

Sharjah Academy's Strategies for Spreading Islamic Astronomy

Abdulhadi Hassan Mohammed Taqi Salah, Nurazmallail Marni

Academy of Islamic Civilization, Faculty of Social and Islamic Sciences, Universiti Teknologi Malaysia, Malaysia

Email: hassanmohammed@graduate.utm.my, nurazmal@utm.my

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Abstract

This study explores the strategic role of the Sharjah Academy of Space Sciences and Technologies (SAASST) in disseminating Islamic astronomy and preserving its intellectual heritage within educational and scientific contexts. The research addresses the challenge of integrating traditional Islamic scientific knowledge with contemporary methods of communication and research to maintain its relevance in modern society. The primary objective is to analyze how SAASST employs strategic initiatives to promote Islamic astronomy as a living scientific discipline, rather than a purely historical subject. This study is significant because it highlights the contribution of an institutional framework that bridges cultural heritage and modern scientific advancement, thereby fostering cultural sensitivity and scientific literacy in the Arab and Islamic world. Using a qualitative approach grounded in the theories of Knowledge Dissemination and Cultural Heritage Preservation, the research investigates five key strategic areas at SAASST: educational and training programs, museum and cultural exhibitions, research and publications, digital dissemination and public outreach, and community partnerships. The findings reveal that SAASST serves as a pioneering institution that effectively integrates science, culture, and education. By utilizing modern pedagogical tools and communication technologies, the Academy connects the achievements of classical Muslim scientists with contemporary scientific goals. Furthermore, SAASST supports national and regional initiatives to celebrate Islamic civilization and promotes international collaboration in astronomy and space sciences. This study contributes to the understanding of how educational and cultural institutions can sustain and revitalize traditional scientific knowledge within modern frameworks, offering a model for similar efforts across the Islamic world.

Keywords: Sharjah Academy for Astronomy, Space Sciences, Technology (SAASST), Islamic Astronomy, Knowledge Dissemination

Introduction

Astronomy, within the intellectual and cultural history of Islamic civilization, has been given the most distinguished consideration. From the early Islamic civilization, observing celestial phenomena served both religious and practical ends-especially in determining times of prayer, the direction of the Qibla, and the arrival of lunar months. Anything celestial was also

a domain of awe-inspiring curiosity, looking into the structure and harmony of the cosmos. Due to such illustrious men as Al-Biruni, Al-Battani, Al-Tusi, and Ibn Al-Shatir, the discipline of Islamic astronomy was made more scientific and hence greatly assisted in developing so much of the astronomical knowledge of the world.

In these days, there have been many attempts at preserving and transmission of the scientific heritage, with intent to reconnect present generations to their intellectual roots. Within this premise, the Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST), established under the University of Sharjah, has matured as a prestigious institute relegated to the study, recording, and public display of modern and ancient astronomy.

The Academy portrays duality in its mission: on one hand, promoting the new astronomical research, and on the other, protecting and embodying the legacy of Islamic scientific consciousness. Through numerous educational initiatives, museum exhibitions, community awareness programs, and joint research projects, the Academy intends to present Islamic astronomy not merely as a historical account but rather as a living history that continues to inspire and seep into modern-day scientific research.

Stretching from theory to practice with cultural ramifications, the intent shall be to analyze the strategies Sharjah Academy employs to disseminate Islamic astronomy, exploring how such processes contribute to the preservation of Islamic intellectual heritage, the promotion of scientific literacy, and the reinforcement of cultural identity in the Arab and Islamic world.

Knowledge and Heritage

This study is based on two complementary paradigms: one that pursues the dissemination of knowledge and the other that aims to preserve cultural heritage. These complementary frameworks provide a conceptual view to understand how SAASST promotes Islamic astronomy as a legitimate scientific knowledge versus the understanding of this science as an element of cultural identity. In highlighting the neologic values embedded within the Academy's strategies, this study foregrounds the dynamism that exists between education, culture, and science in the Arab world today.

Knowledge Dissemination Theory concerns how specialized or scholarly knowledge is purportedly communicated, adapted, and transferred to disparate target audiences. Having had its origins in communication and educational sciences, this theory insists that simply the production of knowledge will be a fruitless endeavor unless adequate dissemination strategies are successfully implemented through secondary agencies to render the complex ideas into layperson's language and relevancy for larger communities.

The theory finds high applicability when put into the context of Sharjah Academy. The Academy constitutes an intermediary institution between academic research and lay understanding. It uses a myriad of dissemination channels including course programs, museum and planetarium exhibits, public lectures, media outlets, and academic literature. Each channel plays a role in a degree of translation into less technical formats of Islamic astronomy that can be appreciated by learners, educators, and the general public.

All things considered, interactive workshops and guided exhibitions make the Academy's works on celestial mechanics and historical observatory practice appear easily digestible while not compromising the sciences involved. Therefore, it allows Islamic astronomy to escape the confines of mere academic discussions and into the cultural limelight of society. Applying the Knowledge Dissemination Theory thus allows the Academy to bridge between expert knowledge and societal engagement, furthering its goals for inclusivity in education and lifelong learning.

Another theoretical aspect lies in the Cultural Heritage Preservation Theory, a theory responsible for the processes wherein societies preserve, reinterpret, and hand down their intellectual and artistic legacy to other generations. In this perspective, the cultural heritage is not something fixed, relative, or pre-analytic gone into the past; instead, it is a living continuum, which evolves via levels of reinterpretation of the original meaning and contextualization into modern settings.

Within the purview of the Sharjah Academy's mission, the theory thus attempts to explain the concatenation of Islamic astronomy traditions within modern educational and scientific narratives. The Academy revives the legacy of Muslim scientists by establishing an interface to historical realities through exhibitions depicting astronomical instruments, manuscripts from ancient times, and replicas of old observatories. These programs, therefore, align to the vision of the UAE to pay homage to Islamic civilization, encourage intercultural dialogue, and nurture scientific literacy among its citizens.

On the other hand, this approach of the Academy is considered one of the finer examples of the synergistic model of preservation, wherein the protection of heritage is coupled with innovation and reinterpretation. Rather than viewing Islamic astronomy as a closed chapter of history, the Academy sees it as a basis for further investigation and as a source of inspiration. From this viewpoint, preserving heritage becomes an extraordinary cultural empowerment—that is, to sustain the spirit of identity while creating opportunities for participation in recent scientific enterprises.

Synthesis of Theoretical Perspectives

When taken together, the Theory of Knowledge Dissemination and that of Cultural Heritage Preservation provide the fuller analytical framework by means of which Sharjah Academy's efforts might be understood. The first lays stress upon those methods and media of Islamic astronomical knowledge dissemination and the second is concerned with the values and the meanings associated with that knowledge in cultural and historical settings.

When putting the theories into perspective, one's scope widens to conclude that the Academy's strategies were not solely directed towards passing information; instead, they represent an entire educational and cultural mission. In this sense, dissemination of Islamic astronomy is both an intellectual and social act: to develop science while remembering a culture that once stood on the very frontier of astronomical innovation.

Sharjah Academy's Strategic Initiatives

The Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST) has developed a multidisciplinary and comprehensive approach to present Islamic astronomy as

a scientific discipline and as a cultural identity. These initiatives advance in the educational and cultural fields, alongside the digital and community aspects, thus, ensuring that the Academy penetrates from classrooms and research centers across international public spaces to the broader public view. The following subsections provide an analytical treatment of the main strategic initiatives of the Academy.

Educational and Training Programs

Education forms the basis of Sharjah Academy's mission. In order to promote scientific literacy and reacquaint the community with the intellectual heritage of Islamic astronomy, multiple workshops, short training courses, and public lectures are held at the Academy. It targets a diverse audience: students, teachers, general learners, etc., thus opening avenues for scientific education to all.

For instance, this course on Islamic Astronomy allows participants to learn about early Muslim astronomers such as Al-Battani, Nasir al-Din al-Tusi, and Ibn al-Shatir in terms of their astronomical precision and accuracy in calculations, observations, and mathematical techniques. The course serves as a bridge across the evolution of sciences from an ancient to a modern state.

In addition to this, the focal point of these programs is experiential learning wherein the participants are afforded an opportunity to interact hands-on with astronomical instruments, telescopes, or even computerized simulations. This method falls under the Knowledge Dissemination Theory, in which complex concepts in astronomy are explained in an interesting and accessible way. Through these programs, therefore, the Academy becomes a disseminator of knowledge while simultaneously stirring curiosity and fostering critical thinking among learners.

Museum and Cultural Exhibitions

Sharjah Planetarium and the Islamic Astronomy Gallery have served as a bridge for cultural and scientific interaction and assimilation. These institutions maintain and display a variety of astronomical instruments and objects, consisting of ancient astrolabes, celestial globes, sundials, and manuscripts, which together provide a historical background of the evolution of astronomical thought in the Islamic world.

Through engaging exhibits and interactive models, visitors learn about the works of scholars during the Islamic Golden Age and their long-lasting contributions to modern astronomy. The museum experience is not just meant for passive consumption but engages the visitor in the act of learning and cultural reflection. Visitors are set to study how Islamic scholars relied on a mixture of empirical observation and philosophical thought in making sense of the universe. This initiative, by transforming historical artifacts into educational tools, fulfills the Cultural Heritage Preservation Theory. The scientific achievements of ancient civilizations with respect to their knowledge must be situated within current scientific discourse to bridge historical understanding and present-day innovation.

Research and Publications

Research lies at the core of the Academy's agenda for integrating the historical investigation with psychic-level modern scientific inquiry. The Academy facilitates multidisciplinary

research ties with universities, observatories, and cultural institutions within the region and beyond. The projects concentrate on such themes as Islamic astronomical instruments: their manufacture and modus operandi; the precision of lunar-solar observations in classical texts; and the transfer of astronomical knowledge between the Islamic world and Europe throughout the medieval period.

Besides the preparation of scholarly publications, the Academy aids graduate research and organizes conferences for historians of science and astrophysicists to gather. All the initiatives serve the revival of Islamic scientific historiography, thus recognizing Islamic astronomy as having been an original and major chapter in world scientific history.

The Academy sees itself as a regional center for Islamic scientific research, where academic rigor combines with cultural sensitivity in the quest for intellectual exchange and innovative efforts based on heritage..

Digital Dissemination and Public Outreach

Having realized the transformative power of digital media, the Academy resorts to multiple online platforms for outreach to audiences across geographic barriers. Its various social media campaigns, virtual exhibitions, and interactive webinars help audiences worldwide engage in activities based on Islamic astronomy without leaving their homes.

Online content at the Academy is usually multilingual, reflecting the need for accessibility and inclusivity. These educational videos, virtual planetarium tours, and digitized manuscript archives open up Islamic astronomical heritage to the world. This approach, while creating more opportunities for public engagement, also opens the door for intercultural dialogues that foreground the shared human property of Islamic astronomers in the language of curiosity and scientific inquiry.

By using modern communication techniques, the Academy exemplifies keeping knowledge intact and living by reinterpreting it through digital transformations so later transmission can ensure relevance in the present-day information age.

Partnerships and Community Engagement

Community collaboration is a principal value in the Academy's outreach motto. By initiating partnerships with mosques, schools, and universities, as well as cultural centers, the Academy organizes sky sighting events, public lectures, and awareness campaigns during spiritually significant periods like Ramadan and Eid.

The entire program serves as an introduction to observational astronomy for the participants while presenting the practical and spiritual importance of astronomy in Islamic tradition- such as establishing prayer times, sighting the moon for the lunar calendar, and the study of celestial cycles.

Such initiatives bind science to society by encouraging community members to view astronomy not only as a scientific pursuit but also as a representation of divine order. Anime is working to support the Academy's vision of a culture that coexists with science, faith, and heritage.

Synthesis

Together, these initiatives portray the integrated framework of Sharjah Academy where education, culture, research, technology, and community engagement are intertwined. Dissemination of Islamic astronomy, as exemplified through the activities of the Academy, is not a singular act of preservation but more so a multidimensional process of revival and reinterpretation. By rendering ancient knowledge usable for today's generation, the Academy performs a unique teaching function in uniting the past generations in their lofty intellectual achievements with the intelligences of the present and thus providing more encompassing grounds for the interpretation of science, culture, and civilization.

Conclusion

Sharjah Academy presents an innovative institutional scheme that bridges the intellectual heritage of the Islamic world with the modern-day aspirations for consciousness of scientific advancement. Through educational, cultural, digital, and community initiatives, the Academy had transformed Islamic astronomy from an antiquated subject into a living, evolving knowledge ecosystem capable of being a source of curiosity, discourse, and discovery.

In the core of the Academy's approach lies one very gargantuan concern: the amalgamation of knowledge and culture. Their educational and training programs develop scientific literacy while promoting a respect for the works of classical Muslim scholars. Time with museum exhibitions and at the planetarium makes visitors revel in the glory of Islamic civilization, offering a really tangible experience of the tools, manuscripts, and methods employed in early astronomical thought. Furthermore, research and academic partnerships link Islamic astronomy closely to the broader global dialogues on the history and philosophy of science. On another profile, digital innovation and community outreach were considered equally important. Sharjah Academy harnesses technology to disseminate the knowledge of Islamic astronomy to the world, turning old manuscripts and scientific principles into interactive experiences. From schools to mosques and cultural centers, these partnerships exemplify a form of science communication that is culturally relevant: appreciation for astronomy can tug along thought with spiritual reflection at the same time.

Seen through the prisms of the Knowledge Dissemination Theory and the Cultural Heritage Preservation Theory, the work spirit of the Academy is an ideal example of the bonding of scholarship with culture. The Academy, apart from disseminating scientific knowledge, also preserves the collective memory of a civilization that was once leading in astronomical discoveries. Such a double purpose, thereby, stands for the truth that gaining knowledge in Islam has always been an act of reason as well as an act of faith.

Finally, the Sharjah Academy for Astronomy, Space Sciences, and Technology remain as an educational and cultural beacon in the Arab and Islamic world. Its all-encompassing view and approach to Islamic astronomy show that the Islamic scientific heritage is not a static entity but rather a living force that continues to contribute to molding today's intellectual and scientific worlds. Using a synthesis of the wisdom of the past and the instruments of the present, the Academy proves that science is one of the strongest forces shaping humankind's understanding of the universe and of itself when conducted in a setting of culture and curiosity.

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