



## **RECLAIMING ISLAMIC SCIENTIFIC LEGACY: ADDRESSING THE KNOWLEDGE CRISIS IN THE MUSLIM WORLD**

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### **Abstract:**

*Allah Almighty, by linking the concepts of religion, humanity, welfare, and success with the pursuit of knowledge, bestowed not only the understanding of material objects but also divine guidance upon Hazrat Adam (peace be upon him). The first revelation to Prophet Muhammad (peace be upon him), consisting of five verses, also began with the command to read and invoked the name of the Almighty, emphasizing that Islam is rooted in knowledge and wisdom rather than superstition or conjecture. From this perspective, Islam established the foundation of human life, society, economy, and politics on the principles of certainty, divine revelation, and beneficial knowledge, in contrast to the mythologies and distortions found in earlier religious traditions. Despite these foundational principles, Muslim countries, which should have led the world in scientific research and innovation based on the teachings of Islam, now rank among the lowest in scientific progress and technological advancements. The same civilization that once contributed significantly to scientific discoveries—producing a thousand groundbreaking inventions that influenced global knowledge—now lags behind, failing to keep pace with contemporary scientific and technological advancements. In this context, Pakistan, which should have been a leader in science and research within the Muslim world, is experiencing continuous decline instead of progress. Given these circumstances, it is imperative to critically analyze the role of the Muslim Ummah, particularly the State of Pakistan, in addressing this intellectual and developmental crisis. A thoughtful approach and the implementation of effective, practical measures are essential to reclaiming the lost legacy of scientific and technological leadership.*

**Key words:** Creating; Education System; Scientific; Knowledge

Allah Almighty associated the concept of religion, the concept of man, the concept of welfare and the concept of success with the acquisition of knowledge, and bestowed not only the knowledge of objects but also divine guidance on Hazrat Adam (peace be upon him). The first revelation, which was revealed to Hazrat Muhammad (peace be upon him) in the form of five verses<sup>1</sup>, also began with the recitation and mention of the names of the Almighty God that religion is based on knowledge and wisdom, not on superstition and conjecture. From this perspective, Islam introduced the construction of human life, society, economy and politics on the basis of knowledge of certainty, divine revelation and beneficial knowledge, instead of the mythologies that were distorted and added to in previous religions of the world.

### **The main question of the research:**

Muslim countries, which should have taken the lead in the field of science and research based on the teachings of their religion, are today considered the least in scientific progress

1 اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ، خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ، اقْرَأْ وَرَبُّكَ الْأَكْرَمُ، الَّذِي عَلَّمَ بِالْقَلَمِ - العلق: 1-3: وَأَعَدُّوا لَهُمْ مَا اسْتَطَعْتُمْ مِنْ قُوَّةٍ وَمِنْ رِبَاطِ الْخَيْلِ تُرْهِبُونَ بِهِ عَدُوَّ اللَّهِ وَعَدُوَّكُمْ وَآخَرِينَ مِنْ دُونِهِمْ لَا تَعْلَمُونَهُمُ اللَّهُ يَعْلَمُهُمْ - الانفال: 60



and inventions. The same people of faith who made 1001 inventions in the scientific<sup>2</sup> field yesterday and whose scientific leadership was used by other nations of the world, today they are living their lives in the light of demand. In this context, Pakistan, which should have been at the forefront of science and research in the Muslim world, is suffering from continuous reverse development. In these circumstances, what should be the role of the Muslim Ummah, especially the state of Pakistan, in resolving the issue? This requires careful thought and effective practical steps.

#### **Situation of Primary Education:**

The situation presented by the statistics from primary schools to higher education demands immediate attention at the national level. According to the National Achievement Test published in 2023, which was prepared in collaboration with Cambridge University, the education of Urdu, Sindhi and Mathematics among fifth grade students is in decline in all provinces. Not only this, but also among grade 7 and grade 8 students, the situation has been found to be very weak in English, Sindhi, Urdu and Mathematics.

#### **Basic Science Education through Material and National Language:**

In the context of Pakistan, be it the northern region or the southern or the central region, the language that is used day and night in the markets, homes and businesses is Urdu. Urdu is the language that connects all the provinces, Azad Kashmir and the northern regions. It has the full capacity to explain scientific and other scientific concepts. On this basis, Quaid-e-Azam Muhammad Ali Jinnah declared it the national language and the Supreme Court of Pakistan declared it the official language in the light of the new Pakistan. Therefore, the real remedy is Urdu as a medium of education and a uniform national curriculum, without which the country cannot move forward. Urdu has all the capacity that is necessary for the teaching and research of social and applied sciences. Moreover, in most countries of the world, education is given in their national language and children understand all scientific concepts in their national language. Thus, in China, France, Germany, Korea, Poland, everywhere, the medium of education is the national language. Regardless of this objectionable sentence, the problems faced by primary education include the lack of basic facilities, such as the shortage of clean drinking water in government schools, the absence of desks and space for sitting in the classroom, the absence of electricity and fans in the hot season, the lack of playgrounds and play equipment, the adequate number of toilets for children, the lack of training for school teachers in the use of educational principles and modern methods, as well as the lack of commitment to education and learning among teachers. A teacher who is not aware of the art of education and does not choose this position as his first choice, but becomes a teacher simply to avoid unemployment, how can he create a demand and yearning for knowledge in students? He can only repeat rote material in class, which has no connection with education and training.<sup>3</sup>

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<sup>2</sup> Science means knowledge (unless one finds a better term) and it means to learn about something by studying it. Science is a systematic means of acquiring knowledge in which man learns through direct experience and observation. Science is the knowledge of the entire universe and this knowledge is the collective heritage of man.

<sup>3</sup> Dr. Ayesha Razak, The News 18 March 2024).



Anyway, due to unknown reasons and as a result of the slavery of the white man, the essential part of education has been excluded from the curriculum under the concept of Value Neutral Education (i.e. ignoring moral values) and education has been limited to skills, abilities and technical aspects only. Be it school or higher university, no attention is paid to life etiquette, honesty, punctuality, hard work, truthfulness, compassion and many other basic qualities in any educational institution. Even Iqbal's 'Lab Pe Aati Hai Dua Ban Ke Tamna Meri', which was recited by children every morning with chanting, has also been excluded from schools. Today there is neither Hamdbari Taala, nor Naat Rasool (peace be upon him), nor Iqbal's Anthem, there is only 'skill' and glorification of numbers and even in them there is no special concern for skill. Ignorance of life values and basic human ethics in the early stages of education will affect every subsequent stage of education and this fundamental deficiency will keep the personality of the students incomplete.

The ratio of trained teachers in schools, that is, teachers with certificates in the field of education, is zero because since education was made a provincial department instead of a federal one, it has become common to give jobs in schools on the basis of political parties or bribery, and education and learning are generally being used to keep the unemployed busy, which has nothing to do with the teacher's ability and educational capacity. This situation is very worrying for the educational future of the country and there is an urgent need to arrange for the purification and professional training of teachers in all provinces without delay. Only those teachers should be appointed in schools who want to become teachers based on their choice, inclination, purpose in life and educational certificates. Along with teachers, parents can also play an important role in raising the quality of schools. If 'Parent-Teacher Meetings' are used properly, by informing parents about their children's academic performance on time, paying attention to their habits and inculcating the habit of doing the homework on time, the quality of education can gradually improve. On the other hand, there is also a need for parents to review their child's academic performance with interest and demand from the school that teachers should give special time to remove the weaknesses and shortcomings in the student and instill a sense of academic excellence in the children.<sup>4</sup>

The government allocated 1.77% of the total national GDP for education at the central and provincial levels in 2024 (Pak Economic Survey 2023-24). If compared, in other countries in Asia, at least four to five percent of the GDP is allocated for education, and if compared with the Gulf countries, 7 to 9 percent is being spent there on the promotion of education. The total number of students enrolled in the country's higher education institutions in 2022-23 was 2.60 million, while the country's population is 240 million and about 20 million students who should have been in education by age are deprived of education outside schools. A large number of students (83%) are studying in government universities and a small number (17%) in private universities. In terms of basic education statistics, the amount being spent on the promotion of education needs to be increased by at least five times, so that the situation from primary education to higher education is improved somewhat, and in this regard, professional training of teachers in schools and colleges is of fundamental importance. In the current situation, when a large number of educated and skilled people are leaving the country in search of employment, there is a need to prioritize spending on education and training.

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4 Educational Perspectives, Al-Burhan, Monthly, Lahore



### **Higher Education**

The Vice Chancellors' Committee held in Islamabad in March 2024, attended by Vice Chancellors of most of the country's public and private universities, attended a two-day meeting and discussed the issues facing them in terms of academic, administrative, financial, professional and research.<sup>5</sup> The assessments made from different angles revealed that the Higher Education Commission (HEC) and the universities alike are facing difficulties in obtaining the required resources from the government. Instead of increasing continuously, the grant of HEC is being reduced, on the basis of which HEC cannot play its role to its full potential. Apparently, the financial assistance given to HEC in 2017-18 was Rs 63 billion, which was reduced to Rs 66 billion in 2023-24. But if it is seen in the context of the depreciation of the rupee, this assistance in 2017-18 was \$ 622 million, which was reduced to \$ 622 million in 2024-24.<sup>6</sup>

### **Quality Research**

Currently, 2.5 crore children who deserve education are deprived of school education. In such a situation, announcing the establishment of universities for political gain without any proper planning cannot be the solution to the problem, nor can writing the name of a school on a few buildings without teachers trained by the provincial governments and who make education and training the purpose of life be the solution. In order to promote research in higher educational institutions, in the last almost a decade, HEC has given importance to the publication of only those articles that are published in journals with impact factor. Then it was said that those articles should be those that are being cited in other academic research and which fall in the Q-1 and Q-2 levels. Therefore, the citation index was made the standard. It was decided to count the publication of articles in these journals in the ranking of individuals and universities. But even in the light of the instructions provided by HEC, the majority of the articles published in Q-1 and Q-2 journals are on topics that discuss theoretical issues and which practically do not benefit industry and agriculture in Pakistan. There is a need, whether in applied sciences or social sciences, to analyze and propose solutions to social, economic, political, economic, state, legal and human rights issues of Pakistan, Islamic culture, the invasion of Western Islamophobia, the growing trends of atheism and atheism, and obscenity and nudity, and the blind imitation of Western thought and culture, in the light of the theory of Pakistan. Similarly, the role of social media, articles created by artificial intelligence (AI), should focus on the psychological, academic, moral, social and cultural issues faced by the country, especially the issues arising under the influence of digitalization and artificial intelligence (AI).

### **Research Ethics**

Regarding research ethics, the facility of online articles has provided researchers with the opportunity to publish research under their own name by copying the research of others and adopting research based on secondary data. This may increase access to research materials in some fields and we may think that we are doing a lot of research, but such research has no weight, nor can it have any impact on social, economic and moral development. The research

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<sup>5</sup> Pak Economic Survey 2023-24, p. 183

<sup>6</sup> Pakistan Educational Statistics 2020-21, p. 15



that is needed in this era can be called holistic and comparative research instead of partial knowledge. Interdisciplinary research can usually suggest a more comprehensive analysis and comprehensive solution to a problem. At present, the situation is that a person who has taken a degree in economics or chemistry does not have any authentic information about law and ethical, social and cultural issues and their relationship to his own field. Knowledge has become limited to a few angles instead of comprehensiveness and this is a very weak aspect of our research.<sup>7</sup>

A common excuse given is that universities and HECs are stingy in funding research. Therefore, research is not progressing due to lack of funds. This is a lame excuse. It is not difficult for a person who wants to do research to find a hundred ways. Not only in the country but also outside the country, there are institutions that take up research that is useful for the industry. The only condition is that the researcher is an expert in his field, knows how to work hard and is willing to work hard, and the purpose of the research is not just point-based, but that he really suggests workable solutions to practical problems. The revival of research culture is possible when there is sincerity and faith in the researcher. He wants to use his ability, time, and resources to solve the problems of the servants of Allah and considers academic plagiarism (cut and paste) forbidden. For real academic progress, universities will have to encourage such individuals and foster a scientific atmosphere in universities. Government universities will have to foster self-reliance instead of depending on government aid. Similarly, private universities will have to follow the principle of self-help. Education and research have been the least important priorities of every ruling political party and this trend does not seem to be decreasing in the near future. Therefore, universities should adopt a policy of self-reliance. In this regard, alumni or former students should be encouraged to play an active role in the affairs of the universities. Universities should make their research practical and in view of the needs of the domestic industry, they should not only find expert solutions to industrial problems and difficulties, but also provide them to industrialists after patenting them.

### **Challenges and Analysis of Problems Facing Universities**

In the conferences of university vice-chancellors held at the global level, it is generally emphasized that close ties should be created between universities and industries so that universities can provide financial support and industrialists can provide professional solutions to their problems. However, it should be remembered here that our goal with regard to Pakistan should not be economic activity in the name of knowledge alone like other universities, but the goal of academic and scientific research should be to create 'beneficial knowledge' and through it to present solutions to the legitimate economic, social and political problems of Allah's creation. Along with this, universities should not be limited to achieving material progress under the influence of this slogan of economic development, but they should be helpful in the comprehensive training of the servants of Allah in morality and awareness of the purpose of human existence and in establishing social solutions and justice. The concept of beneficial knowledge must be clarified among the youth engaged in education and research in universities so that their research pursuits can enter the realm of worship and,

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<sup>7</sup> Farnsworth and R.W. Morris, Higher plants – the sleeping giant of drug development. *Am. J. Pharm. Educ.* (1976), 49





while following the Islamic concept of service to the people, they can play their role in solving social problems. In the modern context of academic research, the use of artificial intelligence in 'open source' courses and 'distance education' (online learning) has become a necessity and cannot be ignored. But its ethical implications are coming to the fore daily in Western journalism and research literature. In the past one year, hardly a week has passed in which, twice only in a newspaper like the New York Times, there has been criticism from people associated with American universities for its negative and immoral use along with the positive use of artificial intelligence. In fact, artificial intelligence can also be considered the antichrist of the 21st century. It is the creative effort of man after which he himself begins to imagine himself as close to the true creator and his ego can lead him to arrogance and pride in his own intelligence. Nevertheless, through it, the organization of information in a few moments according to human desire is its achievement and its use in education can also produce useful results. Chat, GPT and other inventions have put new horizons of knowledge creation before us. Using them within ethical boundaries is no less than a test.<sup>8</sup>

#### **Higher education and migration of talented people abroad**

The frequent departure of highly educated people from the country, especially talented people in medicine, IT and pharmacy, for employment abroad is an irreparable loss to human capital. If the country's thoughtful and applied scientists, disappointed with the country's economic and political situation, leave the country and seek a place for themselves in other worlds, then who will improve the country's economic and political situation? But it is also a fact that in view of the speed with which the country's administration has pushed Pakistan's economy towards self-destruction, some people have been forced to understand that doing business honestly here is not an easy task. The country's economic situation can only be managed when the country's political leadership, administration and judiciary prioritize the country's interests over their own interests and, with a sense of accountability before Allah Almighty, restore the dignity of institutions by being accountable and the supremacy of the constitution and democratic traditions are promoted in the country.

Authoritarian regimes have never been a guarantee of progress and prosperity, nor can they bring this prosperity to Pakistan. According to the 2023 report of the Bureau of Immigration and Overseas Employment, more than 862,000 Pakistanis left the country in search of employment in 2023. This is a large number, on which resources have been spent from the national treasury to provide education and other facilities. It is also worth considering that leaving their families behind and going abroad in search of employment can invite numerous risks from every perspective, social, cultural and moral. Studies conducted on the separation of a large number of workers and skilled people from Pakistan in the Middle East from their families show that as a result, even if some money has come to their families from outside the country, the social cost paid for it has been much higher than this amount. To say that overseas Pakistanis provide financial assistance to Pakistan's economy may affect the statistics, but its far-reaching consequences cannot be said to be happy for the country's society and culture. Moreover, the situation that existed 10 years ago has now changed and those countries where there was a demand for people working in low-income sectors such as mechanics, drivers, construction workers and others are now gradually

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<sup>8</sup> P. Kibertis, and Roberts, It's not just the genes. Science (2002): 307.



decreasing. Using technology, employing their own local population in these jobs has become a priority in the Gulf countries.<sup>9</sup>

If there is a demand for people working abroad in the future, then only in those sectors where they have IT and those skills, which are not yet available in these countries. In this context, first skills (skills) will have to be determined in Pakistan and then their education and training institutions will have to be established, so that these talented people can go abroad and work with dignity. At present, there is only one Skills University in the country, which aims to provide training in skills. Unless every university includes it as a priority in its work, we cannot provide highly skilled people either in the country or outside the country. If experts in the fields where skilled people are needed go abroad frequently, then there will be further poverty and unemployment in the country, as well as a decline in respect for the law. Therefore, there is a need to formulate a nationwide strategy, especially in medicine and IT.

Wherever there is internet access in the country, online learning must be promoted so that basic education can be made popular through virtual classrooms where residential facilities are not available. In this, teaching materials will have to be created according to the needs of Pakistan. Imported concepts cannot solve our problems. Teachers will have to be trained for e-learning in every province so that the plan can be implemented properly. To solve the economic problem, we will have to make fundamental changes in our education system. At present, the education that our business schools are providing can make good managers, but there are no such people who can create businesses with an innovative mind in which they can provide employment to people. Youth in neighboring countries are benefiting their national economies with millions of dollars through IT services. Our youth is no less than anyone in human capital, ability and intelligence, it only needs proper training and guidance.

Due to China's ability to provide goods on a large scale in global trade, industries in Pakistan are facing difficulties and at present the dominant trend is online trade, in which neither America nor we can compete with China's large-scale production. If we give centrality to this trade, there will be a national loss of 'industrial regression' (deindustrialization), whereas if we focus on the development of our country's agriculture, we can reduce poverty a lot. Research is needed in agriculture. For example, other countries produce more than us by spending 1/10 of the water we spend on rice cultivation. Through necessary information and education, we have to increase the fertility of our lands and instead of providing fodder to some so-called friendly countries on rent, we have to meet the needs of not only the country but also other places by increasing the production of vegetables and commodities. At the same time, those industries that are the hallmark of Pakistan, such as the textile industry, must focus on the supply of yarn and cheap electricity on a priority basis. In this regard, technical education in universities should also be promoted.<sup>10</sup>

Universities should generate their own resources. For this purpose, they should establish contacts with people related to industries and agriculture and present solutions to their problems to universities, so that on the one hand, universities can commercialize innovations and their use can create self-reliance in the national economy. Instead of relying on the

9 J. Hodgson, Expression systems: A user's guide. Emphasis has shifted from the vector construct to the host organism. *Biotechnology* 11, (1993): 887

10 P. Kibertis, and Roberts, It's not just the genes. *Science* (2002): 296



government alone, we should build educational institutions under the shade of trees in the informal environment, in place of traditional schools, with the cooperation of knowledgeable people of the society, on the basis of local support, to improve education, cleanliness and health. The teaching and educational use of mosques can also provide extraordinary assistance in the promotion of education. The Islamic tradition was that not only the teaching of the Holy Quran, Hadith and the biography of the Holy Prophet (PBUH) but also the centers of education in mathematics, history and medicine were in mosques. Be it a city or a village, mosques are present everywhere. With their positive use, extraordinary success can be achieved in the expansion of knowledge without any financial burden.

### **Organizing Specialization Education in Universities**

Currently, general education is being provided in most universities. If there is specialization, it is only to the extent of medicine or engineering. Going deep into pharmaceuticals and other fields and finding new paths has not been our priority. This needs attention. It is not necessary to establish new universities for Center of Excellence or specialized universities. At least one or two existing universities in each province can be selected for a specialization. In this way, higher education can be provided by bringing students not only from within the country but also from outside the country, which will be an honor for the university and help in its economic stability. While presenting these few suggestions, the principle has been kept in mind that what we can do based on our existing resources. For these suggestions, it will only be necessary to change their priorities through exchange of ideas with public and private universities, which can yield very useful results at the national and international levels.

### **Conclusions and Recommendations:**

- The Islamic Movement must find individuals from the existing educational institutions for educational planning who will voluntarily prepare a blueprint for an alternative system, its goals, the teachers required for it, and the academic materials required for it that will instill the ideology of Pakistan in the hearts and minds, and make it so technically comprehensive that the study boards of universities will want to use these books in their schools. The leaders of the agreement should select a few institutions as models and present a practical example by introducing the new curriculum and training to them. A nationwide campaign will have to be launched to create awareness of the new education system among the educated people of the country, and education and training, ethics and character will have to be given priority in its priorities. Intellectuals, journalists, and people doing welfare work at the national level must be included in the campaign for educational reform, so that this change becomes a social necessity.
- The preparation of the required textbooks in the national language must be done on a technical basis, so that their high quality and professional skills will persuade people to accept them. If this work is started with sincerity of intention and the hope of Allah Almighty's help, people will come along and a caravan will continue to form. Because this is a basic need of the country.
- To foster the research trend in universities, it is necessary to set up research incentives for young researchers at the MPhil and PhD levels, which will encourage them.



