



## CENTER OF ISLAMIC CIVILIZATION AND INTERACTIVE SCHOLAR AVATARS

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**Abstract:** *This article provides an in-depth analysis of the concept of a Center of Islamic Civilization integrated with interactive scholar avatars, their potential for heritage education, and their impact on public engagement with Islamic intellectual history. In particular, the degree of historical authenticity, pedagogical effectiveness, and ethical challenges of representing classical Islamic scholars (e.g., Al-Farabi, Ibn Sina, Al-Biruni) through digital avatars were considered. Technological approaches to developing interactive avatars, including natural language processing, motion capture, and source-linked dialogue systems, are presented with reference to existing digital humanities projects. The cultural and educational advantages of deploying scholar avatars within a dedicated civilization center are substantiated. The research results serve as an important scientific and practical basis for ethically responsible and pedagogically sound implementation of interactive avatars in Islamic heritage contexts.*

**Keywords:** *Islamic civilization, scholar avatars, digital heritage, interactive learning, Al-Farabi, Ibn Sina, virtual museums, intellectual history, natural language processing, source transparency, ethical design, aniconism, postcolonial heritage.*

### INTRODUCTION

Today, along with the growing demand for digital cultural heritage products, methodological problems related to the representation of Islamic civilization are becoming increasingly relevant. The level of authenticity and ethical safety of interactive systems depicting historical Islamic scholars requires special attention. Digital avatars, especially when representing real historical figures, carry risks of anachronism, oversimplification, or orientalist stereotyping.

If scholar avatars are developed without rigorous historical oversight or without linking dialogues to primary sources, the relatively safe pedagogical representation can transform into a misleading or even harmful educational tool. This dramatically increases the risk of distorting Islamic intellectual traditions. Additionally, poorly designed avatars may inadvertently violate cultural sensitivities regarding the visual depiction of revered figures, causing serious damage to public trust in digital heritage projects.

This work provides for an assessment of the historical authenticity and ethical safety of interactive scholar avatars in a proposed Center of Islamic Civilization, the identification of the mechanisms of knowledge transmission through avatar-user



interaction, as well as an analysis of the main technological and curatorial methods used to ensure responsible representation. The main goal of the work is to recommend scientifically based solutions aimed at reducing the risk of misrepresentation and enhancing the educational value of scholar avatars for diverse global audiences.

**MAIN PART**

Interactive scholar avatars and their underlying technologies are widely used in many sectors of digital heritage, particularly in virtual museums and online learning platforms. Digital avatars are the main interface for user engagement in many cultural institutions, increasing the accessibility and memorability of historical content [1,2]. Avatar-based systems are also used in history education as conversational agents, virtual guides, and role-playing characters.

There are two main forms of scholar avatar design: text-based (non-visual, conversational AI) and visual (animated or stylized representation). Text-based avatars are relatively safe from aniconism concerns and less culturally controversial, while visual avatars offer higher user engagement but require careful attention to Islamic representational traditions. Visual avatars, if not designed with cultural consultation, risk causing offense or reinforcing orientalist tropes. They can also affect user perception of historical authenticity, leading to misconceptions such as assuming the avatar reproduces verbatim historical speech [3].

**Table 1.** Technological Approaches to Developing Interactive Scholar Avatars

Method	Process Tools	Materials	Advantages
Natural language processing (NLP)	GPT-based fine-tuned on classical texts	models, classical	Conversational, scalable
Source-linked dialogue trees	Pre-scripted Q&A with citation display	with	High historical accuracy
Motion capture & animation	Motion capture suits, 3D rendering software		Realistic gestures, engaging
Voice synthesis	Text-to-speech modeling	with historical accent	Accessible, immersive
User query logging & curation	Feedback loops with historians	with	Continuous improvement

Scholar avatars, when poorly designed, damage not only user trust but also the reputation of Islamic digital humanities. They not only threaten the credibility of the institution hosting them, but can also easily spread historical misconceptions



through social media and educational networks. This situation requires strengthening ethical and curatorial safety measures.

The following basic technologies are used in the responsible development of scholar avatars:

- Source-linked dialogue systems – every avatar response includes a citation to a classical text (e.g., Ibn Sina’s “Canon of Medicine”, Al-Farabi’s “Al-Madina al-Fadila”).

- Historical advisory boards – peer review of all avatar content by Islamic studies scholars.

- Transparency interfaces – users can view the historical basis for any avatar statement.

- Pluralism protocols – avatars represent multiple interpretive traditions (e.g., Ash’ari and Maturidi theological perspectives).

- Aniconism-aware design – preference for abstract, text-based, or silhouette avatars in conservative contexts.

- User feedback integration – continuous improvement based on public and scholarly input.

Patent and project research shows that among these approaches, source-linked dialogue and historical advisory boards are the most effective [4,5,6].

Diagram Suggestion: Ethical Design Framework for Scholar Avatars

X-axis: Level of visual realism (abstract → photorealistic)

Y-axis: Level of historical source transparency (low → high)

Quadrant I (high transparency, abstract visual): Ideal for conservative contexts (e.g., text-based avatars with citations)

Quadrant II (high transparency, high realism): Suitable for academic or controlled museum settings

Quadrant III (low transparency, abstract visual): Avoid – misleading despite abstract form

Quadrant IV (low transparency, high realism): Most dangerous – creates false sense of authenticity

A Center of Islamic Civilization equipped with interactive scholar avatars also contains valuable narrative opportunities, such as simulating a classical “majlis” (scholarly gathering) where users can “converse” with multiple avatars debating a topic. This approach, along with the preservation of Islamic intellectual heritage, serves to create deep, experiential learning.

## **SUMMARY**

The research results show that interactive scholar avatars, especially when developed without rigorous historical and ethical oversight, pose a serious threat to accurate representation of Islamic civilization. Scholar avatars in text-based or stylized, non-photorealistic forms transform into safer educational tools, forming a substance of historically responsible and culturally sensitive heritage engagement.



Improper implementation of scholar avatars negatively affects the quality of public understanding of Islamic intellectual history, and also penetrates educational curricula through digital platforms.

Currently, a number of effective technological and curatorial solutions have been developed for the responsible deployment of scholar avatars: source-linked dialogue systems, historical advisory boards, transparency interfaces, pluralism protocols, aniconism-aware design, and user feedback integration. There are a number of patents and project reports on their technological and pedagogical efficiency, which are widely used in practice.

At the same time, by processing the narrative and educational components contained in the historical legacy of Islamic civilization and obtaining such products as interactive learning modules, virtual “majlis” experiences, and open-access scholar dialogue databases, it is possible to reduce epistemological risks and create cultural value. This approach allows for the transformation of scholar avatars from potentially misleading representations into a useful educational resource.

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