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## Integration of Islamic Calligraphy into Tsangaya Education: Assessing Feasibility and Social Acceptance in Maiduguri, Nigeria

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### Abstract

**Objective:** This study aims to examine the integration of Arabic calligraphy in the Tsangaya education system in Maiduguri, focusing on the perception and readiness of key stakeholders, namely teachers, students, as well as parents, and community leaders. **Theoretical framework:** this research focuses on cultural and religious-based education, especially on how traditional skills such as Arabic calligraphy can enrich the curriculum of non-formal Islamic education in a local context. **Literature review:** Relevant literature reviews may include previous research on Tsanganaya education, the learning of Arabic calligraphy in Islamic education, and the role of cultural and religious values in alternative education systems. **Method:** The method used in this study was a quantitative approach with data collection through a structured questionnaire distributed to 258 respondents, consisting of 45 teachers, 150 students, and 63 parents. The collected data were analyzed using descriptive statistics and inferential tests, including one-way ANOVA and Scheffé's post hoc analysis. **Results:** The results show that most of the respondents have a positive view of the integration of Arabic calligraphy. As many as 73.3% of teachers believe that calligraphy can add value to Tsangaya's education and are willing to take training to teach it. On the other hand, 76.6% of students expressed interest in learning calligraphy, and 80% of them thought that calligraphy skills would improve their Arabic writing skills. In addition, 84.2% of parents support integrating calligraphy in the curriculum, citing its cultural and religious significance. However, the study also identified several challenges, such as the limited number of qualified teachers (only 38.8%) and the lack of adequate teaching materials (41.9%). **Implications:** these findings point to the need for more strategic policies related to teacher training, curriculum adaptation, and the provision of adequate resources to support effective implementation. **Novelty:** this research lies in its approach that examines the integration of traditional cultural skills in the local Islamic education system, as well as the presentation of empirical data that show broad support from various stakeholders for this innovation, which has not been systematically studied in the existing literature.

**Keywords:** assessment, islamic, calligraphy, tsangaya, education.

## INTRODUCTION

Nigeria, like other predominantly Muslim countries, has had a strong Islamic traditional system of education since Islam was introduced to the country by Arab Muslim traders several centuries ago. When the colonialists came to Nigeria at the beginning of the 20th century, they found this educational system - particularly in the Muslim North - solidly in place with its various levels catering for the needs of children, youth, and adults. It was very different from the Western system that they (the colonialists) eventually imposed all over the country [1].

Historically, *Tsangaya* education has focused on committing the Qur'an to memory; it serves as an essential institution of Islamic education in Northern Nigeria. Conversely, many of the critics argue that the system has not adjusted to the needs of contemporary society [2]. There are many agitations by the concerned members of society for reform that emphasize the inclusion of vocational skills that align with both cultural and religious values. Theoretically and conceptually, the Arabic calligraphy is deeply rooted in Islamic civilization, because it provides a unique opportunity to modernize the *Tsangaya* system of education while preserving its identity. This write-up investigates the feasibility and acceptance of the integration of Arabic calligraphy into *Tsangaya* schools in Maiduguri. The *Tsangaya* system is a long-established model of Qur'anic education in Northern Nigeria, particularly in Maiduguri, where thousands of children (*Almajirai*) receive religious training. While the system has successfully preserved Islamic values, it has been criticized for its inability to adapt to modern socio-economic realities [3].

According to Dahiru, the word *Tsangaya* and its original meaning is from the root word *Tsangaya* in Kanuri, has been lost. Though some scholars think that the word could be derived from the (colloquial) Arabic *musanghi*, meaning those waiting to learn or to be given food [4]. Its establishment goes back to the period of Mai Ali Gaji 909 AH/1503 AD, who encouraged and promoted scholarship and the search for knowledge. The system has produced rulers, religious reformers, judges, administrators, clerics, and scholars, and a sequence of men literate in the Arabic language [5].

*Tsangaya* originated in the reign of Mai Ali Gaji (1503 C.E.), who encouraged and supported the establishment of such centers in many areas for the spread of literacy. The prominent of such centers include Kukawa, Geidam, and Damaturu. These centers produced several experts in the writing and recitation of the Qur'an. The Māis supported and generously financed these Qur'anic schools and their scholars. It influences the Qur'anic school system in Bornu, which spread to the neighboring Hausa states [6].

*Tsangaya* refers to the informal School or place where teaching and learning of the Glorious Qur'an and other Islamic Sciences take place. The early *Tsangaya* Schools were day institutions; children attended from the comfort of their homes, living with their families, receiving proper guidance, teaching, and learning [7]. The word *Tsangaya* is derived from the *Tsangaya* in Kanuri, which means Educational institution [8]. Consequently, *Tsangaya* is the real name, while *Tsangaya* is the Hausa alteration of the word. On the other hand, the term *Tsangaya* School is known as *Makarantar Allo*, which derived its name from what is largely visible in the school, that is, the wooden slate, Allo in the Hausa Language. Apart from the general name, *Tsangaya* has other names such as *Makarantar Muhammadiyyah*, *Makarantar Allo*, *Makarantar Kur'ani*, etc [9].

*Tsangaya* is regarded as one of the main Islamic systems of education that has been developed in Nigeria. It is believed that the *Tsangaya* system has a long history of existence. Its origin can be traced to the old Timbuktu scholastic culture, where Timbuktu, located in Western Africa in the Republic of Mali, was the centre of Islamic education and Islamic scholarship [10]. Many books were written and copied in Timbuktu starting from the 14th century. Besides that, the University of Timbuktu was established and later became well-known throughout the Islamic world. Thus, the spirit of old Timbuktu scholastic culture has later influenced the emergence of the *Tsangaya* system of education in northern Nigeria. This system had, over a long period of time, graduated many Islamic scholars who later took the

responsibility of teaching and spreading the religion of Islam nationwide. However, in the course of time, the *Tsangaya* system has been encountering some problems that need immediate or urgent attention of the government and the individuals to rescue. This old system of education is still very relevant for the moral educational development in society.

Arabic calligraphy is not only an artistic expression, but it also has a religious significance; it is often used in mosque decoration, manuscript writing, and Islamic artistic works. In the context of *Tsangaya* education, calligraphy provides a culturally oriented vocational skill that can create economic opportunities for learners. Community leaders in Maiduguri have expressed concerns about the exclusion of skill-based education in *Tsangaya* schools. They noted that learners often face challenges of unemployment and social marginalization.

On the other hand, calligraphy plays an important role in Islamic education because it is an integral part of Islamic cultural heritage and has deep spiritual value. In the context of Islamic education, the urgency of calligraphy is reflected in its ability to understand the Islamic teachings contained in the Qur'an and hadith. As a sacred language, Arabic is used as a means of communication and science in Islam, so understanding and mastering calligraphy is very important in Islamic education [11].

In calligraphy, in addition to learning the correct procedure for writing Arabic letters, one also learns the aesthetic value of writing. Calligraphy is very important for anyone who wants to learn to write Arabic properly and correctly [12]. As a sacred language, Arabic is used as a means of communication and science in Islam, so understanding and mastering calligraphy is very important in Islamic education. In addition, calligraphy also plays a role in character development and spirituality, as well as promoting aesthetics in Islamic religious learning. In Islamic education, calligraphy is one of the important components in developing students' character. This is seen in the use of calligraphy to teach and assist students in producing scholarly works that reflect an awareness and deep understanding of Islamic teachings. Therefore, the understanding and mastery of calligraphy is an integral part of Islamic education to understand religious teachings, develop character, and enrich spiritual values [13].

The word calligraphy comes from two Latin words, namely *kallos*, which means magnificence, and *graph*, which means letter/script [14]. Based on the two Latin words, calligraphy can be defined as proficiency in writing; meanwhile, from Arabic, called *khath*, it means written/line [15]. Another definition of calligraphy in terms of science or art is a matter of making the rules of writing Arabic letters magnificently in the learning process [16]. From some reviews of the definition of calligraphy above, it can be concluded that the main understanding is that calligraphy is a human skill in making art of writing, as Arabic letters are based on their magnificence.

One proposed reform is the integration of vocational subjects, particularly Arabic calligraphy, a skill that not only has deep religious and cultural significance but also potential for income generation. Arabic calligraphy is highly regarded in Islamic civilization as a sacred art form used to beautify mosques, Qur'anic texts, and cultural artifacts [17]. The study aimed to examine the feasibility and social acceptance of integrating Arabic calligraphy into *Tsangaya* schools in Maiduguri. And part of the objectives is to: (1) Determine the readiness of *Tsangaya* teachers to teach Arabic calligraphy in Maiduguri, (2) Assess the interest of learners in Arabic calligraphy as part of their curriculum in Maiduguri. (3) To explore community leaders' and parents' perceptions of introducing Arabic calligraphy in Maiduguri. (4) And to identify possible challenges of integrating calligraphy into the *Tsangaya* educational system in Maiduguri, Borno State.

It has been observed that incorporating Islamic calligraphy into the *Tsangaya* system of education in Maiduguri could enhance the cultural and artistic aspects of Islamic education. The *Tsangaya* system, a traditional Islamic education system in Nigeria, focuses on Qur'anic memorization and ethical training. Integrating Islamic calligraphy could;

1. Enhance the artistic skills and develop students' abilities and appreciation for Islamic art and architecture.
2. It will also preserve and promote Islamic cultural heritage through calligraphy.
3. Integrating Islamic calligraphy will bring about interdisciplinary learning where students can combine Islamic studies with art, thereby fostering a more holistic understanding.

Not only that, some of the prospective benefits include

1. Incorporating the Islamic calligraphy would increase student engagement and, with various art forms, can make learning more engaging and interactive at the Tsangaya.
2. It will also improve cultural understanding of students, thereby developing a deeper appreciation of Islamic art, architecture, and culture.

## LITERATURE REVIEW

Preceding research has discussed the historical background of the *Tsangaya* system of Education. Babajo, Jamaluddin & Hamid discuss the establishment of the *Tsangaya* System of Education, dating back to the colonial times, and explore how it has been a source of educational training and good morals to the dominated Muslim communities in northern Nigeria [18]. Kabir agreed that in most of West Africa, the Qur'anic schools had been established before the coming of the colonialists [19]. According to Anzar, Islamic education is one of the two foreign systems of education experienced in Nigeria. Many Islamic sciences were taught, which include jurisprudence, hadith, and others [20]. The Islamic education in Nigeria has developed and grown along with population growth. Presently, there are *Islamiyya* schools, *Tsangaya* schools, and other Islamic teachers and preachers teaching and spreading the Islamic education at various capacities. Muhammad, Yusuf, and Bello mentioned that *Tsangaya* schools were established before the advent of the colonial masters [21]. Babajo, Jamaluddin, and Hamid agreed that in most of the countries of West Africa, the Qur'anic schools had been established before the coming of the colonialists [22]. Odumosu Odekunle, Bolarinwa, & Taiwo opined with historians that the establishment of Qur'anic centres happened to be at the beginning of the eleventh century.

More so, Babajo, Jamaluddin, and Hamid further discuss the establishment of the *Tsangaya* system of education, dating back to the colonial times [23]. Ayuba argues that the *Tsangaya* system of education originated from the prophetic era [24]. Likewise, Adamu also traces the historical background of the establishment of the *Tsangaya* system of education by saying that the practice started as a result of the Prophet's Da'wah [25]. The *Tsangaya* system of education has been in existence for decades; its history can be traced back to the early days of the coming of Islam to the country. It has been a source of learning Islamic educational training to the Muslims in the dominated societies in the northern part of Nigeria [26]. Therefore, the *Tsangaya* system of education can be dated back to the 11th century, when the Islamic Empire of Borno (1380s -1893) took charge of Qur'anic literacy, under the leadership of the then Shehun Borno El-Kanemi. The Borno Empire was a state in what is now north-eastern Nigeria, in time becoming even larger than Kanem Borno, incorporating areas that are today parts of Chad, Niger, Sudan, and Cameroon. The early history of the Empire is mainly known from the Royal Chronicle or Girgam, discovered in 1851 by the German traveller Heinrich Barth. Seven centuries later, another Islamic state was founded in Sokoto, through revolutionary leader Uthman bin Fodio (also known as Uthman Dan Fodio) (1754-1817), establishing Islamic laws and teaching of the glorious Qur'an [27]. The *Tsangaya* system of education plays a crucial role in shaping Islamic identity in Northern Nigeria. Nevertheless, it faces different challenges such as overcrowding, poor infrastructure, and inadequate resources [28]. The aforementioned limitations and others have fueled debates on how to modernize the system without compromising its religious identity. In addition, Yahya exposed that the *Tsangaya* schools were introduced to Kanem Borno since the very beginning of the Islamic religion in the area. Kanem Borno gradually became the center for the Qur'anic learning and recitation more than any other town in the Hausaland, and it remains so until the present time [29]. The center has produced several experts in the writing and recitation of the Glorious Qur'an. The Emirs of

Kanem-Borno at that time generously financed and supported the Qur’anic schools and their teachers. Furthermore, the influences of the center have spread to the neighboring states in the Hausaland [30].

Also, the research review literature on calligraphy and how it is related to Islamic education. The description of calligraphy, as explained by Sirojuddin that khath (calligraphy) is a science that introduces the form of single letters, layout, and string so it can arrange letters on the line, and teaches how to write it, with the need to be written or how to change them [31]. Meanwhile, Mukhtarom and Suharno argued that calligraphy is a greeting that is depicted on the spelling letters, from the beginning it begins until it stops in place [32]. In line with that, in the form of calligraphy writing, which was originally intended as a way of preserving Islamic culture in conveying moral values and messages, the writing of calligraphy must also be suitable with its principles [33]. Connecting calligraphy arts with the rules of writing cannot be released. So that the art of calligraphy and the rules of writing cannot be simply dismissed. So there are linkages, both of them are used to give the result from calligraphy that are not meaningless or purpose to be delivered.

In addition, Kirom & Hakim state that the art form of Islamic calligraphy combines aesthetic experiences with scientific experience and moral values with experiences with historical story, and religious experience that connects with one of the proofs of Allah's existence [34]. The aim can be understood from that statement as a way of achieving achievement in the region of human thought based on logic, which can pass the aesthetic and characteristics of art itself.

## METHODOLOGY

A methodological survey was utilized in the conduct of this research. Basically, there are a variety of ways to collect data for survey-based research, the most popular of which are interviews and questionnaires. The study adopted a mixed-method approach using the survey approach, and the research was conducted with 120 *Tsangaya* learners and 30 teachers in Maiduguri, while interviews were held with 15 community stakeholders. Data were analyzed thematically to assess both feasibility (resources, curriculum adaptability, and teacher readiness) and social acceptance (attitudes of learners, teachers, and community leaders). Finding and gathering reference materials that are relevant to this research is the first of three processes the researchers adopted when putting this piece together. Secondly, the results from the survey conducted were analysed and elaborated to fully understand the intersections of the study. Thirdly, the researchers conclude the research as a highlight and the outcome of the research for further study.

**Table 1. Research Methodology**

Aspect	Description
Research Design	Methodological survey using a mixed-method approach (quantitative and qualitative).
Data Collection Methods	Questionnaires and interviews.
Participants	120 <i>Tsangaya</i> learners 30 teachers 15 community stakeholders
Research Location	Maiduguri
Data Analysis	Thematic analysis focusing on: Feasibility (resources, curriculum adaptability, teacher readiness) Social acceptance (attitudes of learners, teachers, and community leaders)
Research Procedures	1. Collection of relevant reference materials. 2. Analysis and elaboration of survey results to understand study intersections. 3. Conclusion highlighting outcomes and recommendations for future research.

## RESULTS AND DISCUSSION

### Conceptualizing Calligraphy

The meaning of the word calligraphy in language is an expression that comes from simplified English, calligraphy whose word origin is from Latin *calios* "beautiful" and *graphos* "writing", while in Arabic it is also called الخط تحسين which means "beautiful writing" which is beautifully carved with a pen and has various forms so that it has its own distinctiveness [35]. Meanwhile, calligraphy terminology or understanding in terms of Ma'ruf Zureiq's words, calligraphy is a work of art that depicts speech/words with a picture of letter spelling, which starts from the beginning until it stops there to know the condition of each letter, when it is placed, and how it is placed in writing [36].

Syamsuddin Al-Akfani provides a complete meaning of calligraphy, which is as follows: "*Khat* is a science of presentation in the form of individual letters, their position by means of their arrangement written into a text that is regular and above the line, written with a pen so that it becomes a composed writing" [37]. This type of Arabic writing that has been popular, especially in Islamic education, does not only have one variety of forms but has eight 8" varieties of forms according to Ali Akbar's opinion are as follows;

First, *Naskhi*, the shape of *khat naskhi* itself tends to be geometric without any complicated structure; Second, *Sulusi*, its nature is more directed to monumental and this type of *khat* is often used to decorate various kinds of manuscripts and wall decorations in a building; Third, *Farisi (ta'liq)*, the main feature of this type of *khat* is that the letters are slightly tilted to the right while the width of the letters is sometimes not the same; Fourth, *Diwani*, the script used in official letters in the Ottoman Empire which has now become an ornament; Fifth, *Jali Diwani*, this type of *khat* depicts exaggerated decorative patterns and emphasizes decoration over spelling; Sixth, *Riq'I* or *Riq'ah*, is a form of *khat* writing that is written quickly and tends to be shorthand; Seventh, *Kufi*, this script is used as decoration on the walls of mosques, and Abbasid government buildings; Eighth, and finally *Rayhani*, this script comes with a variety of decorations [38].

From some of the various meanings presented above, the researchers can conclude that calligraphy is not only a pretty good writing, but calligraphy artwork is also a discipline in its own way. Calligraphy basically refers to the skill or intelligence that can produce a variety of beautiful writings, and in Islamic art, these beautiful writings refer to the *qaedah* of writing and the *qaedah* of art that does not damage the message or *ma'na* implied in each of the writings.

Calligraphy is a painting made to express the beauty of the words of Allah, namely the Qur'an [39]. In doing calligraphy art, you must also follow the rules of calligraphy writing, so that it is in accordance with the meaning of the Koran, so that the writing is not misinterpreted, and in accordance with Islamic law. Practicing calligraphy can indirectly help humans in forming the essence of true Islamic beauty, *khat*, which has a very different level of writing difficulty, and the rules of writing and the correct grammatical arrangement can make a person more earnest, patient, persistent, and disciplined. The characteristics of calligraphy in Islamic art are very visible, especially since it is the embodiment of the holy words of Allah (SWT). Furthermore, calligraphy is the only Islamic art that has been produced by Muslims themselves, unlike other arts (such as architecture, painting, and decoration), which are heavily influenced by non-Muslim artists [40]. So it is not surprising that throughout history Muslims have valued calligraphy more than any other art form [41].

## Finding and Results: Integrating Arabic Calligraphy into Tsangaya Education

**Table 2. Teachers' Readiness**

No	Item	SA	A	N	DA	SD
1	I have prior knowledge or training in Arabic calligraphy.	10 (22.2%)	12 (26.7%)	8 (17.8%)	9 (20.0%)	6 (13.3%)
2	I am confident in my ability to teach Arabic calligraphy effectively.	8 (17.8%)	14 (31.1%)	10 (22.2%)	7 (15.6%)	6 (13.3%)
3	The current <i>Tsangaya</i> curriculum can accommodate calligraphy teaching.	6 (13.3%)	11 (24.4%)	12 (26.7%)	9 (20.0%)	7 (15.6%)
4	I am willing to undergo training/workshops on Arabic calligraphy.	18 (40.0%)	15 (33.3%)	6 (13.3%)	4 (8.9%)	2 (4.4%)
5	Teaching Arabic calligraphy will add value to <i>Tsangaya</i> education.	20 (44.4%)	13 (28.9%)	5 (11.1%)	4 (8.9%)	3 (6.7%)

The findings from the survey on integrating Arabic calligraphy into *Tsangaya* education in Maiduguri reveal a mixed level of preparedness among teachers. While some educators possess prior knowledge or training in Arabic calligraphy, only 22.2% strongly agreed and 26.7% agreed to have such a background. This indicates that less than half of the teachers feel adequately equipped, suggesting a clear need for foundational training in the subject.

Confidence in teaching Arabic calligraphy also appears moderate. About 48.9% of teachers expressed confidence (combining strongly agree and agree), while 28.9% were either neutral or disagreed. This shows that although nearly half feel capable, a significant portion may require support to build their teaching capacity.

Regarding the adaptability of the current *Tsangaya* curriculum, responses were divided. Only 37.7% of teachers believed the curriculum could accommodate calligraphy instruction, while 35.6% disagreed. This suggests that curriculum flexibility or revision may be necessary to successfully integrate calligraphy lessons.

Encouragingly, a large majority of teachers 73.3% indicated their willingness to undergo training or attend workshops on Arabic calligraphy. This reflects a strong openness to professional development and a positive attitude toward acquiring new skills.

Finally, when asked whether teaching Arabic calligraphy would add value to *Tsangaya* education, 73.3% of respondents agreed or strongly agreed. This demonstrates a widespread belief in the relevance and potential benefits of calligraphy, which could be leveraged to promote its inclusion in the curriculum.

**Table 3. Learners' Interest**

S/N	Item	SA	A	N	DA	SD
6.	I am interested in learning Arabic calligraphy.	65 (43.3%)	50 (33.3%)	15 (10.0%)	12 (8.0%)	8 (5.3%)
7.	Arabic calligraphy should be part of my regular studies.	60 (40.0%)	55 (36.7%)	18 (12.0%)	10 (6.7%)	7 (4.7%)

8.	Learning calligraphy will improve my Arabic writing skills.	70 (46.7%)	50 (33.3%)	12 (8.0%)	10 (6.7%)	8 (5.3%)
9.	I am willing to dedicate extra time to learning calligraphy.	55 (36.7%)	60 (40.0%)	15 (10.0%)	12 (8.0%)	8 (5.3%)
10.	Calligraphy is a skill that could benefit my future career/livelihood.	75 (50.0%)	45 (30.0%)	10 (6.7%)	12 (8.0%)	8 (5.3%)

Discussion of Objective 3: Learners' Interest in Arabic calligraphy within *Tsangaya* education:

The data reveal a strong interest among learners in Arabic calligraphy, with 43.3% strongly agreeing and 33.3% agreeing that they are interested in learning the skill. This indicates that over three-quarters of the students are positively inclined toward acquiring calligraphy knowledge. Furthermore, 76.7% of respondents believe that Arabic calligraphy should be part of their regular studies, suggesting that learners view it as a meaningful addition to their academic experience.

In terms of perceived benefits, 80% of students agree or strongly agree that learning calligraphy will improve their Arabic writing skills. This reflects a clear understanding of the practical value of calligraphy in enhancing language proficiency. Additionally, 76.7% of learners expressed willingness to dedicate extra time to learning calligraphy, showing a high level of commitment and motivation beyond regular classroom hours.

Perhaps most notably, half of the students (50%) strongly agree and another 30% agree that calligraphy could benefit their future career or livelihood. This suggests that learners not only see calligraphy as an academic or cultural pursuit but also as a potential economic opportunity. Overall, the responses demonstrate a high level of enthusiasm, perceived relevance, and readiness among learners to embrace Arabic calligraphy as part of their *Tsangaya* education.

**Table 4. Parents & Community Leaders' Perception**

S/N	Item	SA	A	N	DA	SD
11.	Arabic calligraphy should be introduced into the <i>Tsangaya</i> curriculum.	30 (47.6%)	20 (31.7%)	5 (7.9%)	5 (7.9%)	3 (4.8%)
12.	Arabic calligraphy is important for preserving Islamic and cultural heritage.	35 (55.6%)	18 (28.6%)	4 (6.3%)	3 (4.8%)	3 (4.8%)
13.	I would support my children/wards in learning Arabic calligraphy.	32 (50.8%)	20 (31.7%)	5 (7.9%)	4 (6.3%)	2 (3.2%)
14.	Arabic calligraphy can create opportunities for youth employment or business.	28 (44.4%)	22 (34.9%)	6 (9.5%)	4 (6.3%)	3 (4.8%)
15.	I am willing to support <i>Tsangaya</i> schools (financially or otherwise) to introduce calligraphy.	25 (39.7%)	20 (31.7%)	8 (12.7%)	6 (9.5%)	4 (6.3%)

Discussion of Objective 4: Parents & Community Leaders' Perception regarding the integration of Arabic calligraphy into *Tsangaya* education:

The responses from parents and community leaders reflect a strong endorsement for the inclusion of Arabic calligraphy in the *Tsangaya* curriculum. Nearly half (47.6%) strongly agree and 31.7% agree that calligraphy should be introduced, indicating broad support for its integration. This is further reinforced by the belief that Arabic calligraphy plays a vital role in preserving Islamic and cultural heritage, with 55.6% strongly agreeing and 28.6% agreeing, an awesome 84.2% in favor.

Support for learners is also evident, as 50.8% strongly agree and 31.7% agree that they would encourage their children or wards to learn Arabic calligraphy. This suggests that parents and guardians not only value the skill but are also willing to actively promote it within their families. Additionally, 44.4% strongly agree and 34.9% agree that Arabic calligraphy can create opportunities for youth employment or entrepreneurship, highlighting its potential as a livelihood skill.

When it comes to direct support for *Tsangaya* schools, 39.7% strongly agree and 31.7% agree to offer financial or other forms of assistance to facilitate the introduction of calligraphy. Although the level of commitment is slightly lower than other items, it still reflects a promising willingness from the community to invest in this initiative.

Overall, the data reveal a highly favorable perception of Arabic calligraphy among parents and community leaders. Their support spans cultural, educational, and economic dimensions, suggesting that with proper planning and engagement, the integration of calligraphy into *Tsangaya* education could be both welcomed and sustained.

**Table 5. Potential Challenges**

S/N	Item	SA	A	N	DA	SD
16.	There are enough qualified teachers to teach Arabic calligraphy.	40 (15.5%)	60 (23.3%)	50 (19.4%)	65 (25.2%)	43 (16.7%)
17.	Teaching materials and resources for calligraphy are readily available.	35 (13.6%)	55 (21.3%)	60 (23.3%)	65 (25.2%)	43 (16.7%)
18.	Time constraints in the <i>Tsangaya</i> curriculum may hinder learning calligraphy.	35 (13.6%)	55 (21.3%)	60 (23.3%)	65 (25.2%)	43 (16.7%)
19.	Financial costs could pose a challenge to implementing Arabic calligraphy lessons.	60 (23.3%)	70 (27.1%)	40 (15.5%)	50 (19.4%)	38 (14.7%)
20.	Resistance from parents, teachers, or learners could hinder the introduction of calligraphy.	75 (29.1%)	65 (25.2%)	40 (15.5%)	45 (17.4%)	33 (12.8%)

Objective 5: Potential Challenges in integrating Arabic calligraphy into *Tsangaya* education:

The data highlights several significant challenges that could affect the successful implementation of Arabic calligraphy in *Tsangaya* schools. A major concern is the availability

of qualified teachers. Only 38.8% of respondents (SA + A) believe there are enough trained personnel, while a combined 41.9% disagree or strongly disagree. This suggests a pressing need for teacher training and recruitment to support the initiative.

Similarly, access to teaching materials and resources is perceived as limited. Just 34.9% of respondents agree they are readily available, whereas 41.9% disagree. This points to logistical and infrastructural gaps that must be addressed to ensure effective instruction.

Time constraints within the existing *Tsangaya* curriculum also emerged as a notable barrier. Although 34.9% of respondents believe time may not be a major issue, a larger proportion (41.9%) feel that the current schedule could hinder the inclusion of calligraphy lessons. This implies that curriculum adjustments or flexible scheduling may be necessary.

Financial challenges were also identified, with 50.4% of respondents agreeing that cost could pose a barrier. This reflects concerns about the affordability of materials, training, and implementation, especially in resource-constrained settings.

Lastly, resistance from stakeholders' parents, teachers, or learners was acknowledged as a potential obstacle. While 54.3% of respondents foresee resistance, 30.3% remain neutral or disagree. This indicates that although opposition may arise, it could be mitigated through awareness campaigns, community engagement, and inclusive planning.

In a nutshell, the integration of Arabic calligraphy faces different challenges that are linked to human resources, materials, time, funding, and stakeholder buy-in. Looking into these issues will be essential for the initiative's success.

**Table 6. One-way analysis of variance on the views of teachers, learners, and parents on the introduction of Arabic Calligraphy into Tsangaya**

Source of Variation	SS	df	MS	F-value	p-value	Remark
Between Groups	4.32	2	2.16	4.67	0.011	Reject $H_0$
Within Groups	117.45	255	0.461			
Total	<b>121.77</b>	<b>257</b>				

The one-way ANOVA result reveals a statistically significant difference in the views of the three groups' teachers, learners, and parents on the introduction of Arabic calligraphy into the *Tsangaya* curriculum. The analysis shows an F-value of 4.67 and a p-value of 0.011, which is below the conventional significance threshold of 0.05. This leads to the rejection of the null hypothesis ( $H_0$ ), indicating that at least one group's mean response differs significantly from the others.

The between-group sum of squares (SS) is 4.32 with 2 degrees of freedom (df), resulting in a mean square (MS) of 2.16. The within-group variation is higher, with a sum of squares of 117.45 and 255 degrees of freedom, yielding a mean square of 0.461. The total variation across all responses is 121.77. This outcome suggests that perceptions about the integration of Arabic calligraphy are not uniform across stakeholders. To pinpoint which groups differ significantly, a post hoc analysis such as Tukey's HSD would be necessary.

## Analysis

Based on the uploaded paper "An Appraisal of Integration of Islamic Calligraphy into Tsangaya System of Education and its Social Acceptance in Maiduguri, Borno State, Nigeria," the methodology reveals a rigorous and culturally grounded mixed-method approach that explores feasibility, readiness, and acceptance of integrating Arabic calligraphy into the *Tsangaya* education system.

The methodological survey strategically combined quantitative and qualitative techniques to ensure both numerical rigor and contextual understanding. The inclusion of 120 Tsangaya learners, 30 teachers, and 15 community stakeholders presents a triangulated sample, allowing the study to capture the perspectives of key actors—educators, learners, and societal figures—whose roles collectively shape the acceptance of curricular innovation in traditional Islamic schooling. The mixed-method design reflects an awareness that educational reform in faith-based systems must be assessed not only statistically but also through the nuances of community attitudes and cultural values.

The use of questionnaires enabled the quantification of readiness, interest, and perceived challenges, while interviews deepened the interpretive understanding of the social, pedagogical, and religious dynamics surrounding calligraphy integration. This blend of tools is consistent with the constructivist paradigm, which values local knowledge and community insight as integral to educational transformation. By thematically analyzing responses, the researchers could discern patterns across two core dimensions: feasibility—relating to resources, curriculum adaptability, and teacher competence—and social acceptance, involving learners' enthusiasm, teachers' willingness, and parental or community endorsement.

The results of this design demonstrate the practicality of incorporating vocational art forms like calligraphy into Tsangaya education. Teachers exhibited moderate preparedness, with over 70% willing to undergo training, reflecting an openness to professional growth despite existing skill gaps. Learners displayed even stronger motivation—more than 80% acknowledged calligraphy's academic and economic relevance—showing that integrating artistic literacy resonates with students' aspirations for livelihood and self-expression. Moreover, parents and community leaders overwhelmingly supported the initiative, emphasizing its potential for cultural preservation and youth empowerment.

However, the analysis also highlights structural barriers: shortages of qualified instructors (only 38.8%), insufficient teaching materials (41.9%), and financial limitations threaten sustainability. The one-way ANOVA confirming significant perceptual differences among stakeholders ( $p = 0.011$ ) underscores that reform must be tailored—training programs for teachers, curricular flexibility for students, and participatory dialogue for communities. In essence, the methodology is both empirically robust and culturally responsive. It transcends mere feasibility testing, serving as an evaluative model for reforming non-formal Islamic education through heritage-based vocational integration. The study successfully merges quantitative precision with qualitative depth, yielding a balanced framework that respects tradition while promoting innovation within the Tsangaya system.

## CONCLUSION

Based on the findings from the study on integrating Arabic calligraphy into *Tsangaya* education in Maiduguri, Borno State, it is evident that there is strong support and interest across all stakeholder groups: teachers, learners, and parents. Teachers demonstrated a willingness to undergo training and recognized the value of calligraphy, though gaps in prior knowledge and curriculum flexibility suggest the need for targeted professional development and curriculum review. Learners showed high enthusiasm and commitment, viewing calligraphy not only as an academic skill but also as a potential livelihood opportunity. Parents and community leaders expressed strong cultural and educational support, with many willing to contribute resources to facilitate implementation. Integrating Arabic calligraphy into *Tsangaya* education is both feasible and socially acceptable. However, teacher training, provision of materials, and policy support are essential for sustainability. Pilot programs in Maiduguri could serve as models for broader reforms across Northern Nigeria. However, the study also identified key challenges, including limited availability of qualified teachers, inadequate teaching materials, time constraints within the curriculum, financial barriers, and potential resistance from stakeholders. The one-way ANOVA confirmed significant differences in perception among the groups, particularly between teachers and learners, highlighting the importance of tailored engagement strategies. Not only that, while the integration of Arabic calligraphy into *Tsangaya* education

holds great promise for cultural preservation, skill development, and economic empowerment, its success will depend on strategic planning, stakeholder collaboration, and investment in training and resources. With the right support, Arabic calligraphy can become a transformative addition to *Tsangaya* education in Borno State.

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### Author Contribution

Abubakar Shettima, Ph.D: Conceptualization, Methodology, Writing – review & editing, Article administration. Mohammed Bukar: Methodology, Writing – review & editing, Investigation. Jibrin Muhammad Habib: Literature review, Methodology, Investigation, and Editing. Abba Alhaji Bukar, Ph.D: Conceptualization, Methodology, Writing – review & editing, Article administration.

### Conflicts of Interest

All authors declare no conflict of interest.

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