Future-Readiness and Islamic Education
Perspectives from Singapore

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This article explores the relation between future-readiness and Islamic education from the perspectives of Islamic learning centers in Singapore. The main research objective is to examine how the concept of future-readiness and related terms are interpreted, framed, and facilitated in Islamic textbooks. Based on a content analysis of the textbooks used at Islamic learning centers for primary students in Singapore, two research findings are reported. First, the Islamic textbooks interpret future-readiness as equipping Muslim learners with Islamic knowledge and values as well as application and learner-centeredness in the modern world. Second, the Islamic textbooks promote information and communications technology (ICT) as part of preparing students for future-readiness. A major implication from this study is that Islamic curricula evolve in tandem with changing times to support the development of future-ready students. In addition, the advancement of future-readiness is situated within an Islamic worldview that emphasizes religious beliefs and values. A significant limitation of this study is that its research method centered on an analysis of textbooks; hence, empirical research is recommended to corroborate the research findings and implications.

Keywords: Islamic curriculum, future-ready Muslims, Singapore

Against the backdrop of the fourth industrial revolution, the concept of future-readiness has gained traction in the educational landscape. To date, there is a burgeoning body of literature on various aspects of future-readiness in education, such as teacher preparation, curriculum, pedagogy, a school's mission and vision and educational leadership (e.g. All4Ed, 2022; Gillespie et al., 2017; Kaempf, 2022; Hahn, 2020; Lipuma et al., 2019; Ng & Ku, 2023; Sheninger, 2020; Smith & Hamilton,

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2017; World Economic Forum, 2020; Wong & Ng, 2020). A survey of the extant literature shows the majority of publications focus on secular schools, with relatively little attention having been paid to religious educational institutions such as Islamic learning sites, especially for Muslim minorities. Some 300 million Muslims are in minority situations worldwide, primarily in Asia (Minority Rights Group International, n.d.). There currently are few studies on the development and distinctive features of the Islamic curriculum, especially the teaching content that pertains to future-readiness.

An analysis of the textbooks designed and utilized by Muslims for Muslims is essential to understand how Muslims themselves perceive future-readiness. This study does not assume that textbooks are apolitical but acknowledges them as cultural artefacts and social constructions reflecting the worldviews and values of their authors. In the context of this study, analyzing Islamic worldviews opens the door to *self-projection* that revolves around a public display of one's normative standards and conceptions through a representative object. By deliberately creating a self-image and presenting it in the public domain, the projector draws attention to oneself to send a message and achieve one's goal. Self-projection is not about what others think of us but rather what we think, or would like others to think, about us. Put another way, self-projection serves the projector's agenda by reflecting one's ideal or imagined (rather than actual) reality. It follows that self-projection, and by implication, self-representation, is autonomous and empowering.

It is critical to examine the self-representation of religious minorities as it reveals "how individuals and groups construct a stable and predictable world out of a set of diverse phenomena; in doing so, how they go 'beyond the information given' and what kinds of logic they use in such endeavors" (Markova, 1996, p. 180). Self-representation is the window through which others learn about the cognitive and affective constructs of a cultural group that render meaning, order and familiarity to their lived experiences (Ginges & Cairns, 2000). Against the background of a globalized and digital world, research into Muslim educators' viewpoints on future-ready education is essential as they seek to prepare Muslim learners. Faith is pivotal to Muslims who believe all human knowledge, learning, and actions should be circumscribed and guided by Islamic teachings. In view of Islamic schools' primary mission of propagating religious knowledge, beliefs, and values to Muslim children and youth, it is pertinent to examine the relevance of a future-ready curriculum for these institutions.

To address the research gap between future-readiness and religious curriculum, this article reports on a study of future-ready Islamic curriculum in Singapore. We note that the term "future-readiness" is not found in traditional Islamic curriculum, materials and resources. This study does not attempt to impose the notion of future-readiness on Islamic education, but to explore how contemporary Islamic educational institutions make sense of and respond to the challenge of nurturing future-ready learners. The specific objective is to examine how the concept of future-readiness and related terms are interpreted, framed, and facilitated in Islamic textbooks. Singapore is a multi-ethnic. multi-religious country in Southeast Asia where Muslims account for about 15% of the population (Tan, 2009). Muslim leaders, educators, parents, and other stakeholders in Singapore have enacted diverse curricular and pedagogical approaches to help Muslim students be future-ready. Singapore thus provides a timely and appropriate example to shed light on future-readiness as embodied in the related Islamic curriculum. The article first provides an introduction to the concept of future-readiness and Islamic perspectives on education. It then examines a case study of an Islamic learning site in Singapore and reviews major implications of the example of the Islamic curriculum in Singapore.

The Concept of Future-Readiness

There is currently no consensus on the definition of future-readiness (Tan, 2023, 2024). Broadly speaking, future-readiness is about addressing "evolving and changing circumstances in the future" (Ng & Wong, 2020. p. 2). The first author of this paper has suggested in another study that future-readiness is about having an open and flexible mindset where one (re)acts strategically to emerging realities and challenges (Tan, 2024). Among the attributes associated with future-readiness are critical, creative, and problem-solving competencies and dispositions to deal with uncertainty, volatility, and technological disruptions (Ng & Liu, 2020). Other researchers have tethered future-readiness to economic considerations. A case in point is Fletcher Jr and colleagues (2018) who define future-ready students as "those learners who are prepared to succeed in college and in the workforce, as well as become productive citizens in society upon graduation of high school" (p. 78). What is clear is that governments all over the world are working hard to reform education, as they want schools and colleges to better prepare young people to be future-ready in a rapidly changing society. Educational reform must not focus solely on boosting

economic growth but also help students reach their potential and prepare for the digital age. The future-ready education system must be one where students learn and develop critical thinking skills and have the ability to solve problems (Quinn, 2012). Students need to be exposed to thinking rather than forced to memorize. An inclusive education system is important to facilitate parental choice and cater to diversity. It has to help people develop new knowledge, attitudes and skills as they move through life and face different challenges. Schools require highly skilled teachers who can use a wide range of teaching and assessment approaches to guide students' learning and enable young people to achieve their potential. The system must also make full use of the transformation of information technology.

Future-ready learners need to have an innovative mindset, generate and develop ideas, test the ideas and realize them. A major shift is needed from current practices that focus on knowledge acquisition and ignore ideas that are not in the curriculum. The educational theories of constructivism, connectivism, student agency, and engagement of school community are recommended to effect change (Ng & Wong, 2020). In short, future-readiness has put pressure on the education system to evolve and respond to new demands. A future-ready curriculum implies traditional approaches to teaching and learning are obsolete. Kaempf (2022) maintains future-ready teaching is "to adjust learning activities to student attention spans, to spaced and self-experiential learning, to mixing individual and collaborative learning more thoroughly, and to generate a combination of immersive, flexible, and face-to-face learning activities" (p. 190). Educators need to adopt constructivist approaches where prior knowledge is nourished with new information to foster learners' cognition (White, 2021). In other words, each learner's perception of the world is unique and constantly changes with new information. Conventional models of instruction cannot keep up with the challenges of future-readiness. Teachers and school systems need to design lessons that focus on problem-solving, collaboration and knowledge construction. Innovative teaching practices, such as cognitive activation and enhanced activities, are approaches that can replace typical drill-and-practice lessons; cognitive activation practices require students to think critically while enhanced activities allow students to reach their educational outcomes using technology enriched methods (O'Shea, 2021).

Education communities all over the world have worked to help students be future-ready by promoting "twenty-first century competencies" (21CC). In Singapore, the Ministry of Education undertook a major

curriculum review in 1997 that led to the inception of Thinking Schools, Learning Nation (TSLN) to prepare students for the twenty-first century. This education policy focused on developing creative and critical thinking skills, and its strategies included reducing curriculum content and greater emphasis on process instead of outcomes. In tandem with the demands of future-readiness, the 21CC framework has been infused into the academic curriculum, co-curricular activities, character and citizenship education, as well as applied learning programs (Tan et al., 2017).

Another development that responds to the challenges of future-readiness is the focus on science, technology, engineering and mathematics (STEM). For example, policymakers in the United States have advocated for increased participation in STEM for high school students to prepare them with the knowledge and skill sets needed for success in college and in today's economy (Fletcher et al., 2018). In view of the fact that the United States has comparatively low results in mathematics and other indicators in the Program for International Student Assessment (PISA), the STEM emphasis reflects school leaders' desire to improve students' competencies in these disciplines. A related point is that American schools are focusing not only on students' performance but also on their future development after graduation.

An associated U.S. reform initiative is the integration of academics with career and technical education (CTE). A study by Zagami and colleagues (2018) suggests the full potential of technology can never be achieved if educational leaders and teachers do not effectively integrate and incorporate the most current enhancements into their practice and curriculum.

The foregoing focuses on future-ready policies, content, and pedagogical approaches that pertain to secular education. The religious education sector is also affected by these changes, must help religious adherents to be future-ready, but the interpretations and educational approaches may differ from those in a secular context. It is therefore fundamental to understand the nature of education in various religious systems. The next segment examines Islamic education to better understand the religion's perspective on future-readiness.

iSla miC Per SPeCTiveS on edu CaTion

Educating the young is paramount in the Islamic tradition as it is integral to the development of human reason. Al-Attas (1999) points

out that Islam defines humans as rational beings with "the capacity for understanding speech, and the power responsible for the formulation of meaning—which involves judgment, discrimination, distinction and clarification, and which has to do with the articulation of words or expressions in meaningful pattern" (p. 15). Islamic education emphasizes the virtue of piety to God—the development of a person's soul, mind, and body and a person's capability to carry out his [sic] duties as a servant of God (Lubis et al., 2009). An integrated Islamic education emphasizes the unison of knowledge through teaching and learning in a classroom. Islamic education rejects duality between God and the world. The worldly knowledge should be well-coordinated with religious knowledge. All subjects introduced must be embedded with the characteristics and principles of Islam (Lubis et al., 2009).

It follows that Muslims are receptive toward the concept of future-readiness, understood in this context as the preparedness to meet "evolving and changing circumstances in the future" (Ng & Wong, 2020. p. 2). But the positive view of future-readiness comes with a caveat: human reason, from an Islamic perspective, should not be exalted above religious knowledge. Notably, Muslim leaders at the four world conferences on Islamic Education from 1977 to 1982 reminded Muslim students to "think precisely and logically but let their thoughts be governed by their spiritual realization of truth *as found in the Qur'an and the Sunnah* so that their intelligence is guided in proper channels and does not stray" (Erfan & Valie, 1995, p. 35, italics added). By learning about the proper places of things in the order of creation, Islamic education strives to lead human beings to the recognition and acknowledgement of the proper place of God in the order of being and existence (al-Attas, 1999).

The Islamic viewpoint is antipodal to a secular worldview in which human beings are the masters of their own fortune, free to use their abilities as they please, for better or worse (Bleher, 1996; Tan, 2011, 2012). Significantly, modernity is interpreted by some Muslims to mean not just modern education, technology, and industry, but also Western, anti-religious style of life (Daun et al., 2004). According to this view, education that does not attend to the spiritual nature of the learners is partial and fragmented: The secular education model cannot do justice to the human beings it serves to educate because it deals with various aspects of human nature in a compartmentalized way, ignoring their inter-relationships and denying the divine origin in them all (Esposito, 2002).

A consequence of Muslims' opposition to secular education is "educational dualism" where Muslim students are enrolled in two distinct and unconnected educational systems—Islamic and secular—concurrently (Zainah, 1998). Highlighting the "knowledge dichotomy" between Islamic and public schools, Zakaria (2008) asserts that the Islamic educational system produces graduates who have a strong religious knowledge base and moral attitudes but lack a methodological approach, while general education produces graduates who are strong in methodological approaches but lack a religious knowledge base. A perennial challenge, therefore, faced by Islamic educational institutions is how to balance the preservation of their faith with preparing the young for the realities of modernization. The next segment illustrates the approach adopted by Muslim educators in Singapore to harmonize religious inculcation and future-readiness through Islamic textbooks.

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r esearch background and method

This study analyzed the textbooks used at an Islamic educational corporation that offers part-time Islamic education to Muslim children at the primary level (aged 7–12) in Singapore. There are a total of 23 centers across Singapore and they follow the standard curriculum designed by the corporation. Muslims in Singapore could choose to study in a secular government school or an Islamic school (known as madrasah in Singapore). The vast majority of Muslim parents (around 96%) opt to send their children to study full-time in government schools where English is the medium of instruction, rather than to the madrasahs. At the same time, the parents value the religious inculcation of their children. Hence, many parents choose to enroll their children in part-time Islamic classes outside school hours. Muslim children in Singapore may attend Islamic classes in mosques that provide part-time basic Islamic education to students who attend government schools. Beside the mosque madrasah, Muslims may also receive part-time religious instruction from private Islamic kindergartens, and programs and activities organized by Muslim organizations (Tan, 2007, 2010).

The Islamic educational centers selected for this study are an example of a private set-up established by a group of Muslim religious teachers to provide part-time religious classes for Muslim students. The part-time Islamic education provided to students outside the schools

through a structured curriculum is classified as nonformal education. The primary students attend lessons at the center once a week for 2 hours and 15 minutes per session over a period of six years. The curriculum has the following objectives: to understand Islamic knowledge and sciences, to think logically and analytically based on al-Quran and al-Sunnah, to write and read Jawi, to read the al-Quran following the rules of recitation, and to write and speak basic Arabic (information from the website).

This study employed a qualitative content analysis of the textbooks used at the centers based on the four stages of decontextualization, recontextualization, categorization, and compilation. The study follows Lebrun and colleagues' (2002) definition of textbooks to refer to the standard books used by students as well as other supplementary materials such as "computer-based tools designed for educational purposes" (p. 54). The study's focus on textbooks recognized that they are a major conduit of academic knowledge as well as a significant cultural artefact, pedagogical instrument, and ideological force for students (Johnsen, 1993; Venezky, 1992). Woodward, Elliott, and Nagel (1988) assert that textbooks determine not only what teachers teach and students learn in class, but also mold teaching techniques and assumptions about the subject matter and lesson planning. Although empirical data are valuable to inform researchers on the application of Islamic values and beliefs, this study chose a content analysis of textbooks as they are the starting point to understand the Islamic conceptualization and theories of future-readiness as presented in the curricular materials.

Six standard books for six levels (primary 1 to 6) were analyzed by the second author, who also triangulated the data by checking with the teachers. The aim of content analysis is to "make valid inferences from verbal, visual, or written data in order to describe and quantify specific phenomena" (Downe-Wambolt, 1992, p. 314). The process of content analysis for this study involves four stages, adapted from Bengtsson (2016):

(1) *Stage 1: Decontextualization*

The task is to identify meaning units in the text by asking the question: "what is going on?" A meaning unit comprises a collection of related words, sentences or paragraphs that answer the research questions. Each meaning unit that has been identified will be given a code based on the open coding process. There will be both text and picture coding. Using an inductive coding system, codes will be generated in an iterative manner and a coding list will be created.

(2) Stage 2: Recontextualization

The second stage involves checking that all areas of the content have been covered in relation to the research questions. To do so, the original text will be read again, this time alongside the coding list that contains the identified meaning units. Sections of the text will be distinguished based on whether they are marked (they contain content relevant to the meaning units) or unmarked (they do not contain content relevant to the meaning units). This stage serves to include "content" and exclude "dross". This stage requires the researcher to maintain a distance from the data collected in Stage 1 to overlooking any relevant data.

(3) Stage 3: Categorization

This stage involves the creation of categories and condensation of extended meaning units. Themes will be generated that denote the overall concepts of underlying meanings. The identified themes and categories should be internally homogeneous and externally heterogenous in the sense that no data should belong to more than one group. Throughout the process, the researcher is guided by the research questions and the categorization should be based on the data that have been obtained in the first two stages.

(4) Stage 4: Compilation

The final stage involves drawing realistic conclusions based on the data collected in an objective manner. Both manifest and latent analyses will be adopted. In the former, the researcher stays close to the original meanings and contexts; in the latter, the researcher identifies hidden meanings in the text. A table will be produced to present a summary of (sub)themes, (sub)categories and (sub)headings. This stage also involves checking where the researcher compares the new findings to the existing literature.

Manifest analysis focuses on surface structure by asking the question: "what has been said", whereas latent analysis spotlights on the deep structure by asking the question: "what intended to be said?". Manifest analysis is conducted through the following steps: adopt an inductive coding system, compare the codes with the original data, bring the subjects together, and use the words themselves by staying close to the text. Latent analysis adheres to the following steps: adopt an inductive coding system, compare the codes with the original data, condense the meaning units, and find the underlying meaning of the text. The research questions are:

1. How are "future-readiness" and related terms interpreted and framed in the Islamic textbooks?
2. How do the Islamic textbooks promote future-readiness through the utilization of Information and Communications Technology (ICT)?

The purpose of the first research question is to reveal how the notion of future-readiness and associated ideas are defined and understood by the centers' educators through the prescribed textbooks. The answers to this question serve as a reference point for the second research question, which addresses the cultivation of future-readiness in the learners through ICT. We have foregrounded ICT in this study as scholars have linked information technology to the concept of future-readiness (Fletcher et al., 2018; O'Shea, 2021; Zagami et al., 2018).

The authors of this paper comprised the research team for this study. Both authors are Singaporeans who have conducted research and published papers on Islamic/Muslim education in Singapore. The second author is a Muslim who graduated from a full-time Islamic school in Singapore and is currently an Arabic-language teacher, making her well-versed in the Islamic curriculum and textbooks. While she provides an insider perspective of Islamic education, the first author is a non-Muslim and offers an outsider viewpoint on the topic. Neither author is involved in the conceptualization of the Islamic textbooks or other curriculum aspects at the Islamic centers the study focuses on.

r esearch findings

This section reports on the research findings which are organized in accordance with the aforementioned research questions.

h ow are "future-readiness" and related terms interpreted and framed in the islamic textbooks?

The Islamic textbooks adopted by the centers interpret future-readiness as equipping Muslim learners with the dual aims of (1) Islamic knowledge and values as well as (2) application and learner-centeredness in the modern world. On the inculcation of Islamic knowledge and values, the website states the Islamic centers' vision, mission, and curriculum objectives which are relevant to the topic of future-readiness. The vision is "Knowledgeable and God-fearing Muslims based on the Quran and al-Sunnah" and the mission is "To provide Islamic education with seriousness, patience, and sincerity in producing knowledgeable and God-fearing Muslims based on the Quran and al-Sunnah." As for the curriculum, seven objectives are listed as follows:

- To provide adequate understanding of the core knowledge of Islam so that students can understand it holistically. The curriculum is set to match the students' age and ability so they can appreciate and practice the religion of Islam as much as possible.

- To emphasize the Ta'lim (process of gaining knowledge), the Ta'dib (cultured with Allah, His Messenger and the relationship with all beings/system life) and the Tarbiyyah (spiritual training, intellectual and physical).
- To develop individuals with knowledge and logical, analytical, creative and innovative thinking based on the al-Quran and the al-Sunnah.
- To help individuals become good Muslims who are balanced spiritually, intellectually and physically.
- To develop the potential, talents, and capabilities of each individual, especially in education, appreciation of the way of life and to spread Islam.
- To produce individuals with strong morals and the competence to contribute to the religion, race, and nation.
- To provide a teaching and learning environment that enables maximum achievements in learning.

The vision, mission, and curriculum objectives of the centers do not mention future-readiness. However, future-readiness is alluded to in the reference of enabling students to acquire the 21st century skills of logical, analytical, creative, and innovative thinking. Furthermore, the Islamic textbooks teach that the Quran and al-Sunnah are not limited only to a certain period but are practiced from the Prophet's time until the end of time. Thus, holding strongly to these two main sources of Islam makes someone future-ready. The vision and mission if manifested successfully in the form of teaching and learning will produce someone equipped with Islamic virtues who is able to put oneself in the correct position regardless of what happens in the future. The centers' tagline "Your friend throughout your lifetime" indicates that the centers are ready not only for the present but for the future as well, adapting to whatever situations they might face.

It is noteworthy that the future-readiness concept is invested with an Islamic standpoint that anchors the individual upon a religious foundation. The religious interpretation is contrasted with a secular understanding of future-readiness as being "prepared to succeed in college and in the workforce, as well as become productive citizens in society upon graduation of high school" (Fletcher Jr. et al., 2018, p. 78). A person holding strongly to the Quran and al-Sunnah is able to mold one's inner self according to what is required and this subsequently strengthens and makes the individual a future-ready person.

Turning to the second aim of application and learner-centeredness in the modern world, the Islamic textbooks stress the primacy of helping students relate what they have learned to the 21st century and participate actively in learning. The Islamic textbooks link future-readiness to

a rejection of purely textual or didactic learning in favor of active, experiential and learner-centred pedagogies (Kaempf, 2022). First, teaching resources at the centers are not restricted to books and whiteboard only, and instead emphasize the theory-practice nexus. For example, the centers made a major change in teaching Arabic to the students. The centers produce their own book that is unique for teaching Arabic to students learning basic Islamic knowledge. They have their own method ("Kaji") that is more practical and relatable to the students. The centers' Arabic books focus on themes and terms that are related to the other religious subjects the students learn in the centers such as Tauhid, Seerah, Islamic History. The centers focus more on the Singapore context so the students can apply it in their daily lives.

The classes are also more interactive and constructivist—further evidence of future-ready pedagogies (White, 2021). Test and examination questions are narrowed down to application and questions requiring memorization have been greatly reduced. An example is when the students discuss and put into practice a subject called Fiqh. Basic level students will learn about rulings that are specific, that is, those having clear evidence whether it is an obligation, encouraged, permitted, or prohibited. Examples of such rulings are the five daily prayers and fasting. These two are specific rulings which are obligatory practices for all Muslims who have reached puberty and are of sound mind to show their servitude to God. This is a ruling that cannot be argued and changed; thus, this is a specific ruling. Although some rulings may be specific, there are many sub-rulings and discussions that are dynamic and may also be related to the main, specific rulings.

Flexible thinking also is a part of the future-ready mindset and is promoted in Islamic textbooks. In a subject called *Maqasid Shariah*, or legal maxim, students learn about the rulings in Islamic law. When a Muslim really understands the legal maxim of Islamic rulings, he or she can apply them in their lives and understand their practicality. *Maqasid Shariah* does not discuss rulings that are specific. It discusses the wisdom and objective of the fundamentals of religion and how, in some situations, certain rulings may change. With this being taught, the students will know how they are supposed to react if they are caught in certain situations.

An example is the five daily prayers where the older students will learn that in a situation critically requiring their presence, such as when they hold jobs like nurses, fire fighters, or surgeons, they are encouraged to exercise flexibility by combining the prayers at an earlier or later time. Prayer is an

obligation, but saving lives is also another obligation by which a Muslim must abide. There are flexibilities (*rukhsah*) that Muslims can apply to their lives. As a case in point, Islam gives Muslims guidelines to the performance of Friday prayer during the Covid pandemic. Some discussions in the religion are not rigid and can be adjusted according to situations; therefore each Muslim must keep learning to upgrade their knowledge because there will always be new issues that will emerge. The students will appreciate what they learn and this also makes them think more critically because some rulings are not static; they are dynamic according to the situation. When the students are equipped with the knowledge, they are ready and more confident in making decisions.

how do the islamic textbooks promote future-readiness through the utilization of information and Communications Technology (iCT)?

The centers capitalize on ICT as part of the Islamic understanding of future-readiness to ensure the complementarity of online and face-to-face teaching and learning. In this regard, the Islamic textbooks, which include ICT tools and resources, support Kaempf's (2022) argument that future-ready teaching comprises "a combination of immersive, flexible, and face-to-face learning activities" (p. 190). The inclusion of ICT exemplifies the centers' aspiration to equip the students with STEM from a young age as part of being future-ready. Future readiness is applied through online learning as the centers have the awareness that the virtual world will be a place for learning (Ng & Wong, 2020; Quinn, 2012). Although physical classes are still available, the virtual world is a complementary learning tool. The Islamic textbooks encourage the learners to acquire religious and modern knowledge through technology enriched methods (O'Shea, 2021).

There are classes that run only online via the Zoom platform and others that run in brick-and-mortar classrooms. Demonstrating flexible learning, physical classes are now able to go both online and offline thanks to the Learning Management System (LMS) portal and Blended Synchronous Learning Environment (BSLE) that incorporate the hybrid mode of learning. With this BSLE system, classes can be held physically and online. Half the students will attend the lesson at the center while the other half will attend the class online via Zoom. Online classes are able to run as per normal even during Covid and students are able to do their school activities online. Islamic learning for the centers is not only based on reading books with teachers per se as learning can also be done from an

online platform that includes learning about Islam. For example, when the students learn about taking ablution before performing the prayer, there is a two-to three-minute video that talks about ablution. Some classes were recorded and uploaded to the portal so students who are unable to attend the classes could watch the videos.

Other than the LMS portal, the centers also have the ePendidikan portal. Students who attend physical classes will also be given access to the LMS portal and they will still have the opportunity to use the online platform. This platform will be important should Singapore ever go through another lockdown. Future readiness is also about globalization where students may travel overseas as they can still attend classes online without interrupting their Islamic education. The centers also have invested in a recording studio for teachers to record videos for Islamic learning. The centers have arranged for third-party IT consultations to optimize IT usage. This helps the centers attract more young people and those groups who are IT savvy. Teachers also use all the engagement tools available online such as Padlet and Kahoot.

Attesting to the promotion of constructivist pedagogies that are associated with future-readiness (Ng & Wong, 2020), the Islamic textbooks come with quizzes and other activities using engagement platforms like Nearpod, Mentimeter, Classkick, and Kahoot. Students tend to enjoy the engagement platforms very much. Teachers also use Google Maps for Seerah, which is the biography of the Prophet that includes the event of his migration from Mecca to Medina, and allows teachers to show the locations of Mecca and Medina, the distance between the two cities, and the time required by the Prophet to travel between them. Teachers also use YouTube videos for subjects like Fiqh, Tauhid, Akhlak, and Islamic history.

Not only do students get the benefits of online and blended learning; parents also can use the online platform for parent-teacher meetings. This was conducted online via Zoom, and the response from the parents was better than when the meeting was held onsite at the centers. Some teachers also were able to share past years' examination papers in PDF format using WhatsApp groups with parents. There is a WhatsApp group for each class and parents can contact the teachers directly. This helps parents be more aware of their children, the subjects they are learning, and what the students do not understand so they can immediately inform the teachers. Parents will be aware of what the students learn during online lessons and able to hear and see what their children are learning, and they

themselves can ask the teachers about their concerns. The WhatsApp group is also a good initiative when students are infected by the Covid virus and unable to attend class. The teachers will remind the parents that their children will be sitting for an examination and therefore need to practice the papers for their preparation. The involvement of parents further testifies to a future-ready curriculum as Ng and Wong (2020) have posited that the engagement of the school community is a necessary component of a future-ready curriculum.

Discussion and Implications

The foregoing has reported on how the centers' Islamic textbooks seek to produce students who are ready to face future challenges. It has been noted that the Islamic curriculum enables Muslim students to participate actively in learning through myriad teaching methods and resources. A major implication from this study is that Islamic curricula evolve in tandem with changing times to support the development of future-ready students. What has remained unchanged for Islamic educational institutions is the underlying Islamic philosophy and theological framework. Future-readiness, understood as equipping learners with the requisite knowledge and skills to prepare them for a world of globalization, progress, and development, is not necessarily incompatible with Islam. To empower Muslim students for an era of globalization where learning transcends borders, the centers in this study have invested heavily in ICT tools, resources, and pedagogical approaches. This study reiterates Ulfat's (2020) conclusion that young Muslims can be prepared for a life in a religiously plural society, in which the individual relationship to God and the reflexivity of one's own religion are crucial preconditions for feeling at home in both the religious and secular worlds. Future-readiness reconciles the theological fields of tension, such as those between the omnipotence of God and the free will of human beings, between faith and reason, between religion and religiosity and other such fields.

The centers' curriculum objective of fostering application, flexible thinking, and experiential learning is in concert with Fletcher Jr. and colleagues' (2018) definition of future ready students as successful and productive individuals in schools and beyond. It is also evident that constructivism, connectivism, student agency, and engagement of the school community (Ng & Wong, 2020; White, 2021) are infused into the Islamic

curriculum through lessons that require active student participation and collaboration with parents. A distinctive feature of the center's promotion of future-readiness is the zealous utilization of ICT. Given that the students at the centers are full-time students in government schools, the centers' future-ready curriculum and pedagogies are congruent with the Singapore Ministry of Education's drive to prepare students for the twenty-first century (Tan et al., 2017). But what sets the Islamic centers' approach to future-readiness apart from the existing understandings and theories of the term is the former's religious underpinnings. As noted earlier, the center's aim is twofold: to advance Islamic knowledge and values as well as application and learner-centeredness in the modern world. As explained earlier, a major concern in Islamic learning is educational dualism where Islamic contents are presented as unrelated to and even contradictory to "modern" or secular knowledge. The example of the Islamic learning centers in this study shows that educational dualism can be avoided through a future-ready curriculum that is rooted in Islamic principles.

Islamic teachers need to link problems to daily life to help students improve their thinking ability because the latter can relate what they learn in class to their daily lives (Zulkifli et al., 2021). The teaching of Islamic education should emphasize efforts to enhance the intellectual capacity to understand, observe, study, and solve problems. The teachers' role is not to deliver the content per se, but to take responsibility to ensure students emerge as humans with noble morals. Thus, with current innovation, each individual student gets a choice in the pattern of knowledge acquisition. When creativity in teaching and learning is used effectively, teachers will have the opportunity to attract students, increase creativity, and apply good values in the teaching and learning process. According to Lubis and colleagues (2009), Islamic teachers and educators should be ready to change their thinking and attitude to accept and understand integrated Islamic education as a holistic system. Islamic integrated education is both teacher-oriented and student-centered. Teachers should be trained to be confident in their way of thinking and attitude while showing good mannerism in accordance with Islamic values as an example to the students. A teacher should use innovative methods, aspirations, and be good role models in their teachings to mold the students. Islamic teachers need to be capable of creating awareness of 21st century education among the students, preparing the latter for their future, and toward green, digital, and global culture.

A related point on future-ready education is that technology can serve as a catalyst for expanding the scope of Islamic education. In other words, technology can unite Islamic education and other fields; humans' expertise can be fully utilized in technology to make Islamic education the core of learning; technology can be used as a worldwide network for Islamic education; and technology can be capitalized on in building the concept of God and His knowledge. Pertinently, Mohd Baharan and colleagues (2021) report that technology use in Islamic education in Malaysia can increase the effectiveness of teaching. Another research study by Nawi and colleagues (2015) on mobile learning or M-learning in Islamic education in Malaysia shows religious teachers had positive attitudes toward the use of mobile phones as learning tools.

The example from Singapore shows that the promotion of future-readiness needs to be situated within an Islamic worldview that emphasizes religious beliefs and values. The case study of the Islamic curriculum underscores the potential to address the issue of educational dualism for Muslims by developing future-ready Muslims using interactive, ICT-enabled approaches within an Islamic worldview. At the same time, the experience of the Islamic centers points to practical difficulties in sustaining a modern curriculum that is circumscribed by religious values. The staff at the centers need to negotiate the contents of the course to ensure that what is transmitted is consistent with the religious beliefs and principles prescribed by the faith. Examples are sexuality issues that confront young Muslims in Singapore and require that teachers in the Islamic centers make a stand and guide the students appropriately.

Another challenge from the centers' interpretation, framing, and facilitation of future-readiness for learners at the primary level is critical literacy. There is limited evidence that the incorporation of ICT is accompanied by lessons to help the learners question, assess, and evaluate the information online. It appears that a prominent assumption held by the educators at the centers is that the textbooks, which include the materials, apps, and activities, are "safe" for the children because they already have been carefully vetted and selected by the teachers. Another likely assumption of the centers' educators is that what the children need most at the primary level (7–12) is a solid foundation in Islamic knowledge and piety. As these children progress to the secondary level, they will be progressively taught digital literacy and critical thinking.

Conclusion

Based on research data collected from an Islamic corporation that runs 23 learning centers across Singapore, two research findings regarding the Islamic curriculum have been described in this paper. The Islamic curriculum of the centers conceives future-readiness as enabling Muslim learners to master Islamic knowledge and values as well as their application in the modern world. In addition, the centers utilize ICT as part of their understanding of future-readiness to achieve harmony between online and face-to-face teaching and learning. A major implication is that Islamic curricula support the development of future-ready students. The realization of future-readiness centers on an Islamic paradigm that stresses religious beliefs and values. This study on Islamic perspectives on future-readiness is significant as we live in a world marked by a revitalized emphasis on religion across all aspects of life (Bachmann-Medick, 2016). Pointing out that this religious turn is more closely associated with Islam than with any other religion, Panjwani and Moulin-Stożek (2017) aver:

> By using religious identity to interpret and classify the diverse group of people who are now increasingly called 'Muslims', religion supplants the prior categorizations of ethnicity, race, or nationality. This trend, it has been argued, does not just concern how Muslims are classified, but is part of a process of 'religification' taking place in the self-understanding and self-definition of Muslims themselves related to the increased likelihood of others to confer that religious identity upon them (p. 519).

Overall, the case study of the Islamic curriculum shows that the centers perceive Muslims to be future-ready by encouraging them to seek knowledge throughout their lifetime.

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References

Al-Attas, S.M.N. (1999). *The concept of education in Islam*. International Institute of Islamic Thought and Civilisation (ISTAC).

All4Ed (2022). Future Ready Schools® Retrieved from https://all4ed.org/future-ready-schools / (accessed 25 Apr 2022).

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open, 2*, 8–14.

Bleher, S. M. (1996). A programme for Muslim education in a non-Muslim society. In G. Sarwar et al. (Eds.), *Issues in Islamic Education* (pp. 61–65). Muslim Education Trust.

Chye, S. Y. L., Chua, B. L., & Balanagu, S. S. (2021). Digital portfolios in teacher education. In J. Madalinska-Michalak, M. A. Flores, E. L. Low, & S. Van Nuland (Eds.), *Recruiting and Educating the Best Teachers: Policy, Professionalism and Pedagogy* (pp. 209–225). Brill. doi: https://doi.org/10.1163/9789004506657_012

Daun, H., Arjmand, R. & Walford, G. (2004). Muslims and education in a global context. In Daun, H. and Walford, G. (Eds), *Educational strategies among Muslims in the context of globalisation: Some national case studies* (pp. 5–36). Brill.

Downe-Wambolt, B. (1992). Content analysis: Method, applications and issues. *Health Care for Women International, 13*, 313–321.

Erfan, N. & Valie, Z. (1995). *Education and the Muslim world: Challenges and responses*. The Islamic Foundation and Institute of Policy Studies.

Esposito, J. L. (2002). Introduction: Islam and secularism in the twenty-first century. In J. L. Esposito & A. Tamimi (Eds.), *Islam and secularism in the Middle East* (pp. 1–12). Hurst & Co.

Fletcher Jr, E. C., Warren, N. Q., & Hernández-Gantes, V. M. (2018). Preparing high school students for a changing world: College, career, and future ready learners. *Career and Technical Education Research, 43*, 77–97.

Gillespie, K., Jenkins, S., & Schweinler, V. (2017). Growth not gotcha: The power of feedback for future-readiness of teacher candidates. *The Advocate, 23*(4), 1–12. https://doi.org/10.4148/2637-4552.1020

Ginges, J., & Cairns, D. (2000). Social representations of multiculturalism: A faceted analysis. *Journal of Applied Social Psychology, 30*(7), 1345–1370.

Hahn, J. (2020). Virtual exchange: Future-ready teaching of multiliteracies across borders and cultures. *Learning and Teaching Journal, 2*(2), 187–190. https://learningteaching.ethz.ch/index.php/lt-eth/article/view/129

Johnsen, E. B. (Ed.). (1993). *Textbooks in the kaleidoscope. A critical survey of literature and research on educational texts*. Oxford University Press.

Kaempf, S. (2022). Getting our teaching "future ready". In: Szarejko, A.A. (eds) *Pandemic pedagogy. Political pedagogies*. Palgrave Macmillan (pp. 189–202), Cham. https://doi.org/10.1007/978-3-030-83557-6_12

Lebrun, J., Lenoir, Y., Laforest, M., Larose, F., Roy, G. R., Spallanzani, C., & Pearson, M. (2002). Past and current trends in the analysis of textbooks in a Quebec context. *Curriculum Inquiry, 32*(1), 51–83.

Lipuma, J., Leon, C. & Reich, J. (2019). Future ready schools—New Jersey: A collective impact success story. In G. Marks (Ed.), *Proceedings of Global Learn 2019-Global Conference on Learning and Technology* (pp. 106–113). Association for the Advancement of Computing in Education (AACE). Retrieved April 19, 2022 from https://www.learntechlib.org/primary/p/210409/.

Lubis, M.A., Mustapha, R. & Lampoh, A.A. (2009). Integrated Islamic education in Brunei Darussalam: Philosophical issues and challenges. *Journal of Islamic and Arabic Education*, *1*(2), 51–60.

Markova, I. (1996). Towards an epistemology of social representations. *Journal for the Theory of Social Behaviour, 26*, 177–196.

Minority Rights Group International (n.d.). *Muslims.* Retrieved from https://minorityrights.org/minorities/muslims-2/

Mohd Baharan, M.F., Mamat, M.N. & Temyati, Z. (2021). Interactive learning in Islamic education using FROG VLE: Readiness and proficiency of teachers. *E-Proceedings of International Conference on Language, Education, Humanities & Social Sciences,* 600–606.

Nawi, A., Hamzah, M.I. & Abdul Rahim, A.A. (2015). Teachers acceptance of mobile learning for teaching and learning in Islamic education: A preliminary study. *Turkish Online Journal of Distance Education, 16*(1), 184–192.

Ng, D. F. S., & Ku, D. (2023). School reform: New future-ready quality outcomes and proposed measures. *Education Sciences, 13*(12), 1–21.

Ng, D., Wong, C.P. & Liu, S (2020). Future-ready learners: Learning, lifework, living, and habits of practices. (NIE Working Paper Series No. 20). Singapore: National Institute of Education.

Ng, D.F.S. & Wong, C.P. (2020). The role of school leadership in Singapore's future-ready school reform. *European Journal of Education: Research, Development and Policy, 55*(2), 183–199.

O'Shea, C. (2021). Distributed leadership and innovative teaching practices. *International Journal of Educational Research Open*, *2*, 1–13.

Panjwani, F., & Moulin-Stożek, D. (2017) Muslims, schooling and the limits of religious identity. *Oxford Review of Education, 43*(5), 519–523.

Quinn, R. (2012). The Future Development of Education in Ireland. *Studies, 101*(42), 123–138.

Sheninger, E. (2020). Leading future-ready schools. Retrieved from https://leadered.com/leading-future-ready-schools/ (accessed 19 Apr 2022)

Smith, K. & Hamilton, S. (2017). Tech2Teach: Making the future ready shift through a blended learning initiative. In P. Resta & S. Smith (Eds.), *Proceedings of society for information technology & teacher education international conference* (pp. 709–713). Association for the Advancement of Computing in Education (AACE). Retrieved April 19, 2022 from https://www.learntechlib.org/primary/p/177347/.

Tan, C. (2007). Islam and citizenship education in Singapore: Challenges and implications. *Education, Citizenship and Social Justice*, *2*(1), 23–39.

Tan, C. (2009). The reform agenda for madrasah education in Singapore. *Diaspora, Indigenous, and Minority Education*, *3*(2), 67–80.

Tan, C. (2010). Contesting reform: Bernstein's pedagogic device and madrasah education in Singapore. *Journal of Curriculum Studies*, *42*(2), 165–182.

Tan, C. (2011). Where tradition and 'modern' knowledge meet: Exploring two Islamic schools in Singapore and Britain. *Intercultural Education*, *22*(1), 55–68.

Tan, C. (2012). Functionalising Islam: The schooling experiences of Malay Muslims in Singapore. *HIKMA—Journal of Islamic Theology and Religious Education, 3*(5), 174–186.

Tan, C. (2023). Clarifying the concept of future-ready learning: A Confucian perspective. *Asia Pacific Journal of Education,* 1–12. DOI: 10.1080/02188791.2023.2231651

Tan, C. (2024). Future-readiness and its educational implications: A Daoist interpretation. *Research in Comparative & International Education*, 1–15. DOI: https://doi.org/10.1177/17454999241230238

Tan, J. P.-L., Choo, S. S., Kang, T., & Liem, G. A. D. (2017) Educating for twenty-first century competencies and future-ready learners: Research perspectives from Singapore, *Asia Pacific Journal of Education, 37*:4, 425–436, DOI: 10.1080/02188791.2017.1405475

Ulfat, F. (2020). Empirical research: Challenges and impulses for Islamic religious education. *British Journal of Religious Education*, *42*(4), 415–423.

Venezky, R.-L. (1992). Textbooks in school and society. In P. W. Jackson (Ed.), *Handbook of research on curriculum. A project of the American Educational Research Association* (pp. 436–61). New York: Macmillan.

Woodward, A., Elliott, D. L., Nagel, K. C. (1988). *Textbooks in school and society. An annotated bibliography and guide to research*. Garland.

World Economic Forum (2020). Schools of the future: Defining new models of education for the fourth industrial revolution. Author.

Zagami, J., Bocconi, S. et. al. (2018). Creating future ready information technology policy for national education systems. *Technology, Knowledge and Learning*, *23*, 495–506.

Zainah, A. (1998). *The goals of madrasah educational system in Singapore: Obstacles and recommendations*. Unpublished Honours thesis, National University of Singapore.

Zakaria, R. (2008). *Indonesian Islamic education: A social, historical and political perspective*. VDM Verlag Dr. Muller.

Zulkifli, N., Hamzah, M.I. & Abdul Razak, K. (2021). Creative teaching practices among Islamic education lecturers in polytechnic. *Journal of Social Sciences and Humanities*, *18*(4), 32–41.