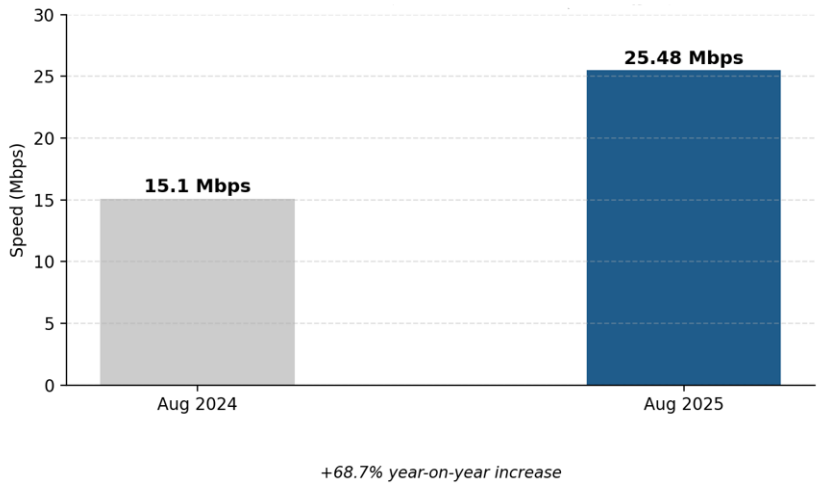

Figure 6. Average mobile internet download speed in Libya, which shows year-on-year growth.

This creates an interesting contrast that should be considered for a while. Connectivity is usually the most obvious and costly barrier to digital adoption. This is not the real problem in Libya. What is lacking is at the top of the chain. Enterprise licenses for paid AI tools are missing. Structured training programs are missing. The ministry's policy and clear ethical guidelines are also missing. The solution to the challenge of adopting artificial intelligence in Libya is not laying fiber optic cables. It's mostly about building institutional capacity around tools that most faculty members have technical access to.

4.5 Comparison Table Summary

Table 1 below summarizes the major structural indicators discussed in this section. These data were collected from the above sources from the beginning.

Table 1: Key Structural Indicators of Libya's Higher Education and Digital Environment.

hint	| | Reported Value	Sources
No. of Government Universities	24 to 29 (estimates vary by year and source)	Wikipedia contributors (2026);
Share of Higher Education in Total Education Budget	12%	UNICEF (2025)
Share of salaries spent on education budget	91%	UNICEF (2025)
National Internet Penetration Rate	88.5%	Data Report (2026)
Average Mobile Internet Speed (2025)	25.48 Mbps	Libya Platform (2025)
Estimated Annual Arrival of Foreign Students for Post Graduate Studies Abroad	~3,000 annually, about half of them don't come back	Gurupedia (2026)

5. Teacher Adoption Outcomes, Attitudes and Barriers

This section brings together peer-reviewed studies. It explains how Libyan faculty members are actually using AI. It describes their emotions. It covers the things that stand in their way. When studies remember specific numbers, those numbers are displayed directly. Accurate statistics matter more than public perceptions.

5.1 How widespread is the use of AI tools among Libyan teachers?

The most obvious and prominent figure in the entire literature came from a study conducted in 2026. A survey of 130 Libyan researchers working in public universities and research

institutes. It found that 96.2% of the respondents had already used some kind of AI tool in their academic work. The confidence interval shows that the true number will be between about 92 and 99 percent (Alennabi et al., 2026). Among these tools, ChatGPT was clearly prominent. 85.5% of the respondents used it. This puts it far ahead of any competing AI application.

This image is shown to be adopted in Figure 7. This shows the supremacy of researchers using AI and ChatGPT in this group.

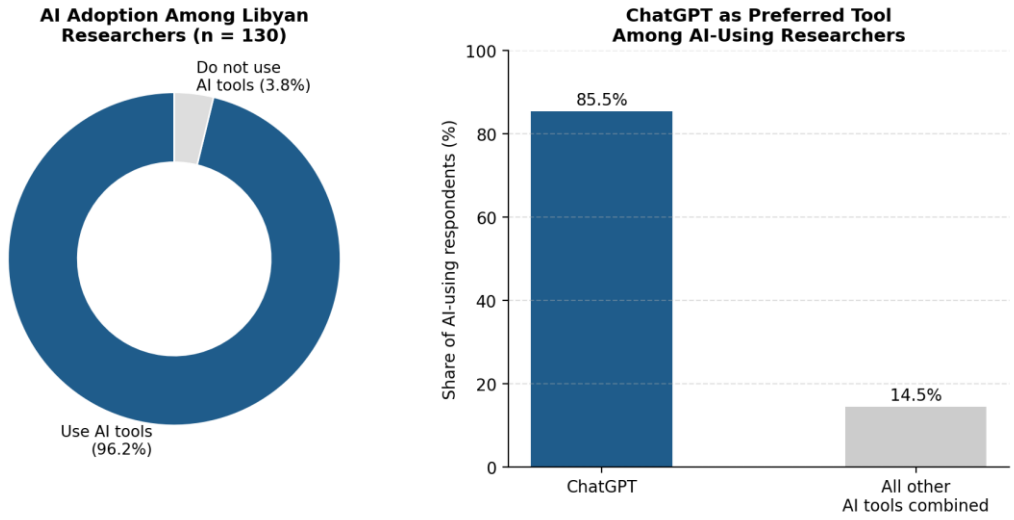

Figure 6 AI adoption rate among Libyan researchers and use of ChatGPT among adopters.

This is almost everywhere the number of adoptees is worth a one-time stop. It tells a different story than many might expect. Libya is still reeling from years of conflict and institutional pressure. However, faculty members don't stop to try out these tools before waiting for permission or training. They are already using it intensely and mostly voluntarily. A previous survey of 314 professors has indirectly supported this picture. Its focus on the constraints of use assumes that consumption itself is already widespread (Singh & Patel, 2025).

This trend reflects the results of other parts of the region. Meta-analyses of AI admissions studies in colleges around the world revealed very similar dynamics. Ease of access and time savings have propelled adoption faster than any formal institutional implementation (Researchgate, 2026). Libya seems to fit into this broader trend rather than be isolated from it.

5.2 Alleged benefits reported by faculty members

Three benefits have been repeatedly shown in Libyan studies. The first is search efficiency. Faculty and graduate students have reported a significant increase in speed. Tools such as ChatGPT and Grammarly have helped in writing, editing, and even analyzing data in the early stages (Mare & Almabrouk, 2026). The second is to improve the quality of writing. This is very important for faculty members whose first language is Arabic but who have to publish or present books in English. This situation is common in most of the Libyan educational world. The third advantage is especially seen in sectors like architecture. This provides time for high-level feedback rather than the usual technical tasks. This allows teachers to spend more time in critical conversations with students rather than working on mechanical drawings (El Basha, 2025).

PhD students from the University of Benghazi described the growing reliance on artificial intelligence devices. Use these tools to organize the literature, improve the arguments, and test the rules. They had a clear realization that these tools actually improve the quality of their written output (ResearchGate, 2024). None of the surveys showed that teachers considered AI as a substitute for their expertise. Rather, it was always considered a way to deal with routine tasks that took up more time. This freed up more energy for original teaching and thinking.

5.3 Barriers and Concerns Reported by Faculty Members

The survey of 314 source faculty is particularly detailed about the barriers. The study cited high financial expenditure as the biggest obstacle. This was followed by inadequate digital infrastructure. This was followed by a weak education policy. This was soon followed by concerns regarding data security and privacy (Singh & Pathal, 2025). Figure 8 shows these barriers in the order in which they were identified in the original study.

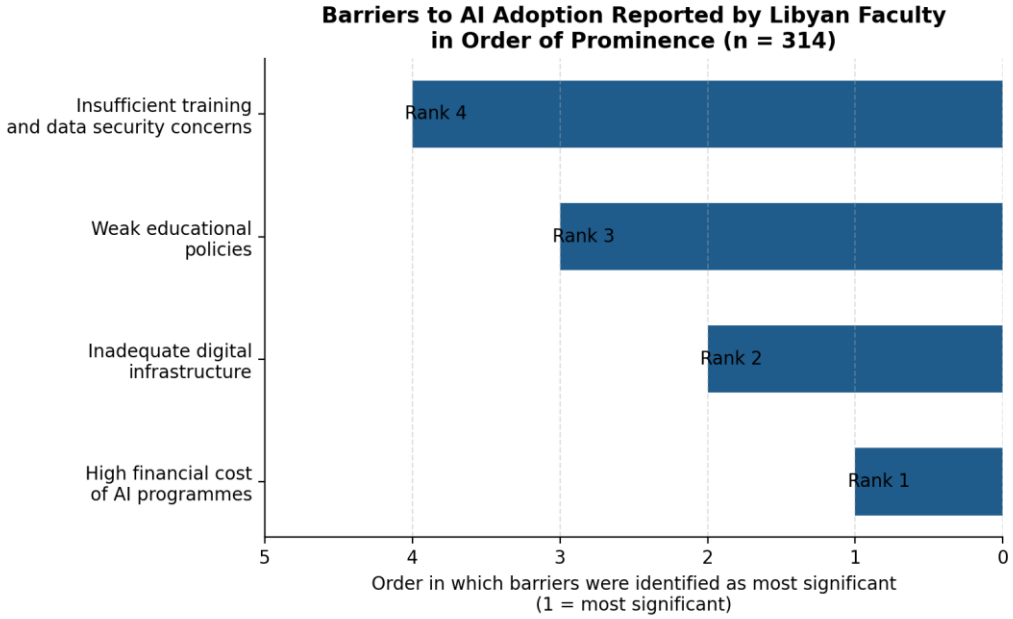

Figure 7 Barriers to AI adoption by Libyan teachers reported in order of prominence.

Moral concerns are reflected in almost every Libyan study. These happen in a slightly different way depending on the context of the research. The concern for postgraduate researchers was focused on bias, privacy, and plagiarism (Marr & Almbrook, 2026). Anxiety was more severe for the 130 researchers in the adoption study. Despite AI being used almost everywhere, none of these have been formally disclosed in published research. The study's authors attributed this to a lack of disclosure (Alennabi et al., 2026). Their conclusion was simple. Training individual researchers in ethics does not in itself have much effect. What actually changes behavior is a clear and enforceable institutional policy. This policy should apply specifically to everyone, not just a vague incentive to act responsibly.

The lack of formal training has also been repeated time and again. It looked different between studies. Some faculty members said they feel confident enough to try the tools themselves. They lacked guidance on best practices. Others expressed concern in general, especially in doctoral interviews in Benghazi. They felt uncomfortable using tools that had not been formally reviewed by anyone at their university (ResearchGate, 2024). The two groups started from different places. However, they came to a similar conclusion. Their institutions have not yet given them anything concrete that they can work on.

5.4 Differences by specialization

Not every sector evaluates AI in the same way. Libyan literature provides some useful glimpses of the genre. There is no single study that compares the subjects together in a completely systematic manner. Architecture and design teachers have basically described AI as a tool to accelerate visual painting. The time has allowed for studio-style critique (El Basha, 2025). The faculty of English and Humanities was mostly focused on supporting writing and organizing literature. This came from doctoral interviews in Benghazi (ResearchGate, 2024). Artificial Intelligence has been extensively used by researchers in the fields of science, technology, engineering, mathematics, medicine, and business. A study of

130 researchers found that the use spanned the entire research process. It spanned from idea creation to data interpretation (Alennabi et al., 2026).

This pattern indicates something important. The impact of artificial intelligence in Libyan universities is not an isolated story. It turns in line with most of the major's time. This quickens the designer drawing. Improves prose for the humanities. Supports analysis for scientists. Future Libyan research would benefit from directly comparing these particular differences. A single study through a regular survey tool in different parts of the colleges would be helpful.

5.5 Summary of key findings

Table 2 summarizes the key findings of the major Libyan studies described above. These points are presented together so that they can be easily compared.

Table 2 Summary of Key Findings of the Libyan Landmark Studies on Artificial Intelligence in Higher Education.

study	Sample	Discover Heading
Singh & Patthal (2025)	314 Faculty Members, Several Universities	High costs, weak infrastructure, and unclear politics are the primary barriers to the use of AI
Mar & Almabroek (2026)	Graduate Students and Faculty, Mixed Majors	Artificial Intelligence Improves Research Efficiency, but Ethics and Training Gaps Still Unresolved
Allenby, etc. (2026)	130 researchers, universities and government institutions,	The adoption rate is 96.2%; there is almost no official disclosure of the use of AI in published works
Al-Hawal etc. (2025)	Faculty of Sibha University	Opportunities outweigh risks, provided controls and guidance are provided
Research Gate (2024), PhD Study in Benghazi	Six PhD students, English Department	Concern over growing acceptance and lack of institutional organization
The Pasha (2025)	Architecture and Design Teachers, Angle	Artificial Intelligence provides time for critical feedback instead of routine tasks in drafting

6- National Strategy for Artificial Intelligence in Libya and its Importance for Faculty Members

On June 1, 2026, the Prime Minister of Libya officially launched the National Strategy for Artificial Intelligence. The strategy covers the period 2026 to 2030. A national code of ethics for artificial intelligence was simultaneously introduced during an event in Tripoli (Africa AI News, 2026; GIA, 2026). This is a very important document for anyone studying AI in Libya. This is the first time that the country has adopted a coherent national approach on this technology. However, on closer reading, one more thing emerges. This strategy mainly talks about government services and the wider economy. It provides only indirect contact with the faculty of the university. This section examines the strategy that actually says. He asks what this might mean in practice for the people in whom this paper is primarily interested.

6.1 Strategy structure and objectives

This strategy is organized around six pillars. These include Governance and Leadership, Legislation and Ethics, and Digital Infrastructure and Data. Human Capacity and Education, Innovation and Priority Areas, and Monitoring and Review Six complement the OECD. Artificial Intelligence, 2026). Together, these pillars consist of thirty-five distinct initiatives (Artificial Intelligence Africa News, 2026). Figure 9 shows these six columns.

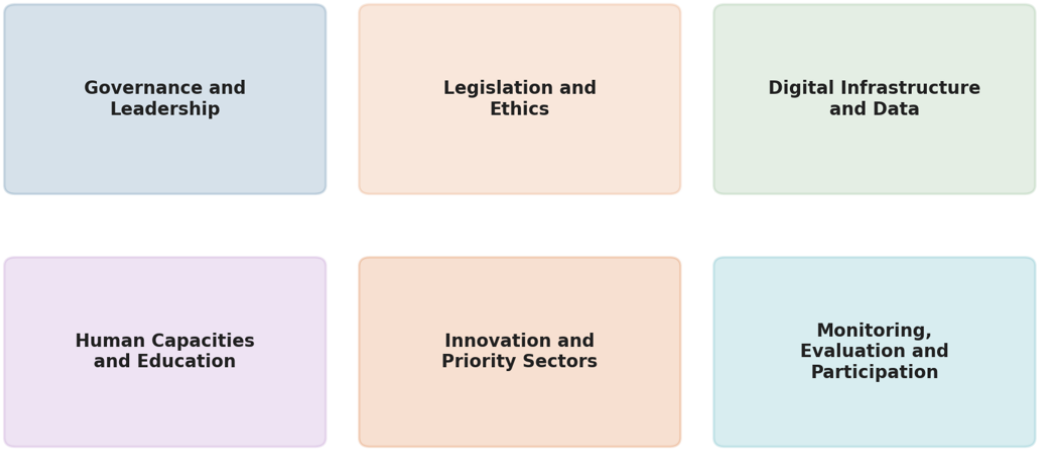

Figure 8: Six pillars of Libya's National Artificial Intelligence Strategy, 2026 to 2030.

Specific goals linked to the strategy are very ambitious. The government aims to include 80 percent of public institutions in AI-based systems. It wants to train 10,000 employees in modern technology skills. She hopes to support the establishment of 100 AI-centric startups. It wants all government transactions to be semi-automated by 2030. It also wants seventy percent of paper records to be digitized by the same date (GIA, 2026). The planned infrastructure projects include an autonomous national cloud, which is expected to be implemented between 2026 and 2027. A unified national digital identity system is expected by 2027. It is necessary to establish a national data exchange platform by 2028 (Africa AI News, 2026).

Particularly within the human capabilities pillar, the strategy offers two related promises. It plans to incorporate Artificial Intelligence and Digital Ethics in the curriculum of schools and universities by 2027. It plans to establish a national AI academy by 2028 (African AI News, 2026). These two commitments are the closest to directly addressing higher education. Everything else within this pillar pertains to workforce training in the government and industry in general. It does not meet the specific needs of the faculty of the university.

6.2 What does this strategy overlook for universities

Reading the strategy with the faculty level results of the fifth department shows a clear inconsistency. The strategy itself recognizes several limitations. It does not have a unified national AI body. Its legislation is still fragmented and inconsistent. Good quality data is still limited. Special skills are still rare (Artificial Intelligence News Africa, 2026). These are almost the same restrictions that faculty faced directly. Faculty members described poor policy direction, unclear rules, and limited expert support. But the strategy articulates these problems at the national level. He proposes to reform them through new government institutions, rather than addressing the way universities work on a day-to-day basis.

Specific commitment to funding AI training for existing undergraduate faculty is not reflected in publicly available abstracts. There is no restriction to develop specific AI ethical guidelines for academic publications. This strategy does not address the disclosure gaps identified by Allenby et al. (2026) in a study by Libyan researchers. The commitment to integrate the strategic curriculum is welcomed. But it focuses on what students are learning. It doesn't say much about how faculty prepare themselves to teach, research, and publish responsibly through these tools.

This is not necessarily a unique loss in Libya. The same trend is seen in national AI strategies across Africa. Ghana, Mauritius, and Morocco have recently introduced their own strategies. These systems focus more on digitization of government and economic competitiveness. Higher education is considered to be one of the many beneficiaries. It itself is not considered a priority area (Africa News AI, 2026). However, the adoption of Libyan teachers appears to go

far beyond institutional policy. This gap, which has emerged in Section V, deserves special attention. The Ministry of Higher Education will have to deal separately with the process of this Broader National Strategy.

6.3 Opportunities Created by Universities Strategy

Despite these gaps, this strategy creates real opportunities. Universities can take advantage of these opportunities if they act quickly. The National Academy of Artificial Intelligence is scheduled to be held by 2028. It can become a true training partner for undergraduate faculty development units, rather than having it compete. The Sovereign National Cloud Project can ultimately address the enterprise infrastructure gap. A survey of 314 professors identified this gap as a major barrier (Singh and Pathal, 2025). For this, it is necessary to expand the cloud computing project to educational institutions. The new AI Code of Ethics offers something more useful. Although it was written at the national level and not at a specific university level, it provides a handy reference to Libyan universities. They can use them to make their own academic integrity policies, rather than starting all over again.

The Ministry of Higher Education has its own separate strategy covering the period 2025 to 2035. The strategy already identifies digital transformation and teacher development as clear priorities (International Network for Higher Education in Africa, 2026). It was developed prior to the National Strategy for Artificial Intelligence. Bringing these two strategies closer to compatibility appears to be a viable opportunity in the near term. Currently, they are in danger of acting as loosely connected and parallel processes.

7. Discussion

Beyond the individual studies, a fairly consistent story emerges. Faculty members are rapidly and voluntarily adopting AI tools. They are far ahead of any similar institutional response. This is an encouraging discovery in some respects. She points out that Libyan academics are not hampered by reluctance or ignorance of new technologies. This is true despite what the government has endured in the last decade and a half. The 96.2% adoption rate reported by Allenby et al. (2026) is higher by international standards. This will be significant even in a country where institutional pressure is minimal.

However, this creates its own risks of adopting the momentum. Faculty members often leave individuals themselves to work on the proper use of AI. Without a common criterion, the result will be inherently inconsistent. A researcher can carefully demonstrate the help of AI in a published paper. A colleague in a neighbor's office might not even bother to mention it. This is not necessarily dishonesty. Often, no one has told the partner that he should disclose it. This is the lack of disclosure described by Allinby et al. (2026). Their result is worth repeating. Individual moral training alone cannot solve this problem. Only clear and consistently enforced institutional policies can do this.

The theoretical frameworks presented in the second part help to understand this pattern. According to the UTAUT model, performance expectations and effort predictions explain why the adoption pace is so fast. Faculty members clearly believe that these tools save time and improve their work. The tools themselves are really accessible, especially given the sudden spread of the powerful internet in Libya. What is missing is part of the model's simplified conditions. This includes institutional support, licensing, and training that usually accompanies the adoption of health technology elsewhere. The case in Libya is different from the usual pattern. Technology adoption goes beyond its institutional structure. Elsewhere, infrastructure and policies usually come first, followed by adoption.

Comparing Libya to neighboring countries further reinforces this point. Faculty studies in Saudi Arabia depend on much larger research budgets. They also benefit from a more robust quality assurance system. Saudi universities are already showing active progress. They create AI policy frameworks and training programs. Some have set up ethics committees dedicated to the use of artificial intelligence in scientific research (ResearchGate, 2024; MDPI, 2025).

By comparison, Libya is still in its early stages. This continues to document the existence of large-scale informal adoptions. This is not a criticism of Libyan researchers or the teachers themselves. They seem ready to handle these tools like their regional counterparts. Rather, it reflects how backward the surrounding institutional structures are. This gap mostly explains conflicts, allocation of funding, and recruitment pressures, as outlined in Section IV. The lack of interest in teachers does not explain this.

The new national strategy for AI really matters. But he hasn't filled that particular gap on himself yet. As discussed in Section VI, its human capacity pillar generally reflects the needs of the government and economic workforce. It only provides brief references to university-specific issues. Research ethics are not very high to demonstrate. Special training is also not mentioned much. This leaves an opportunity and perhaps a responsibility for the Ministry of Higher Education. Individual universities also share this responsibility. They will have to make their own targeted policies. Waiting for the broader national strategy to finally be leaked may be time-consuming.

Along with these concerns, there is a more optimistic interpretation that should be adhered to. Libyan teachers have already shown a deep natural interest in artificial intelligence devices. For this reason, universities are faced with a more manageable task. They don't need to get excited from the start. Instead, they have to turn the current fervor into something more organized. The training programs that the faculty use daily give better results. These documents work better than abstract policy documents that don't link to the actual process. Libya's starting point may be easier to handle than the reverse situation. Some other modern higher education systems show strong policies on paper but are not interested in faculty. In Libya, a combination of strong bottom-up adoption and a thin top-down structure may be the easiest problem to solve.

8- Recommendations

Based on the evidence examined in this paper, the three sets of recommendations are as follows: These modules target the Ministry of Higher Education, leadership of individual universities, and Faculty Development Units respectively. These books have been written as deliberate action and not as discrete aspirations. There are already public demands for better policies in the current literature. It provides very little detail about what the policy should actually be.

8.1 Recommendations for Ministry of Higher Education

The Ministry should consider preparing a supplementary draft along with the National Code of Ethics for Artificial Intelligence for Higher Education. This appendix will transform the general principles into concrete guidelines for scholarly publishing, teaching, and assessment. This supplement should not be too long. Even a brief document can meet the disclosure requirements for AI-driven research. Some international journals have already adopted similar policies. Such a document would directly address the lack of disclosure that Allenby et al. (2026) has identified.

The Ministry should also emphasize for close coordination. The National AI Strategy and its separate Higher Education Strategy serve as a parallel process from 2025 to 2035. A joint working group, however small, can be helpful. This can ensure that the planned National AI Academy, scheduled in 2028, is designed keeping in mind the needs of the university. At present, the academy appears to be focused only on government and industrial training.

Lastly, the current budget puts a heavy strain on higher education. The Ministry may examine whether AI funding can be allocated separately from the operating budget of public universities. Salaries already use 91 percent of total education spending. Any new AI-related funding will likely come through a separate channel. With current budget lines, competition is unlikely to succeed.

8.2 University Leadership Recommendations

University authorities don't have to wait for service level action on everything. Several practical measures are now available. Departments can formulate simple written guidelines for acceptable use of AI in courses and research. These may begin informally, influenced by the disclosure-based methodology proposed by Allenby et al. (2026). These guidelines are not necessarily punitive. The evidence from this survey shows that faculty members are not trying to hide their use of AI due to bad faith. They are not only made aware of the inclusion standards that their organization expects.

University leadership should also consider negotiating institutional licenses for widely used AI tools. Even minor licenses will be helpful. Cost constraint identified by Singh and Patthal (2025) was the most prominent barrier reported by faculty. A joint corporate license, however simple, will remove this barrier from the entire department at the same time. It's better for individual faculty to pay out of pocket or rely on free limited editions.

Universities whose research outcomes are more robust may consider trying a more detailed AI policy framework first. The University of Tripoli and the University of Benghazi are good candidates for this field. They can then share the lessons learnt with smaller regional institutions. Cooperation projects between IBTIKAR and ARMONIA are already in the works in Libyan higher education (International Network for Higher Education in Africa, 2026). These existing networks can advance this knowledge. These networks can advance this knowledge.

8.3 Recommendations for Faculty Development Units

Faculty Development Offices are perfect for faster functioning. Their work does not always require new funding or service approval. The short, hands-on workshops focused on the use of responsible AI will be effective. These points will be as per the original desire of the teachers, especially based on the training gaps identified in the repeated review studies. Abstract moral lectures are often less effective. These workshops can be organized around specific tasks. Writing assistance, literature review assistance, and data analysis assistance are good starts. Thinking of AI as a single non-heterogeneous tool often deviates from the original purpose.

Development units should also address the specialization gap outlined in Section V. The workshop using visual AI tools for architecture teachers will look completely different. For humanities researchers who specialize in writing assistance, this model will require a completely different approach. Skill-wise alignment of training, even if trivial, leads to better inclusion. A public meeting that covers everything at once attracts fewer people.

Lastly, faculty development modules can play the role of a useful bridge. These can connect large and small employees more thoughtfully. Due to the staff pressure discussed in Section IV, the number of senior academics is now low in many disciplines. Few of them informally guide the professional traditions of young colleagues. It also includes emerging standards related to the use of AI. Organized peer mentoring programs can help fill this gap. Significant new resources will not be required to integrate young AI confident faculty with senior colleagues who have experience in research ethics.

9- Conclusion

The purpose of this paper was to gather existing information. The topic was Artificial Intelligence and its impact on faculty members in Libyan universities. Rely entirely on existing published evidence rather than collecting new data. The scene that unfolds is far more inspiring and complex than just a simple story of fall. Teachers in Libya have adopted AI tools quickly and cheerfully. Their adoption rate is considered to be higher in any part of the world. What is not keeping pace is the institutional structure that is designed to guide, support and regulate this adoption.

Three things have come to the fore which have been examined. First, fiscal expenditures, weak infrastructure, and unclear policy reporting are the most persistent barriers. This is also true at a time when basic internet connectivity in Libya is no longer the limiting factor it used to be. Second, ethical concerns point to a real institutional vacuum. The problem with demonstrating the use of AI in published research is not a lack of awareness among individual researchers. Third, Libya's newly launched National AI Strategy is a significant development for the entire country. But it doesn't speak directly enough about the specific needs of the university's faculty right now. This leaves room and responsibility for more targeted action at the service and university level.

This paper has clear limitations. It is based entirely on secondary sources. Use several of these custom samples for ease. He did not always clarify which universities or regions the respondents represented. Libya's National Artificial Intelligence Strategy was published a few weeks before the paper was completed. Independent scholarly analysis of its application is still almost non-existent. It will be useful for future researchers to conduct comparative studies at several Libyan universities. A single, consistent survey tool would be helpful, which has not yet been attempted in the current literature. It will also be valuable to track the actual process of national strategy in higher education. This is especially important because what has not yet been explained in the current general summaries of the strategy.

Despite acknowledging these limitations, the evidence gathered here points to a clear conclusion. Libyan teachers are ready for artificial intelligence. They may be more prepared than many outside observers expect, given the country's recent history. The job of Libyan higher education is no longer to persuade teachers to engage with this technology. Rather, build the institutional structure around them quickly enough to align with what they are doing.

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