# Enhancing Teaching and Learning Methodology with Computing Visualization in Studies of Qiraat (Malaysia)

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# Enhancing Teaching and Learning Methodology with Computing Visualization in Studies of Qiraat (Malaysia)

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**Abstract**

The development of learning process by using the diversity of technologies has given many positive impacts on education. These development and computer programs have transformed teaching and learning scenarios in the classroom. It has become the premier teaching aids in order to improve and enhance the quality of teaching and learning process in the classroom. Ilmu Qiraat is a conventional knowledge which means its delivery process is really focusing on the concept of talaqqi and musyafahah. Hence, this article aims to expose the needs of enhancing teaching and learning methodology with computing visualization in studies of Qiraat. This study is a conceptual study by using a survey method. The survey has been conducted by analyzing websites, softwares, applications and multimedia that discussing on Qiraat studies. The results indicated that there have had a lot of computerized visualization mediums in Qiraat in the market but there are still no specific sources in Malay Language. Thus, this article will provide information and the starting point towards empowerment of Qiraat studies comparable to other disciplines in the development of Islamic studies.

**Keywords**: Computing Visualisation, Studies of Qiraat, Teaching and Learning Methodology, Qiraat in Malaysia.

**Introduction**

The study of *the* Quran deals with the study of those sciences that have a direct bearing on the details of its revelation (*Wahy*), reasons of revelation (*Asbab al-Nuzul*), compilation, recitation, history, understanding and implementation of the Quran. It is, therefore, a vast field of Islamic scholarship, and one of primary importance *(Abu Ammar al-Qadhi, 2008)*. For example, with regards to recitation, study of the Quran deals with the science of pronunciation (*tajwid*), the different methodologies of reciting the Quran (the *qiraat*), the blessings of reciting the Quran, and the etiquette of its recitation. Study of the Quran has many branches and every branch has its different concepts. Teachers must understand the concepts in order to help students know

and also understand the knowledge of the Quran. The concept for study of the Quran is different in many ways whether in its pronunciation (tajwid) or interpretation (*tafsir*). Study of the Quran which deals with the different methodologies of reciting the Quran (*qiraat*) has its own characteristic and known as difficult to learn.

Qiraat is the word masdar (derivative) of qara'a or plural (many numbers) of *qiraah* which means reading or reciting (al-Zubaydi 1385H). According to the term: The way and method of reciting the phrase al -Quran and its letters by discussing the various forms of reading that are derived from the narration which came to the Prophet PBUH (Muhaysin, 1993).

Ibn al-Jazari (751H) defines Qiraat as "*A knowledge-discuss on the method and procedure of mentioning a word/phrase al-Qur'an and disputes that occur with reference to its narrators*" (Ibn al-Jazari, 1419H). The definition stated by Abd al-Fattah al-Qadi (1992) is also almost the same as Ibn al-Jazari, which is "*Knowledge which deals with the methods of mentioning the words/phrases of al-Qur'an and tariq (the way of narration) whether there is agreed upon or disagreement, in which case the overall form is based on its narrator* ".

**Computerized Visualization Concept in Education**
According to Hamzah (2004), visualisation is one of the thinking skills whereby the ability to imagine the shape and rotate the shadow from various directions whether from  two dimensions and three dimensions when manipulated by a person. Visualization is also a technique in creating an image, diagram or animation that communicate with the message to to the user either abstract or concrete idea. Visualization is said to encourage creativity through an idea and allows a better understanding of a subject by the use of dimensions for displaying an information (Knight, 2000).

Nowadays, in Malaysia, Application of information Visualization was also developed in the field of education as learning materials because the advantages and uniqueness of the information visualization techniques to improve process understanding through the use of visual. In addition, information visualization applications are also able to manage data sources and complex concepts in learning activities.

This introduction shows the use of the visual that is growing on the need and interest. Visual is not only seen interesting but will help earnings quick information and more understandable.

**Problem Statement**
Conventional teaching refers to the one way communication method by a teacher on information presentation and ideas explanations verbally while students being merely the recipient is said to be passive (Aris & Yunus, 2016).  Based on the study of Hadi (2010), it was stated that there are quite a number of institutions that still implement a one way teacher-centered teaching of Qiraat. This resulted in students easily feel bored and did not pay attention to the content of the lessons delivered. The evaluation that focused only on text will eventually preventing the communication between teachers and students. (Abdullah et. al, 2014).

In addition, study of Hadi (2010) also showed a low confidence level of the students to recite in front of audiences by being a leader in or outside of prayer. It occurs when the students failed to remember the differences among the reading of every Qiraat's imam properly.

### Scope and Methodology
This study aims to expose information on empowering the teaching and learning of Qiraat knowledge by using computerized visualization. It specifically deals with the development of Qiraat knowledge in Malaysia, the importance of technology-based teaching, quality teaching and learning through computerized visualization and its elements in Qiraat.

Generally, this is a qualitative study using the method of documentation alone. This method is used in this article to obtain the conceptual datas and some official documents of the research institution. The study also reviews some forms of computerized visualization such as the existing Qiraat's websites and applications for the purpose of strengthening the study data.

### Qiraat Study in Malaysia
Qiraat study is one of the emerging fields in Malaysia. All levels whether in school, college or University begin to integrate study of Qiraat as part of the curriculum. This knowledge is applied in various forms including modules, subjects and specific courses in the institution.

### The Secondary Level
Study of Qiraat has been included as one of the subjects in the Quranic Skill Classroom (QSC) which is mandatory in all Religious Secondary School (SMKA) and schools with Religious Stream Classes (KAA). It complements the Quranic Skill Classroom (QSC) module that includes Qur'anic Tajweed, Hafazan, Tarannum and Ulum al-Qur'an. The syllabus used in QSC is The Seven Qiraat (al-Qiraat al-Sab'ah). Between the deliberations are the concept of al-Qiraat, *Sab$^c$ah Ahruf*, the history of al-Qiraat and short profile of the seven Qiraat's Imams. Only afterwards, they highlighted the respective Qiraat Imam's reading technique by selecting some surahs to be practiced. (QSC Implementation Handbook 2014)

### Study of al-Qiraat in Higher Education Institution
The purpose of Islamic Education in Higher Education Institution in Malaysia aims to meet three objectives;
1. Knowledge development
2. Research empowerment
3. Community service

### Knowledge Development
Higher Education Institution is the center for developing knowledge in all its areas. Currently there are several higher education institution in Malaysia that offered Bachelor's degree specifically in the field of Qiraat. Among them are:
1. Sultan Zainal Abidin University (UNISZA) offers a Bachelor of Qur'an and al-Sunnah (al-Qiraat) with the full time course of three and a half year.

2. *Selangor* International Islamic University College (KUIS) offers a Bachelor of Al-Quran and Al-Qiraat with the full-time course of four years.
3. Insaniah College University (KUIN) offers a Bachelor Tahfiz Al-Quran and Al-Qiraat with the full time course of 8 semesters.
4. Sultan Idris Education University (UPSI) also has planning to offer a Bachelor Tahfiz al-Quran and al-Qiraat (with education). The proposed intake is at the entry of February 2017.

While at the diploma level, the most recognized diploma in al-Qiraat by the Government is Darul Quran (JAKIM). It is implemented on a joint venture with various State Maahad Tahfiz and colleges. In general, there are institutions offering Diploma tahfiz Darul Quran (JAKIM) in almost every state including:
1. Johor Islamic Studies College (MARSAH).
2. Maahad Tahfiz Al-Quran Kedah.
3. Maahad Tahfiz Al-Quran Wal Qiraat (MAIK), Kelantan.
4. Al Quran Institute Kuala Lumpur.
5. Maahad Tahfiz Al-Quran Wal Qiraat, Melaka.
6. Tahfiz Al-Quran Institute Negeri Sembilan.
7. Maahad Tahfiz Al-Quran Wal Qiraat State Mosque, Kuantan Pahang.
8. Maahad Tahfiz Al-Quran Wal-Qiraat, Perak.
9. Maahad Tahfiz Al-Quran Wal-Qiraat, Yayasan Islam Perlis.
10. Maahad Tahfiz Al Quran Wal Qiraat, Penang.
11. Maahad Tahfiz Al-Quran Wal-Qiraat of Sabah.
12. Islamic Skills Institute of Malaysia Sarawak.
13. Maahad Tahfiz Al-Quran, Terengganu

In addition there are also a number of institutions offering diploma in Qiraat including:
1. International Islamic University College (KUIS) offers *Diploma in* Tahfiz Al-Quran and Al-Qiraat.
2. Sultan Ismail Petra International University College (KIAS), Kelantan offers Diploma in Qiraat and Tarannum
3. Klang Hafiz College offers Diploma Tahfiz Al-Quran and Al-Qiraat.
4. International Islamic College of Technology (KITAB) Penang offers a Diploma in Qiraat.
5. Sultan Azlan Shah Islamic University College: Diploma in Tahfiz Al-Quran Wa Al-Qiraat.

Moreover there are also some higher education institutions offering al-Qiraat studies through courses or subject. Between the participating universities are:
1. Dep. of Al-Quran and al-Hadith, Academy of Islamic studies, University of Malaya under the subject IXEB 3203: al-Qiraat.
2. Dep. of Al-Quran and al-Sunnah, Faculty of Islamic studies, Universiti Kebangsaan Malaysia under the subject PY1252: an introduction to Qiraat and Hafazan.
3. Faculty of Quran Sunnah, Islamic Science University of Malaysia under the subject QBA3023: Practical Qiraat.

4. International Islamic University under the subject RKQS3042A : *Muqaddimah fi ' Ilm al-Qiraat*: Introduction to Science of Quranic Readings.
5. Faculty of Contemporary Islamic Studies, University of Sultan Zainal Abidin (UNISZA) under the subject IQS 2072: al-Qiraat.
6. Dep. of Islamic studies, Faculty of human sciences, Sultan Idris Education University under the subject HIQ 3013: al-Qiraat

**Research Empowerment**

In the context of Qiraat knowledge, it has been used as one of the most sought after studies. Nowadays there are many researches conducted at the bachelor degree level of scholarly training, a dissertation at the masters and thesis at the PhD level. The research generally focused on few scopes such as the study of the methodology of al-Qiraat, Qiraat figures, Qiraat scripture study, Qiraat association with other disciplines, Qiraat Syadhdhah and Qiraat in an educational context. It is also extended through the award of research grants that are available at the university or related institution.

Studies and research have also published either in the form of journal articles, book chapters, proceedings and academic books. The Qiraat journals currently available in Malaysia are KUIS Qiraat Journal of Education and Research and JAKIM Darul Quran Journals. In addition there are also other Islamic studies journals containing Qiraat related articles such as Journal al-Bayan, Dep. of Quran and Hadith, Academy of Islamic Studies Uni. Malaya, Journal Islamiyyat Faculty of Islamic Studies UKM and more.

Apart from that, there are also exclusive seminars and conferences to present the study findings in respect of al-Qiraat. Among them are the National Seminar on Qiraat 2011 (National Qiraat Seminar) organized by the Association of Students of Islamic Heritage and Revelation Knowledge (IIUM), National Seminar on Qiraat Education and Research 2010 by Department of Tahfiz al-Quran al-Qiraat, *Selangor* International Islamic University College, 3rd National Qiraat Seminar 2012 organised by Tun Hussein Onn University of Malaysia (UTHM) and Johor  Qurra Society in collaboration with the National Qiraat Association and the Johor Quranic Teachers 'Association and International Qiraat and Qurra' Seminar (SQ2010) organized by the Faculty of Islamic Contemporary Studies (FKI) in collaboration with the Terengganu State Government, the Terengganu Al-Quran Institute, and the Department of Islamic Development Malaysia.

**Community Services**
Among the institutions that are active in offering the al-Qiraat studies to the public is International Islamic University (IIUM). Under Tilawah Division, CELPAD, they introduce a number of courses related to the Quranic skills at the certificate level. Courses offered are with Basic Al-Quran Certification, Tajweed Al-Quran Certification narrated by Hafs ' An ' Asim and Advanced Certification related to Talaqqi and Tarannum.

In addition, there is also Malaysian Qiraat Association inspired by a lecturer in IIUM Gombak, Ustaz Mohd Rahim bin Jusoh. This society is set up to uphold the Qur'an particularly in al-Qiraat through courses, workshops, dialogues, forums, meetings and seminars. It also

becomes a field to unite Al-Quran and al-Qiraat members in Malaysia. (http://www.ustazrahim.net.)

**Quality Learning through Visualization**
A quality teaching is an important aspect in developing a balanced generation. Teachers are characters who played a major role as a variable in the process of an educational institution. According to the Creemer (1991) & Scheerens (1992) factors that the teachers' teaching practices in the classroom such as the need to create an effective learning environment are an increasingly complex challenge in today's teaching profession.

In order to achieve that goal, it is dependent on the effectiveness of the role of teachers in the learning process and in relation to the students (Anderson, 2004). Therefore, according to the Marsh (1996) teachers should have sufficient skills to practice them in new situations effectively. By having enough skills, then teachers can make teaching more clear and effective. Teachers should be proficient in determining the appropriate teaching and learning strategies for students as well as wise in selecting teaching methods and techniques. It is important so that the teachers are able to deliver content in a structured and systematic manner (Kallison, 1986).

Among the urgent skills in the world today are the skills of teachers in using technology. It is very functional as teaching AIDS (ABM) to help explain a concept in ensuring effective teaching (Hiebert, Wearne & Taber, 1991; Kazna 1991). Presentation of teachers using information and communication technology (ICT) are able to help students who have a variety of intelligence to learn optimally during class (Hadi, 2005). According to Wyatt (1984), computer-assisted learning has met the consumer's wishes.

Visualization means imagining or describing (Johari Surif et al., 2007). Visuals are images, images and graphics. Visual immobilization and visual display provides a wide range of meanings because a picture alone can provide multiple meanings (Card, Mackinlay, & Schneiderman, 1999). According to Tufte (2001), visualization is an effort to convey information obtained into the form of pictures, objects, tables, diagrams and graphs in a detailed, systematic and focused manner. Visualization is an important and useful technique for primary and secondary school students (Norasikin Fabil & Zawawi Ismail 2005). Based on student learning styles, visualization is an alternative technique that can help students who are very weak and moderate in improving their cognitive ability. The effectiveness of visualization can provide a specific meaning and describe the concept and design of an information or knowledge very well (Norasikin Fabil & Zawawi Ismail 2005).

The best method in the visual presentation is through the method of computing. This amplified by McCormick, Defanti, & Brown (1987) stating directly visualization is a method of computing. Visualization is capable of combining various disciplines of knowledge naturally. It can connect computer graphics, computer engineering, information science and various application fields such as science, geography, language and include the field of Islamic studies. Gershon (1994) also said more than one visualization method of computing because visualization

is the process of bringing information to the visual form, which allows users to research the information.

Among the advantages of using visual include a tool for exploitation of human perception and it can change the cognitive that happens to perceptions for the sake of perception Spence (2001). Among the advantages of using visuals is as a tool for the exploitation of human perception and it can change the cognitive that occurs to the perception of perception (Spence 2001). In the context of learning, it will be able to change the perceptions of students who assume a subject to be difficult to a visual that is easy to understand. However, it very relies on visual performances that require expertise, especially content selection, design and delivery of teachers. This as stated by Laconte (1984) that the skills of visualization is a skill to understand and translate the visual message to accurate information. The process of ensuring that the visualization in teaching and learning can be seen in the following figure:
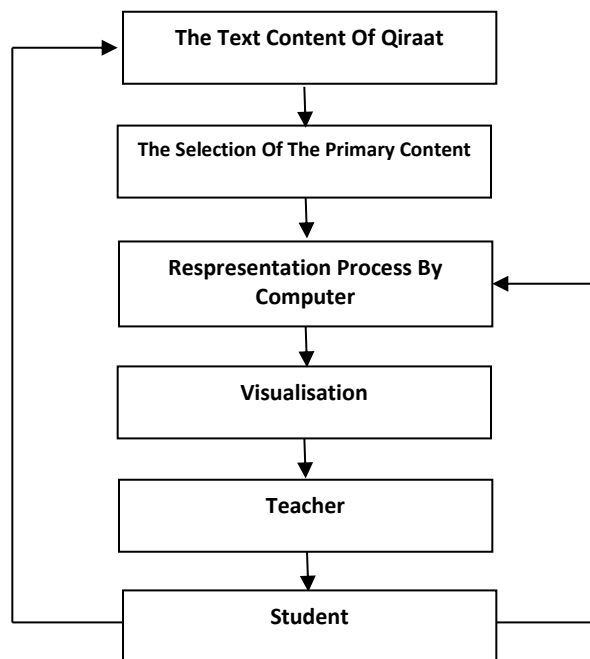


## Application of Information Visualization in Qiraat Studies

Qiraat study is a study which has five key pillars and foundation to the disciplines concerned.
i.      History of the development of Qiraat Study including biography the imams and narrators.
ii.     Specific Methodology (Usul al-Qiraat) for every imam and narrator reading Qiraat.
iii.    Points specific differences (farsy al-huruf) in the text of the Quran for every imam and narrator.
iv.      Practical reading based on imams and narrators in ifrad and jama '.
v.      The effect of difference Qiraat in writing, language and fiqh law.

All these important elements have deep discussions that require high perseverance especially involving practical reading. This is because readers of the Quran in various method of Qiraat

require strong memories, especially involving the methodology and places of special difference for each imam and narrator. Therefore, among the methods to facilitate and avoid getting bored when studying is to visualize the information contained in Qiraat.

In the field of education, most of the techniques and elements of visualization information are presented through the design of courseware and websites. In this way students can access information quickly and fast. According to Norasikin Fabil and Zawawi Ismail (2005) there are seven key elements in information visualization techniques, namely:

**1) Overview**
This element is important to enable a lesson or subject to be thoroughly view the whole idea before learning a topic more deeply. It also functions to view the overall idea so that can strengthen the understanding of the topics taught. In the context of Qiraat stdudy, an idea in general before beginning a lesson is very important. For example, from a given topic learning, students will be able to find out what will be learned on that day. The visual below illustrates the sub topics that will be studied in general:



**2) Zooming**
Among the advantages of the application of information visualization is the student can focus on subjects that they want to understand more clearly. Its contents displayed more complete and clear as there are facilities *zooming*: for example, through learning Geography, a map of the country learned included; and with *zooming* student can view physical condition of a country more closely. In the context of Qiraat study, the enlargement of this image can be used to show students the specific signs in the Qur'an such as the sign ( ) in the verse◊

<div dir="rtl">قَالُوٓا۟ يَـٰٓأَبَانَا مَا لَكَ لَا تَأْمَنَّا عَلَىٰ يُوسُفَ</div>

This sign shows the reading of isymam. Due to the small sign the student can not see it clearly, hence the process of enlarging the image will make it easier for students to know exactly and clearly.

### 3) Filtering

Through the filtering process, students will be able to find the topic easily and quickly. Students can directly enter keywords for related topics, then the application's view will focus on the related topics. In this way allows students to filter out topics that are not required or dislike topics and more time-saving. In the context of Qiraat study, this filtering process will facilitate the students to keep learning on verses required as shown in the following https://www.nquran.com/ :



### 4) Details-on-Demand

Students can choose one or a set of topics and also get the full details the of topic immediately. In the context of Qiraat study, students still can gain information quickly about the topics that they want. For example, in the chapter of the term specific words in Qiraat, students will be able to get the information required directly.



### 5) Related

Used to illustrate a visual description of a topic being studied. In the context of Qiraat, this connection is evident that there are imams and narrators who share the same methodology in some situations. For example, related topics (mim al-jam'i); It is a chapter that has a relationship between the imam and Qiraat narrator. According to Imam Ibn Kathir, all the mim al-jam'i are read with silah (عليهم read with عليهمو) and it is related and similar to one of the ways of Qalun reading. When it is visualized it can be seen as follows:

### 6) Extract

An application of interactive information visualization provides freedom and variety of choices to students. In addition to selecting datas or topics, students can divide the data for a particular purpose such as storing the data in the specified file, printing, downloading and dragging to other

applications. Then, in this way they can be checked by the teachers and shared with friends. In the context of Qiraat, among those that can be implemented is the process of downloading certain imam recitation for a specific Qiraat. This is as it is on the https://www.nquran.com/page.
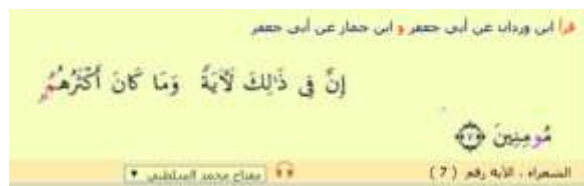


### 7) Various Dimensions

The application of this visualization system provides a diverse dimension. By using visual information, students can delegate something more effectively. A concept can be described in different shapes, sizes or colors, and it creates a variety of ideas; can attract attention; and improve student memory. Differences in dimensions also make the students competent to differentiate a concept easily. For example; in surah al-Fatihah there are signs by using two colours namely red and green. Red-labeled words refer to the differences that occurred in the context of the special methodology of the imam (usul al-qiraat) and the green color referring to the special difference of Qiraat imam (farsy al-huruf). By looking at the colours, students have gained the initial idea that there are three (farsy al-huruf) and two (al-qiraat) in surah al-Fatihah.



### Conclusion

Learning Qiraat can be enhanced by improving teachers' skills in mastering the knowledge of information technology. Teachers of Qiraat should take specific measures to ensure that visuals used can help the process of teaching and learning. This is because the visuals are a good learning aid that may attract students. This will prevent students from feeling bored with maintaining one-way and traditional techniques. This will produce more quality and effective learning.

However, teachers' pedagogical skills in delivering learning are still a priority. Teachers still need to master the areas they are teaching before relying on technology aids. In the context of teaching aids, teachers need to wisely select the format and appropriate visual type of learning activity and student ability levels. Undoubtedly, learning techniques and strategies as well as the uniqueness of student learning styles will result in a more robust and effective PP process.

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