

# **Implementation Of Multimedia For E- Learning Of Arabic Language For Foreigners**

**By**

**Isam Ahmed Hassan Ahmed**  
B.Sc In Information Technology  
Computer man College For Computer Studies  
1999.

**A dissertation**

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**Department of Computer Engineering  
Faculty of Engineering & Technology  
University of Gazeera**

Supervisor: Dr. Saif Eldin Fatooh Osman Yaseen

Co Supervisor Dr. ◌Ali Mohamed Abdelrahman Agoub

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## **Examination committee :**

<b>Name</b>	<b>Position</b>	<b>Signature</b>
1- Dr. Saif Eldin Fatooh	Supervisor	.....
2- Dr Ali Mohamed Agoub.	Co Supervisor	.....
3- Dr. Atif Osman. Bakheet	External Examiner	.....
4- Dr. Khalid Osman Dafaalla.	Internal Examiner	.....

**Date of examination: 21/05/2008.**

## Dedication

To my parents  
&  
All gratitude & Teachers  
&  
My Love Wife

To my graceful God who gave me everything

## **ACKNOWLEDGEMENTS**

I would like to thank my advisor Dr. Saif Fatooh who didn't hesitate to transfer his steamed experience to light my immigration toward science and education and those who assisted me as most as they can.

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# **Implementation Of Multimedia For E- Learning Of Arabic Language For Foreigners**

Isam Ahmed Hassan Ahmed

MSc. in Computer Science & Information

Department of Computer Engineering,

Faculty of Engineering and Technology

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## **Abstract**

This Dissertation focuses on E learning for Foreigners who can learn Arabic language through multimedia design and internet applications through revised platforms of Arabic simple words, sentences and alphabets, which can help them to join the Arabic community without difficulties.

The dissertation is accomplished in 6 chapters, exploring the nature of Arabic language, importance and implementation of E learning as a tool to introduce the Arabic language.

The dissertation shows the data flow diagram which guides the user to get some knowledge about the E-learning system through diagrams.

## استخدام الوسائط المتعدده في التعليم الألكتروني للناطقين بغير اللغة العربية.

عصام أحمد حسن أحمد  
ماجستير في علوم الحاسوب و تقنية المعلومات  
قسم هندسة الحاسوب  
كلية الهندسه و التكنولوجيا  
مايو ٢٠٠٨

### الخلاصه

تعكس هذه الوثيقه البحثيه صورة التعليم الألكتروني للناطقين بغير اللغة العربية حتى يتمكنوا من تعلم اللغة العربية من خلال الوسائط المتعدده و الشبكة العنكبوتيه الإنترنت. وذلك بتوفير قوالب لغويه مراجعه جيدا والتي تتيح للمتعلم تعلم الجملة العربية البسيطة و المركبه و الحروف الأبجديه حتى يتمكنوا من الولوج في المجتمعات العربية من دون تعقيدات. البحث موزع في ٦ فصول تعكس طبيعة اللغة العربية و أهمية و تطبيقات التعليم الألكتروني كأداة لتقديم اللغة العربية للناطقين بغيرها. كما تعكس المسوده ايضا مخطط انسياب البيانات والتي تقود المتعلم إلى فهم النظام من خلال أشكال النظام فقط.

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# Chapter 1

## *Introduction*

## **1-1 Forward.**

E-learning is the 21<sup>st</sup> home learning tools which extended the learning from universities to home containing any materials which may be useful according to the traditions and type of language in the certain countries.

The dissertation will explore the topic of using the multimedia as an E learning tool to teach Arabic for those who cannot speak Arabic language.

## **1-2 Problem Definition.**

Sudan , is a destination for many African and Asian nations who immigrate from their countries to learn and speak Arabic, the dissertation may help them to use the computer as an E-learning tool to learn and speak Arabic language from their home. From the other side the main problem of Arabic language is the phonemes and vowels of Arabic alphabets which need some type of multimedia to listen the Arabic letters which reflected and solved in this dissertation.

## **1-3 Objectives.**

To provide an E-learning tool for those who can not speak Arabic (Foreigners) by providing them some multimedia programs to listen Arabic alphabets and simple sentences which can help them to speak Arabic and learning Islamic religion.

## **1-4 Research Methodology.**

- Data are represented in system analysis format using data flow diagram and flow charts to present the case.

- Theoretical part is proceeded the system analysis part so as reflect the nature of both E learning system & Arabic language prospectively.
- Theoretical parts are collected from many internet and references since the standardization of E learning is still depend on the development of technology itself.
- Multi-media including graphics and sounds designed by multimedia editors so as to mix the graphics and sounds together for more enhancement.

#### **1-5 Limitations.**

E-learning in Sudan is still considered as a new topic which need many resources and equipments to be launched beside the education itself should be developed so as to have a strong idea about E-learning in Sudan , may need long time to collect the data from considered and approved resources.

## **Chapter 2**

### ***Introduction to E-learning***

## **2-1 What is E Learning?:**

The delivery of a learning, training or education program by electronic means. E-learning involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material.

e-learning is the acquisition and use of knowledge distributed and facilitated primarily by electronic means. This form of learning currently depends on networks and computers but will likely evolve into systems consisting of a variety of channels (e.g., wireless, satellite), and technologies (e.g., cellular phones, personal digital assistant devices) as they are developed and adopted. E-learning can take the form of courses as well as modules and smaller learning objects. Elearning may incorporate synchronous or asynchronous access and may be distributed geographically with varied limits of time.

E-learning can involve a greater variety of equipment than online training or education, for as the name implies, "online" involves using the Internet or an Intranet. CD-ROM and DVD can be used to provide learning materials.

Distance education provided the base for e-learning's development. E-learning can be "on demand". It overcomes timing, attendance and travel difficulties.

Learning is a collective term used to describe training delivered by electronic means, including web-based systems, and computer and communications technologies, anywhere and at any time on demand.

## **2-2 E-learning has a variety of forms including:**

E-learning has many forms to be introduces such as

### **2-2-1 Computer Based Training (CBT)**

Computer-Based Training (CBT) is training which is delivered via a computer. Computer-based training includes tutorials, drill and practice, simulations and testing

### **2-2-3 Computer Aided Instruction**

(CAI) emulation and simulation, has been an important, and expanding element of Defense training for many years.

### **2-2-4 web-enabled e-learning**

It is a method to use the web sites and HTML pages through the computers servers and distributed environment to reflect the learning subject and contents.

## **2-3 Benefits of e-Learning:**

### **2-3-1 Technology has revolutionized business; now it must revolutionize learning**

The need to transform how organizations learn points to a more modern, efficient, and flexible alternative: e-learning. The mission of corporate e-learning is to supply the workforce with an up-to-date and cost-effective program that yields motivated, skilled, and loyal knowledge workers.

### **2-3-2 Anywhere, anytime, anyone**

We estimate that approximately 80% of the professional workforce already uses computers on the job. Technical obstacles, such as access, standards, infrastructure, and bandwidth, will not be an issue two years from now. The growth of the World Wide Web, high-capacity corporate networks, and high-speed desktop computers will make learning available to people 24 hours a day, seven days a week around the globe. This will enable businesses to distribute training and critical information to multiple locations easily and conveniently. Employees can then access training when it is convenient for them, at home or in the office.

### **2-3-3 Substantial cost savings due to elimination of travel expenses**

The biggest benefit of e-learning, however, is that it eliminates the expense and inconvenience of getting the instructor and students in the same place. According to Training Magazine, corporations save between 50–70% when replacing instructor-led training with electronic content delivery. Opting for e-training also means that courses can be pared into shorter sessions and spread out over several days or weeks so that the business would not lose an employee for entire days at a time.

### **2-3-4 Just-in-time access to timely information.**

Web-based products allow instructors to update lessons and materials across the entire network instantly. This keeps content fresh and consistent and gives students immediate access to the most current data. Information can be retrieved just before it is required, rather than being learned once in a classroom and subsequently forgotten. Training Magazine reported that technology-based training has proven to have a 50–60% better consistency of learning than traditional classroom learning (c-learning).

### **2-3-5 Higher retention of content through personalized learning.**

Since they can customize the learning material to their own needs, students have more control over their learning process and can better understand the material, leading to a 60% faster learning curve, compared to instructor-led training. The delivery of content in smaller units, called "chunks," contributes further to a more lasting learning effect. Whereas the average content retention rate for an instructor-led class is only 58%, the more intensive e-learning experience enhances the retention rate by 25 – 60%.

### **2-3-6 Improved collaboration and interactivity among students.**

Teaching and communication techniques which create an interactive online environment include case studies, story-telling, demonstrations, role-playing, simulations, streamed videos, online references, personalized coaching and mentoring, discussion groups, project teams, chat rooms, e-mail, bulletin boards, tips, tutorials, and wizards. Distance education can be more stimulating and encourage more critical reasoning than a traditional large instructor-led class because it allows the kind of interaction that takes place most fully in small group settings. Another study found that online students had more peer contact with others in the class, enjoyed it more, spent more time on class work, understood the material better, and performed, on average, 20% better than students who were taught in the traditional classroom.

### **2-3-7 Online training is less intimidating than instructor-led courses.**

Students taking an online course enter a risk-free environment in which they can try new things and make mistakes without exposing themselves. This characteristic is particularly valuable when trying to learn soft skills,

such as leadership and decision-making. A good learning program shows the consequences of students' actions and where/why they went wrong. After a failure, students can go back and try again. This type of learning experience eliminates the embarrassment of failure in front of a group.

## **2-4 E-Learning vs. Online Learning**

e-Learning represents the whole category of technology-based learning, while online learning is synonymous with web-based learning. In this case, online learning is actually a subset of e-Learning.

e-Learning = Technology-based Learning

The term e-learning covers a wide set of applications and processes, including computer-based learning, Web-based learning, virtual classrooms, and digital collaboration.

E-learning is defined as the delivery of content via all electronic media, including the Internet, intranets, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-ROM. Yet, e-learning is defined more narrowly than distance learning, which would include text-based learning and courses conducted via written correspondence. For the purpose of this report, the term e-learning is used synonymously with technology-based learning. Terms like e-learning, technology-based learning, and Web-based learning are defined and used differently by different organizations and user groups. Moreover, use of these terms is constantly changing, as the world of e-learning evolves.

Online Learning = Web-based Learning

Online learning constitutes just one part of technology-based learning and describes learning via Internet, intranet, and extranet.

Levels of sophistication of online learning vary. A basic online learning program includes the text and graphics of the course, exercises, testing, and record keeping, such as test scores and bookmarks. A sophisticated online learning program includes animations, simulations, audio and video sequences, peer and expert discussion groups, online mentoring, links to material on a corporate intranet or the Web, and communications with corporate education records. In this report, the term online learning is used synonymously with Web-based learning or Internet-based learning.

## **2-5 Applications of E-learning.**

### **2-5-1 Economy is evolving to a knowledge-based economy.**

In the last four decades, economic and technological forces have transformed the U.S. economy from a production-based economy to a service-based economy. In the old economy, corporate value and value creation were defined primarily through physical and financial assets. The new economy puts a premium on intellectual capital. However, the life of knowledge and human skills today is shorter than ever, increasing the pressure to remain at the forefront of education and training throughout a career. In the midst of globalization and technological revolution, four-year degrees are just the beginning of a forty-year continuing education. Life-long learning may be considered merely a buzzword today, but it is quickly becoming an imperative.

### **2-5-2 A paradigm shift in the way education is viewed and delivered.**

At the beginning of the new millennium, corporations view learning increasingly as a competitive weapon rather than an annoying cost factor. Business success depends more and more on high-quality employee

performance, which in turn requires high-quality training. Corporate executives are beginning to understand that enhancing employee skills is key to creating a sustainable competitive advantage. In the quest to remain competitive in today's labor-tight market, companies are exploiting advances in technology to train employees more rapidly, more effectively, and at less expense than in the past.

### Huge knowledge gaps demand educational system reform

The new global economy poses more complex challenges to workers, requiring higher levels of education, computer literacy, critical thinking, information analysis, and synthesizing skills. However, educational deficiencies have brought America to the edge of a widening knowledge gap. The U.S. is lagging behind educational levels of other industrial nations in several key indicators. U.S. students, for example, still trail students from other developed countries in mathematics and science achievement, according to the U.S. Department of Education. Even more alarming is that the literacy proficiency of a substantial proportion of the U.S. labor force is limited. More than forty percent of the labor force perform at the two lowest levels on government literacy scales, suggesting that many workers lack the skills needed to interpret, integrate, and compare information using written materials common to the home or workplace. The chasm between the higher demands of a knowledge economy and the educational status of the workforce is deep and must be addressed if the U.S. is to remain competitive internationally. A thorough reexamination of curriculum and teaching methods as they relate to labor market preparation is needed. Academic and corporate environments must be redesigned to adequately prepare people to function in an information society.

### **2-5-3 Globalization of business is resulting in manifold challenges.**

Advances in information technology and falling trade barriers facilitate business around the globe. As borders become less meaningful, global competition intensifies. International expansion and accelerating M&A activity have led to larger and more complex corporations. Today's businesses have more locations in different time zones and employ larger numbers of workers with diverse cultural backgrounds and educational levels than ever. Thus, more information has to be delivered in increasingly larger organizations, challenging internal planning, logistics, and distribution. Corporations worldwide are now seeking more innovative and efficient ways to deliver training to their geographically dispersed workforce.

Social and demographic changes direct education toward older target groups

Organizations and training providers need to evaluate whom they train and how. Today, traditional students in higher education – age 18 to 22 – make up less than 20% of all students. The fastest growing group attending higher education institutions are working, part-time students older than 25. This new group of "learning adults" is seeking education principally to advance their careers and increase their salaries. For universities and business-to-consumer (B2C) training providers, these individuals are excellent candidates for education delivered to their homes or offices. Declining birth rates, aging population, and lack of skilled labor also require an objective evaluation of the training needs of older age groups. In the new economy, even senior workers, including those nearing retirement, need to be trained. Broader acceptance of new training delivery options among older workers should facilitate the

training process. Americans over 50 years old are already the fastest growing user group of the Internet today.

#### **2-5-4 Learning has become a continual process rather than a distinct event**

In the new economy, corporations face major challenges in keeping their workforce current and competent. Many past training practices are unable to meet these challenges. Traditional training is often unrelated to new business initiatives or key technology drivers. In "just-in-case" fashion, courses are given and then forgotten, often without improving the performance of workers. While learning is not a one-time activity, training has traditionally been treated as such. To retain their competitive edge, organizations have started to investigate which training techniques and delivery methods enhance motivation, performance, collaboration, innovation, and a commitment to life-long learning.

#### **2-5-5 Explosive growth of the Internet provides delivery vehicle for education.**

The emergence of online education is not only a matter of economic and social change, but also of access. IDC estimates that, by 2003, the number of Internet users worldwide will grow to about 502 million, up from 87 million in 1997, representing a CAGR of 34%. With an estimated 103 million users in 2000 – or 40% of the projected 2000 total – the U.S. has the largest share and highest penetration of the Internet. The U.S. is also the leading nation in ecommerce. By 2003, one-fourth of all U.S. business-to-business purchasing will be done online, as predicted by The Boston Consulting Group. The increasing integration of the Web and American culture is also evidenced by tremendous annual user growth. In

1997, only 15% of the U.S. population used the Internet – then mostly a domain of educational institutions and businesses. A stunning 63% of Americans will be surfing the Web in 2003, more than doubling the usage in 1999. Through its increasing reach and simplicity of use, the Internet has opened the door to a global market where language and geographic barriers for many training products have been erased.

## **2-6 Organizing standards**

Currently, most e-learning standards can be organized into some general categories:

### **2-6-1 Metadata.**

Many developers argue that metadata content is the heart of e-learning. Learning content and catalog offerings must be labeled in a consistent way to support the indexing, storage, discovery (search), and retrieval of learning objects by multiple tools across multiple repositories.

### **2-6-2 Content packaging.**

The goal of content packaging specifications and standards is to enable organizations to transfer courses and content from one learning system to another. This is crucial because content can potentially be created by one tool, modified by another tool, stored in a repository maintained by one vendor, and used in a delivery environment produced by a different supplier. Content packages include both learning objects and information about how they are to be put together to form larger learning units. They can also specify the rules for delivering content to a learner.

Learner profiles. These standards allow different system components to share information about learners across multiple system components. Learner profile information can include personal data, learning plans, learning history, accessibility requirements, certifications and degrees, assessments of knowledge (skills/competencies). In **addition, systems need to communicate learner data to the content, such as scores or completion status.**

### **2-6-3 Accrediting organizations**

Currently, e-learning standards are being developed by four main organizations: AICC, IEEE, IMS, and ADL.

AICC ([www.aicc.org](http://www.aicc.org)) is an international group of technology-based training professionals that creates CBT-related guidelines for the aviation industry. AICC publishes a variety of recommendations, but its standards with the most impact on the e-learning arena are its computer-managed instruction (CMI) guidelines.

IEEE ([www.ltsc.ieee.org](http://www.ltsc.ieee.org)) is an international organization that develops technical standards and recommendations for electrical, electronic, computer and communication systems. Within the IEEE, the Learning Technology Standards Committee (LTSC) provides specifications that address best practices, which can be tested for conformance. Basically, they wrote the standard on how to write standards. The most widely acknowledged IEEE LTSC specification is the Learning Object Metadata (LOM) specification, which defines element groups and elements that describe learning resources. The IMS and ADL both use the LOM elements and structures in their specifications.

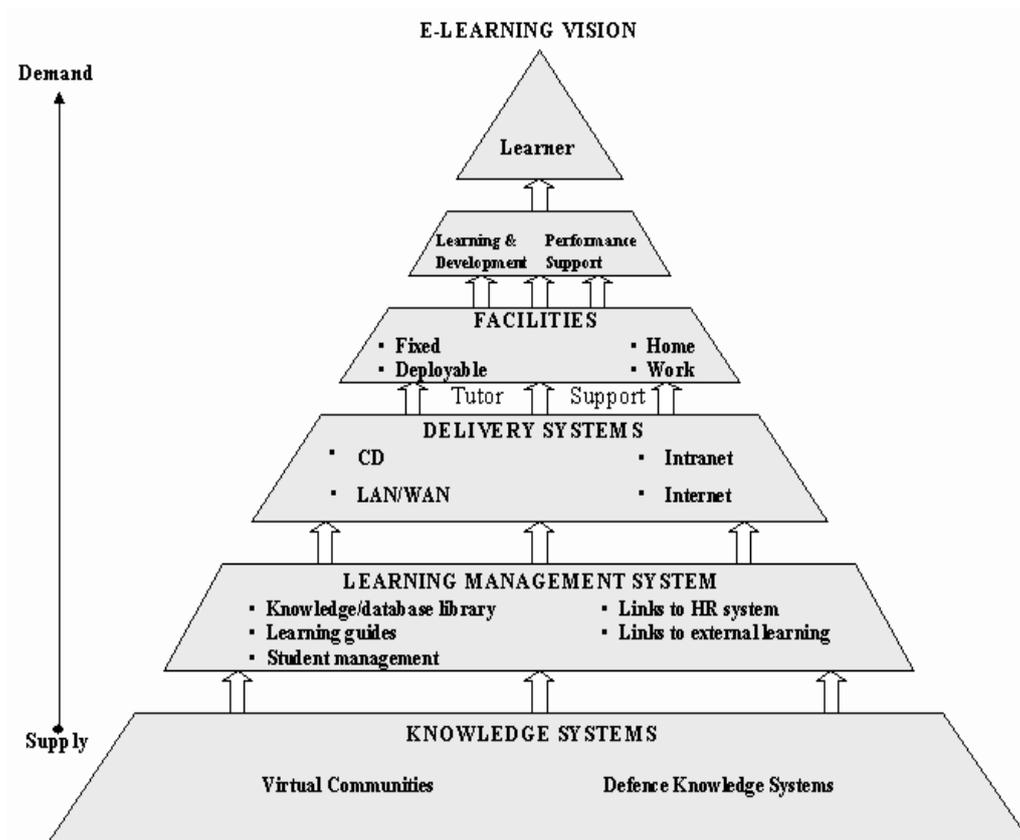
IMS Global Consortium ([www.imsproject.org](http://www.imsproject.org)) is a consortium of suppliers that focus on the development of specifications that focus on the use of metadata to address content packaging. The specifications are used to define how an LMS communicates with back-end applications and content objects or libraries. Several of its standards are made available on its website at no fee.

ADL ([www.adlnet.org](http://www.adlnet.org)) is a U.S. government-sponsored organization that researches and develops specifications to encourage the adoption and advancement of e-learning. The most widely accepted ADL publication is the ADL Shareable Content Object Reference Model (SCORM). The SCORM specification combines the best elements of IEEE, AICC, and IMS specifications into a consolidated document.

## **2-7 STRATEGIC VISION**

As shown in the diagram below, the vision for Defence-wide e-learning is to provide the opportunity for individuals to gain access to supported learning for both professional training and personal development purposes as appropriate. Web delivered and managed e-learning will need to be made available through all access points to the Defence Information Infrastructure (DII), any internet connected device and all electronic learning centres. Furthermore, from a training management perspective, the use of technology should enable automated tracking of student progress, increase the reusability and speed of update of training material and reduce disruption to both domestic and work place environments.

It is also recognized that one of MOD's highest priorities is to train people for military operations. That training includes the development of attributes such as leadership, teamwork, ethos and courage, which, predominantly, requires human interaction. Consequently, the MOD will continue to adopt a blended policy to learning but, as part of that policy, must take a progressive approach to e-learning in order to exploit known benefits and explore uncharted opportunities without undermining current output. Therefore, whilst both web enabled and non-web enabled e-learning will add to the overall efficiency and effectiveness of the learning process, it will rarely replace traditional classroom based methods entirely



**Figure 2-1: E- Learning Vision**

## **2-8 Models of e-Learning.**

After assessing the goals of a course, the material that will be used and the methods of evaluation, the developer can choose between three distinct models of E-Learning. These can be used stand-alone or as hybrids to provide a diverse learning experience. They include:

### **1. Presentation Model**

### **2. Interactive Model**

### **3. Collaborative Model**

#### **2-8-1 Presentation Model**

In this asynchronous model, information is presented one-way to the learner via text, graphics and sound. It is a demonstration, a simulation, a story or a movie.

Watching television or going to movies is a favorite activity for Americans, so the presentation model should be quite effective, as this is the medium people are used to. Using production techniques that capture the learner's attention is the key to making effective presentations.

The obvious advantage for using Presentation models is the lack of individual hardware requirements to deliver the information to a large audience, but critics might argue presentation models are not as engaging as the other models.

#### **2-8-2 Interactive Model**

The interactive model takes presentation of materials a step further by requiring users to interact directly with the material. This can be as simple as clicking buttons to navigate themselves through the course content or more involved such as answering test questions, running experiments, or connecting objects and concepts. A biology class, for example, might have a learner use the mouse to build an endocrine systems in a blank human body. A chemistry class might have the learner experiment with mixing chemicals with polymers in a simulated environment.

This model might have more impact on learning, as learners become directly involved in material. Learners make active choices, navigating their own path and understanding the building blocks of their studies. The new science of learning, as presented by the National Research Council, states the most important aspects of learning and knowledge, involve active learning, where learners control their own learning, metacognition, where learners are monitor their mastery of skills, and transfer of learning, where learners reuse previously learned material in new arenas (National Research Council, 2000). The interactive model of E-Learning supports each of these notions.

### **2-8-3 Collaboration Model**

The collaboration model encourages the social aspect of learning, as it creates online communities which share information and discourse, or complete collaborative work and projects. Message boards, for instance, foster an archived knowledge base of a community of practice. It allows multiple topics with threads that can be collapsible or expandable, demonstrating an easy way to organize the discourse. Document repositories allow a central database to store and organize documents,

offering excellent accessibility to course materials, or for peers to file-share when working on a collaborative project.

A more synchronous example might be the web-based video conference, where multiple participants from various geographical locations use real-time audio/video transmissions to have class or foster discussion.

Even email can be effective in allowing the discourse to continue anytime anywhere.

Professors become more available and peers have an easy, no intrusive way to contact each other and promote the completion of the project.

## **2-9 The Importance of Policy In E learning**

Policy considered as an organization tool in every system .

### **2-9-1 E-Learning functional philosophy**

There are several key concepts in developing E-Learning courses and applications. These concepts not only distinguish web-based learning from traditional classroom environments, but also demonstrate its strength as a

scalable and distributive network technology.

### **2-9-2 Standardization**

An increasingly popular idea in networked industries is the idea of setting standards to encourage universal recognition and distribution among competing developers. If an industry can agree upon standards in the language and components of software design, it fosters interoperability between systems and applications. In this way, developers and educators can interconnect content and tools from different vendors.

### **2-9-3 Successful Standards: HTML, XHTML and XML**

The most ubiquitous and accepted standards involve the language of building web sites. The World Wide Web Consortium (W3C) continues to evolve the Web development language from HTML, which is universally interpreted by all web browsers, toward XHTML and XML, markup languages that allow more flexibility in tag creation for style and content management, as well as the ability to modularize and extend traditional HTML content.

## **Chapter Three**

### **Arabic Language**

### **3-1 Introduction:**

Arabic: the Semitic language of the Arabs; spoken in a variety of dialects.

Arabic is one of the world's largest languages, as well as an important language to religion and literature. Arabic is the writing language of more than 200 million people, but spoken Arabic varies more than it does for most other languages, and Arabic-speaking Moroccans might not be able to talk easily with Arabic-speaking Yemenis.

Arabic is written with its own alphabet — and yes, it is an alphabet, just like the Latin alphabet is one — which is called Arabic alphabet. Arabic alphabet consists of 28 letters, and is written from right to the left. The shape and structure of the letters, make it natural to write Arabic in this direction.

Arabic is difficult to learn, and later to remember, but not because of reasons that spring most people to mind. Arabic writing is easily learned, and Arabic grammar is simpler and more logical than many Western languages.

But the great challenge with Arabic, is the wealth of words. The use of verbs and nouns in Arabic has reached a level of accuracy which few Western languages can match.

Semitic language used by Arabs caused by some historical tie, as the majority of Arabs are Arabs by language and not by blood.

Arabic is used as the principle language in most countries covered by the Encyclopaedia of the Orient: Algeria, Bahrain, Egypt, Iraq, Israel (as one

of the official languages), Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Syria, Sudan, Tunisia, United Arab Emirates and Yemen.

Among Muslims around the world. Arabic is also central to other languages in the Muslim world, as a large exporter of words and expressions. Arabic writing is also used for other languages like Persian and Urdu.

### **3-2 TYPES OF ARABIC**

Arabic is a language divided into 3 separate groups: Classical written Arabic; written Modern Standard Arabic; and spoken Arabic.

Classical written Arabic is principally defined as the Arabic used in the Koran and in the earliest literature from the Arabian peninsula, but also forms the core of much literature up until our time.

Modern Standard Arabic is a modernization of the structures of classical Arabic, and includes words for modern phenomenon's as well as a rich addition from the many dialects spoken all over the Arabic world.

Spoken Arabic is a mixed form, which has many variations, and often a dominating influence from local languages (from before the introduction of Arabic). Differences between the various variants of spoken Arabic can be large enough to make them incomprehensible to one another. Hence it could be correct to refer to the different versions as separate languages named according to their areas, like Moroccan, Cairo Arabic, North Syrian Arabic etc.

### **3-3 SACRED LANGUAGE**

Arabic also has a dimension of being a sacred language, as it is the only language from which the Quran is believed to be fully understood — all translations will reduce the quality of the revelations of God.

Arabic is based upon a very strict grammar, in which nearly all nouns and verbs are built from a stem of 3 consonants. From these 3 consonants, a large range of words are derived — there are 10 forms of verbs, there are a number of nouns which can be both feminine and masculine. As an example, s-l-m is the root of the words Islam, muslim, salam (peace), salama (safety), in addition to many others.

Arabic grammar is fairly simple compared to Western languages, but the language has a richness in its used vocabulary that exceeds most languages in the Western world.

### **3-4 THE LETTERS**

Arabic writing is an alphabetic script, based upon distinct characters, adjoined to other characters, which in most cases change their looks depending on where they stand in the word. The Arabic alphabet developed from Nabatean characters, one of the West Aramaic languages of the ancient Middle East.

ENCYCLOPAEDIA OF THE ORIENT						
ا	ب	ت	ث	ج	ح	خ
a	b	t	th	j	h   h	kh
د	ذ	ر	ز	س	ش	ص
d	dh	r	z	s	sh	ṣ   s
ض	ط	ظ	ع	غ	ف	ق
ḍ   d	ṭ   t	ẓ   z	ʿ	gh	f	q
ك	ل	م	ن	ه	و	ي
k	l	m	n	h	w/ū	y/ī
ء	ة	ـ	ـ			
No sound	Gives "a" in the end of words	a	u	i	<b>EXPLANATION</b> For some letters two transcriptions are given. The first is the correct one (with dots), the second (bold letter) is used in this encyclopaedia due to font limitations.	
ARABIC ALPHABET						

Figure 3-1: Arabic Language Letters

Arabic writing is put together of 28 signs, where 3 have vowel qualities (a, i, u, but i is often used for the letter y, and u often for the letter w). Since some regions of the Arabic world have different dialects, extra letters have been added. The sounds that are not covered by standard Arabic are: p, g, v. These are written almost like the letter that comes closest in standard Arabic, but with an extra dot.

The following Arabic letters does not have any correspondence in the Latin alphabet: kh (equals German ch), gh (a softer version of kh), cayn (guttural stop, but clearly pronounced from the back of the throat), th (as in English), dh (softer version of

th), sh (as in English) and strong and emphasized versions of the letters t, d, s, z, h.

One letter, called hamza, is not even pronounced, other than as a stop. In transcriptions it is marked with a ' only.

### The Arabic Keyboard

Extra Arabic letters and vowels that are not written on the keyboard buttons:

#### لوحة المفاتيح العربية

- أزرار الحركات (التشكيل) وحروف خاصة غير مكتوبة على اللوحة
- اضغط أولاً على زر shift ثم على زر حرف ثاني فتحصل على الحرف المطلوب.
- أسماء الحروف الخاصة قد تختلف من بلد لآخر، لذلك ركز على شكلها.

اسم الحرف المطلوب	الحرف المطلوب	= (دوماً shift)	الحرف +
-------------------	---------------	-----------------	---------

فتحة	◌َ	= Shift	ض +
تنوين الفتح	◌ِ	= Shift	ص +
ضممة	◌ُ	= Shift	ث +
تنوين الضم	◌ُ	= Shift	ق +
	لا	= Shift	ف +
	!	= Shift	غ +
فاصلة عليا مقلوبة	ء	= Shift	ع +
	]	= Shift	ب +
	[	= Shift	ي +
تنوين الكسر	◌ِ	= Shift	س +
	~	= Shift	ن +
سكون	◌ْ	= Shift	ء +
	{	= Shift	في +
	}	= Shift	ر +
فاصلة عليا	ء	= Shift	ة +
كسرة	◌ِ	= Shift	ش +

Prepared by Hussein Maxos 1999 <http://hmaxos.com>

**Figure 3-2: Arabic Language Keyboard**

Vowels are not letters, only signs added to the letter preceding them. In most cases the vowels are not written, so that the name 'Muhammad' is written 'mhmd'. The vowels are normally only

indicated in special cases, like where there is doubt about the correct meaning of the word, and in reading books for school children. There are also "long" vowels, and these are written, and in transcriptions they are marked with lines over or under the letter. Due to limited fonts on computers, this encyclopedia writes such letters like this: ā, ī, ū.

There are 3 declensions (nominative, accusative, genitive), and 2 tenses (perfect and imperfect). In general, sentences are built up as verb-subject-object constructions

### **3-5 History of Arabic Language**

Modern Standard Arabic belongs to the Semitic language family. Semitic languages have a recorded history going back thousands of years, one of the most extensive continuous archives of documents belonging to any human language group. While the origins of the Semitic language family are currently in dispute among scholars, there is agreement that they flourished in the Mediterranean Basin area, especially in the Tigris-Euphrates river basin and in the coastal areas of the Levant.

The Semitic language family is a descendant of proto-Semitic, an ancient language that was exclusively spoken and has no written record. This relationship places Arabic firmly in the

Afro-Asiatic group of world languages. Specifically, Arabic is part of the Semitic subgroup of Afro-Asiatic languages. Going further into the relationship between Arabic and the other Semitic languages, Modern Arabic is considered to be part of the Arab-Canaanite sub-branch the central group of the Western Semitic languages. Thus, to review, while Arabic is not the oldest of the Semitic languages, its roots are clearly founded in a Semitic predecessor.

Aside from Arabic, the Semitic language family includes Hebrew, Aramaic, Maltese, Amharic, Tigrinya, Tigre, Gurage, Geez, Syriac, Akkadian, Phoenician, Punic, Ugaritic, Nabatean, Amorite and Moabite. While a majority of these are now considered "dead" languages, either entirely obsolete or used only in religious practice, Arabic has flourished. The reason for this is inextricably linked with the rise of Islam and, more specifically, Islam's holy book, the Qur'an.

There are three distinct forms of Arabic. Classical or Qur'anic Arabic, Formal or Modern Standard Arabic and Spoken or Colloquial Arabic. Classical Arabic is the form of Arabic literally found in the Qur'an. It is used neither in conversation, nor in non-religious writing. As such, Classical Arabic is primarily learned for reading and reciting Islamic religious texts.

In order to understand the relationship between Modern Standard Arabic and Spoken Arabic it is important to understand the concept of "diglossia". As defined by the term's founder, Charles Ferguson, diglossia (literally meaning "two tongues") conveys a situation where, in addition to the primary dialects of a language, there is a highly codified form which is the vehicle of a large and respected body of literature. In addition to Arabic, an example of diglossia can be found in the co-existence of written Latin with the spoken Romance languages of French, Italian, and Spanish. While Modern Standard Arabic is the definitive form of written Arabic there are many spoken Arabic dialects. Modern Standard Arabic provides a universal form of the language that can be understood by all and is commonly used in radio and TV news broadcasts, films, plays, poetry, and conversation between Arabic-speaking people of different dialects.

Arab colloquial dialects are generally only spoken languages. Arabs use the colloquial language in all their daily interactions, but when they encounter a language situation calling for greater formality, Modern Standard Arabic is the medium of choice. In every area of the world where Arabic is spoken, this language situation prevails: there is a colloquial language, meaning the language which is spoken regularly and which Arabic speakers learn as their L1, and then there is Modern Standard Arabic,

based on Classical or Quranic Arabic. Standard Arabic is more or less the same throughout the Arab World, while there are wide differences between the various colloquial dialects. In fact, some of the differences are so large that many dialects are mutually unintelligible. My Palestinian roommate, for example, has told me several times that he can't understand the Moroccan dialect of colloquial Arabic.

Modern Arabic, both Standard and colloquial, is not static. The colloquialisms have undergone and will likely continue to undergo great change. Unfortunately, until recently they have not been closely studied, and therefore it is difficult to document any changes they may have undergone. It is easier, however, to document changes in Modern Standard Arabic.

One on-going trend in Modern Standard Arabic is modernization. Modernization involves the creation of new terms for concepts which didn't exist in earlier times. Like many other speakers around the world, Arabic speakers are sensitive to the wholesale borrowing of words. In fact, they are perhaps more sensitive to language change because most Arabs recognize Arabic as the language of God. Such a concept does not accommodate language change well. As a result, normative language academies have been established in several areas

throughout the Arab world including Cairo, Damascus, Baghdad, and Amman.

While the first documented record of written Arabic dates from the early 4th century AD, its use in the early 7th century as the language of the Qur'an led Arabic to become the major world language that it is today. As Islam spread throughout the world, its chosen language did as well. Coupled with the rise of Islam, Arabic became the language of government as well as religion. Within 100 years after the introduction of the Qur'an, Arabic became the official language of a world empire whose boundaries stretched from the Oxus River in Central Asia to the Atlantic Ocean, and even northward into the Iberian Peninsula of Europe. As Islam continued to spread through the world, Arabic inherently followed.

### **3-6 Phrases in Arabic**

In the street

Please: min fadlak (m) iki (f)

Thank You: shukran

You are welcome: afwan, ahlan wa sahlan

Excuse me / sorry: assif

Do you speak English?: tatakalam Inglesi?

I don't understand: anna mush fahim

What is this?: shu hatha?

Introducing yourself

How are you?: kheif halak (m) iki (f)

Very Well: tamam, bikhair

My name is...: Isam

What is your name?: ma ismiki (f)

Shopping

How much is this?: bikam hatha? What do you want? - (m):

Matha tureed?, (f): Matha tureedeen?

What is the discount?: kam il khasem?

I want to buy....: Anna ureed ishtaraiti

It is too expensive: ghalia katheer

It is too cheap: hatha rakhees jedan

Travels & directions

Where is...: wain

the bank: IL masrif

the restaurant: IL mataam

the telephone: IL hatif

the airport: IL matar

the post office: maktab IL bareed

the toilets: IL hamam

the hospital: IL mustashfa

the police station: dar al shurta

traffic police: IL murur

Go...: rouh

to the left: ala al yassar

to the right: ALA al yameen

Go straight on: alatool

The road: al shar'e

The easy group of Arabic letters

a

a is normally not written in Arabic but appears in the transliterated text. Its pronunciation is quite similar to the 'a' of English bag

u

just like the case is for a, u is not written in Arabic. Its pronunciation is quite similar to 'u' in Bulgaria.

i

i is also not written but it is simple to pronounce similar to 'i' in English sit.

ā

this is an a which is written in Arabic, and it is often referred to as "long a" because it is pronounced as the 'a' in English father

ū

works as a long 'o' like in the English word swoon

ī

like a long 'i'

b

nothing special, uttered similar to English b

t

nothing special, uttered similar to English t

th

when t and h are written next to one another in transliterated text, it normally means that it denotes one letter, which is pronounced as th is in the English word think

sh

when s and h are written next to one another in transliterated text, it normally means that it denotes one letter, which is pronounced as sh is in the English word shilling

dh

when d and h are written next to one another in transliterated text, it normally means that it denotes one letter, which is pronounced as th is in the English word that

r

rolled r, not too different from road

d

similar to English d

s

similar to English s

f

similar to English f

h

similar to English h

k

similar to English k

l

similar to English l

m

similar to English m

n

similar to English n

y

uttered like y in the English word yes

w

nothing special, uttered similar to English w

More difficult Arabic letters

q

a type of k-sound, but pronounced deep in the throat

kh

similar to the ch in the German family name Bach

gh

specific to Arabic, similar to highly expressed rolled r

c

no similarity in Western languages, a sound which starts deep in the throat

'

no sound, but at the point where this enters, the uttering of a word stops briefly. It works therefore as a pause in a word

h

stressed h, but it is a pure h

d

stressed d, and when followed by a, the a is pronounced as the a in car

s

stressed s, and when followed by a, the a is pronounced as the a in car

t

stressed t, and when followed by a, the a is pronounced as the a in car

z

stressed z, and when followed by a, the a is pronounced as the a in car

## **Part Four**

# **Implementation Data Flow Diagrams and system screens**

## 4-1 Context Diagram

The first analytical tool is the data flow diagram which describes the flow of all E-learning data which can be understood for both system designer and system user.

This described the relation between the student, university and the course contents and the designer of the Elearning template.

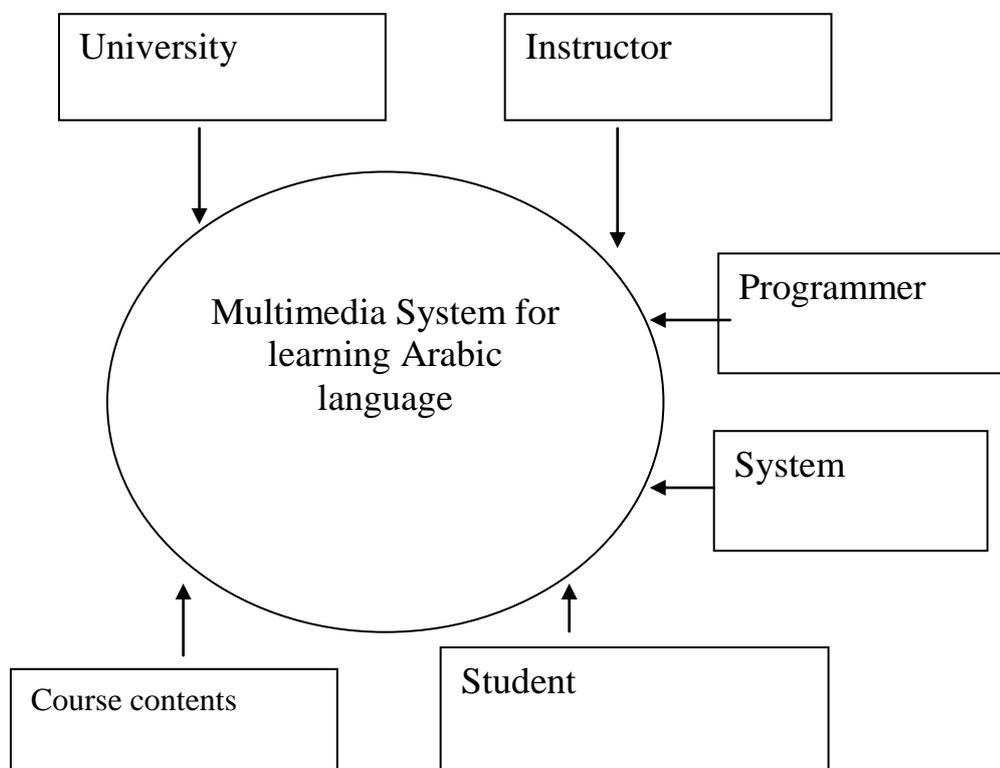


Figure 4-1: Context Diagram

## 4-2 Level one data Flow Diagram

This described the context diagram in one level which describes the relation of the student and starting the lesson.

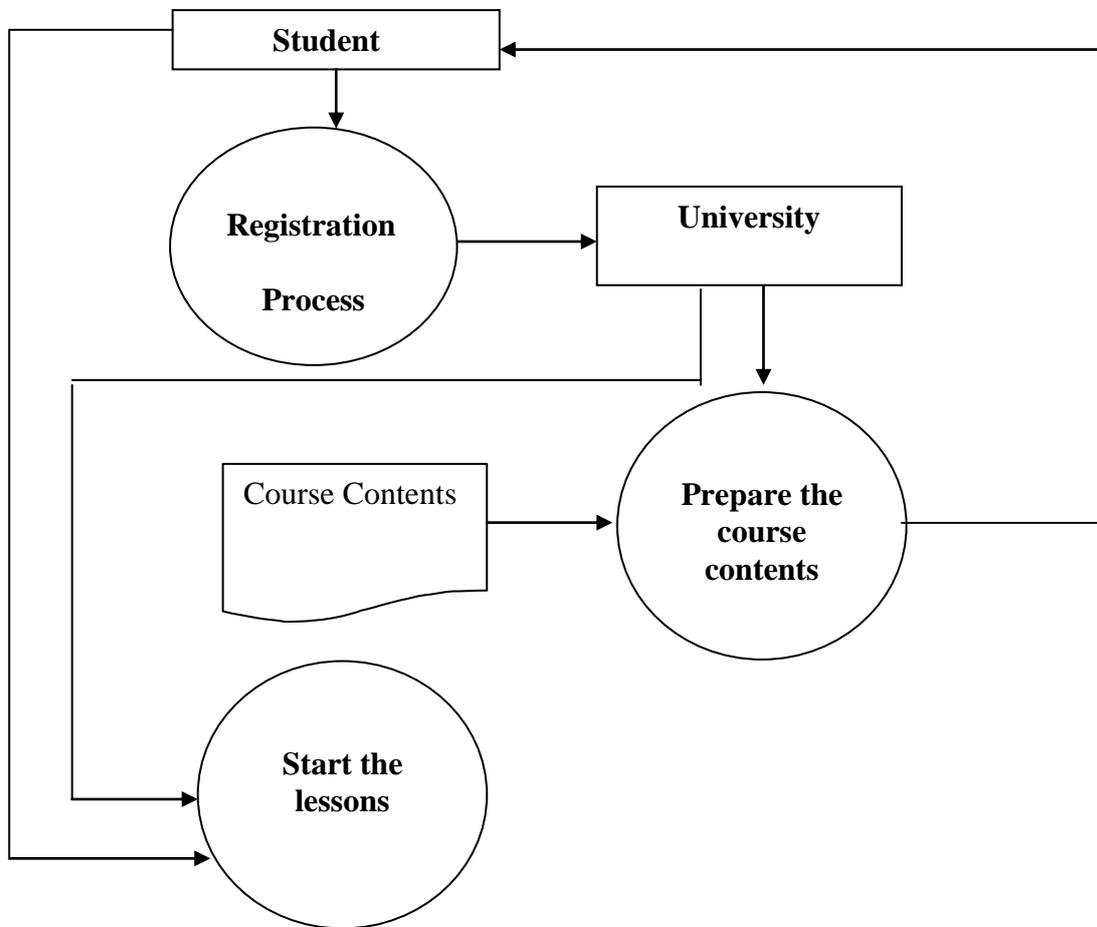
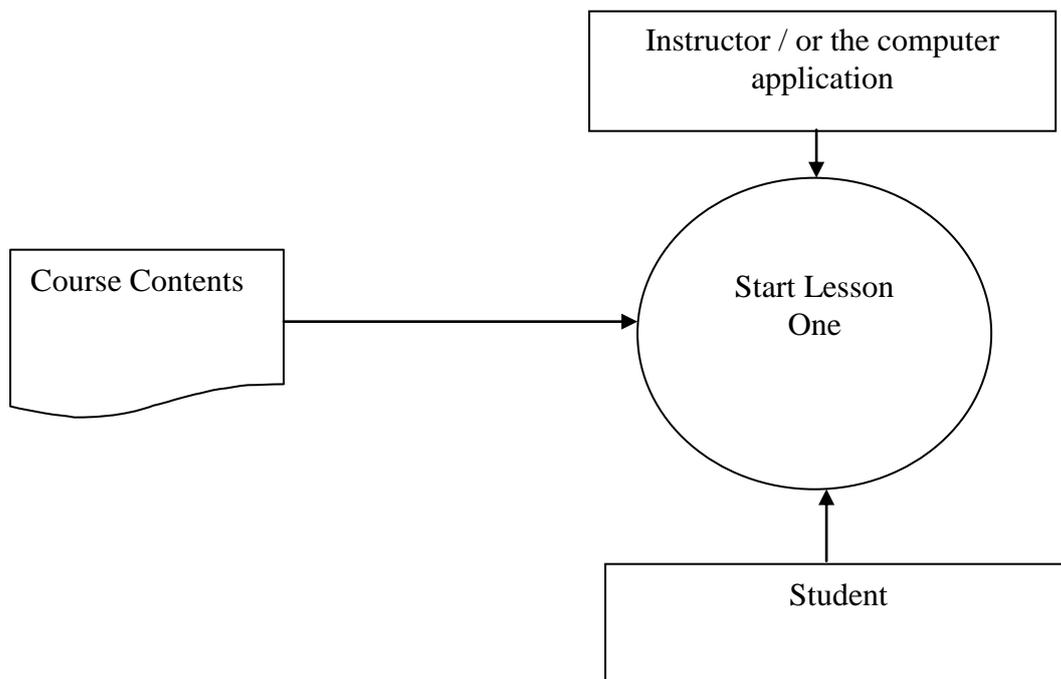


Figure 4-2: Level One Data Flow Diagram

### 4-3 Context Data Flow Diagram of lesson one.

This describes starting lesson one in its context diagram (while it can be considered as level two of the first context diagram).

The instructor and the students are the entities of the diagram and the course contents is the focused contents which can be the multimedia contents



**Figure 4-3: lesson One Data Flow Diagram**

#### 4-4 Level One Data Flow Diagram A Alfatha (الفتحه)

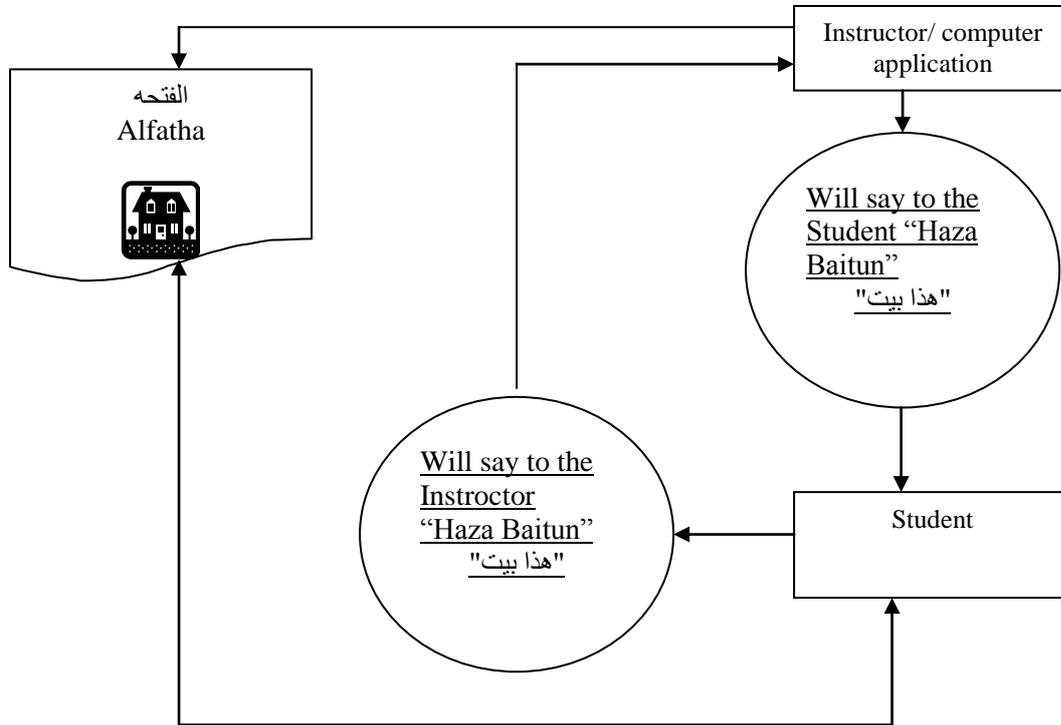
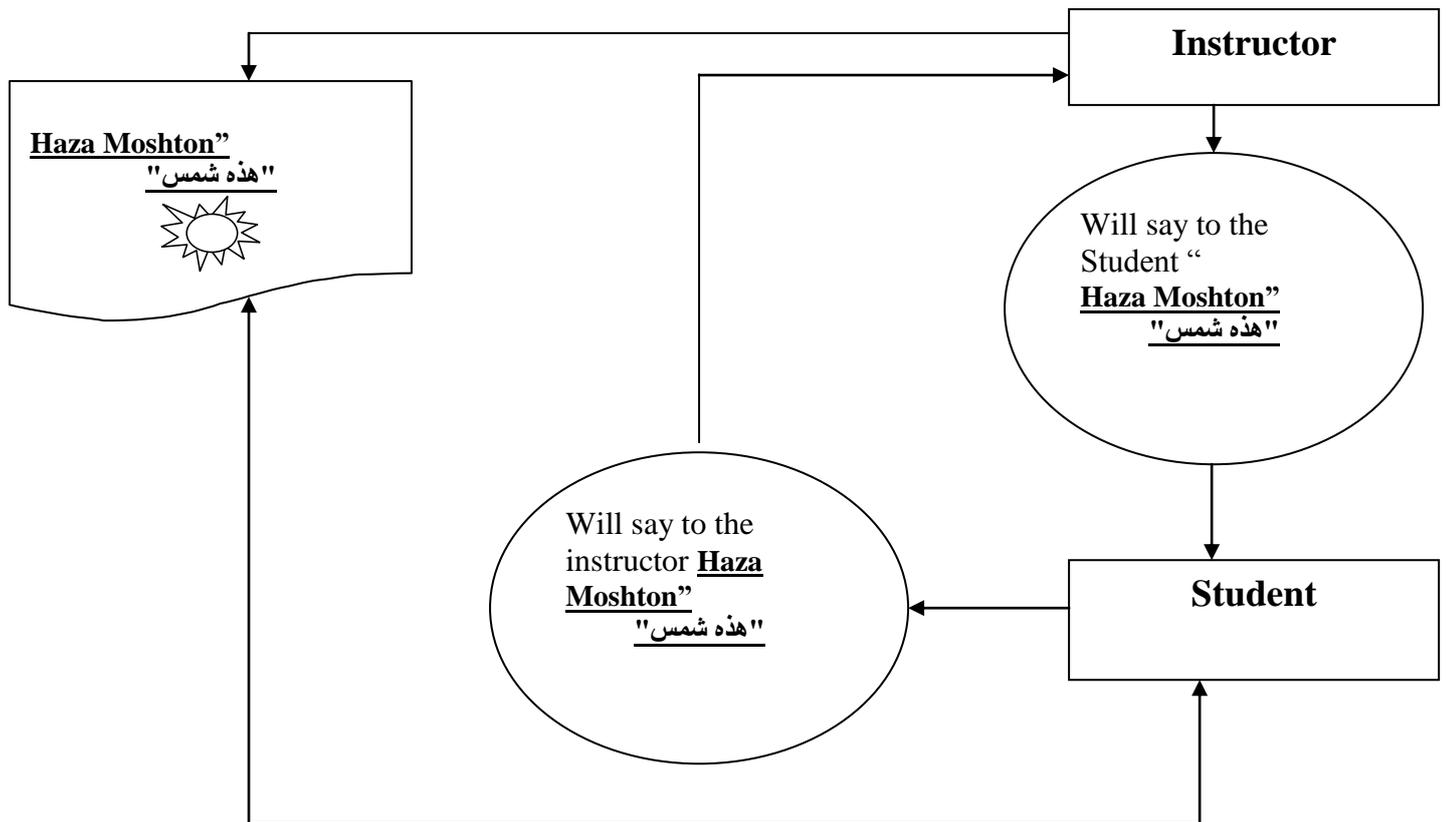


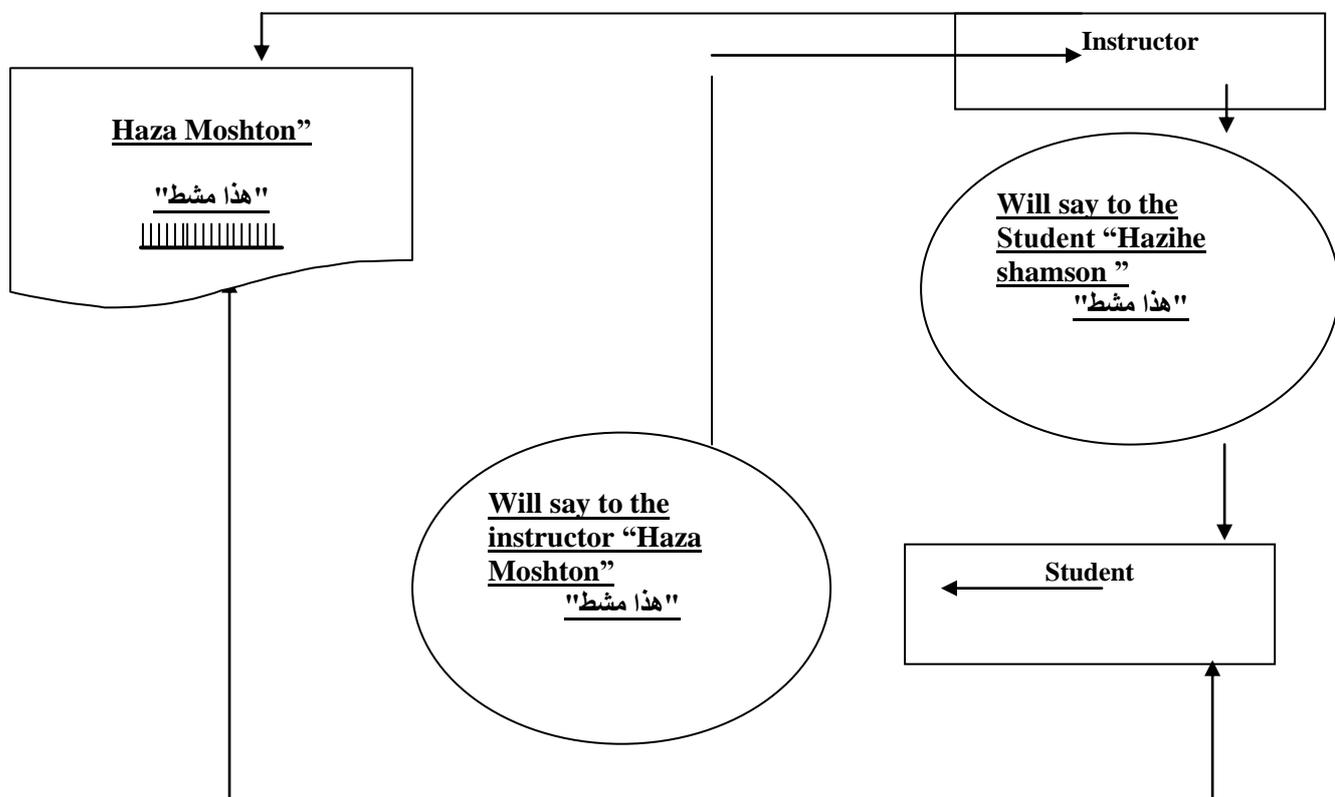
Figure 4-4: lesson One Data Flow Diagram The Fathaa lesson



#### 4-6 Data Flow Diagram Lesson One Alsekoun.



#### 4-7 Data Flow Diagram Aldama

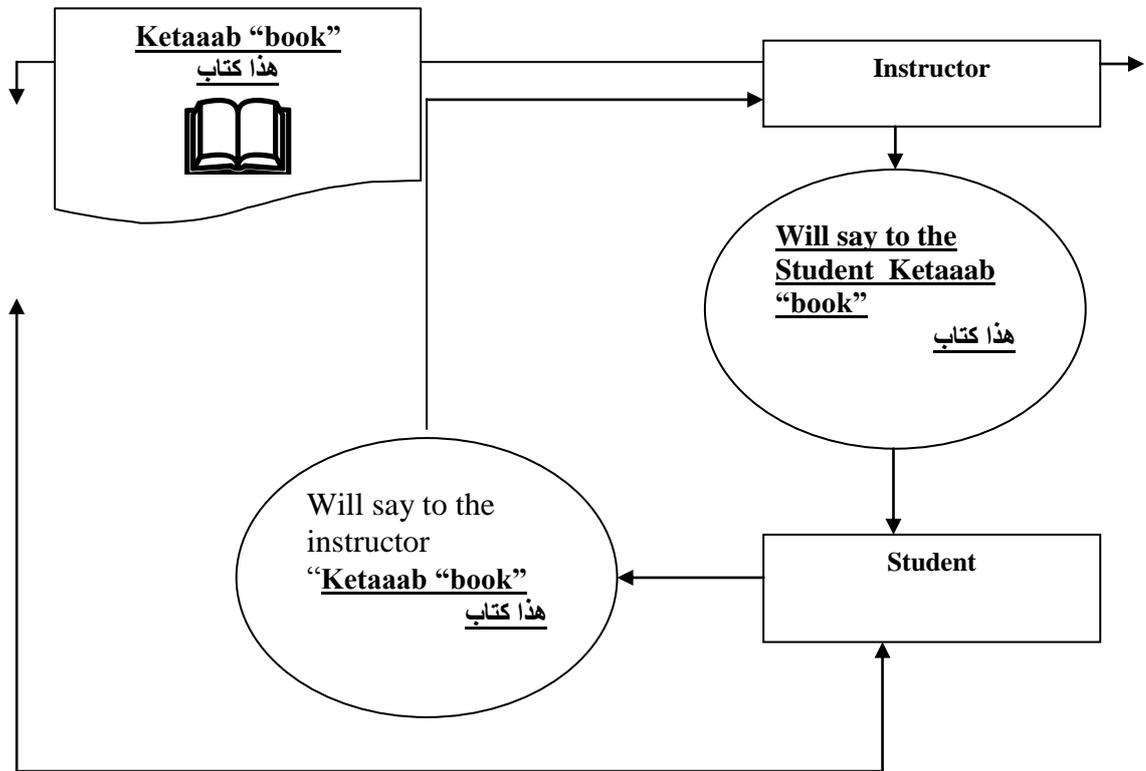


## 4-8 Lesson Two Data Flow Diagram

Long Sound letters Like Alif and Yaa and Waw.

Alif Data Flow Diagram lesson

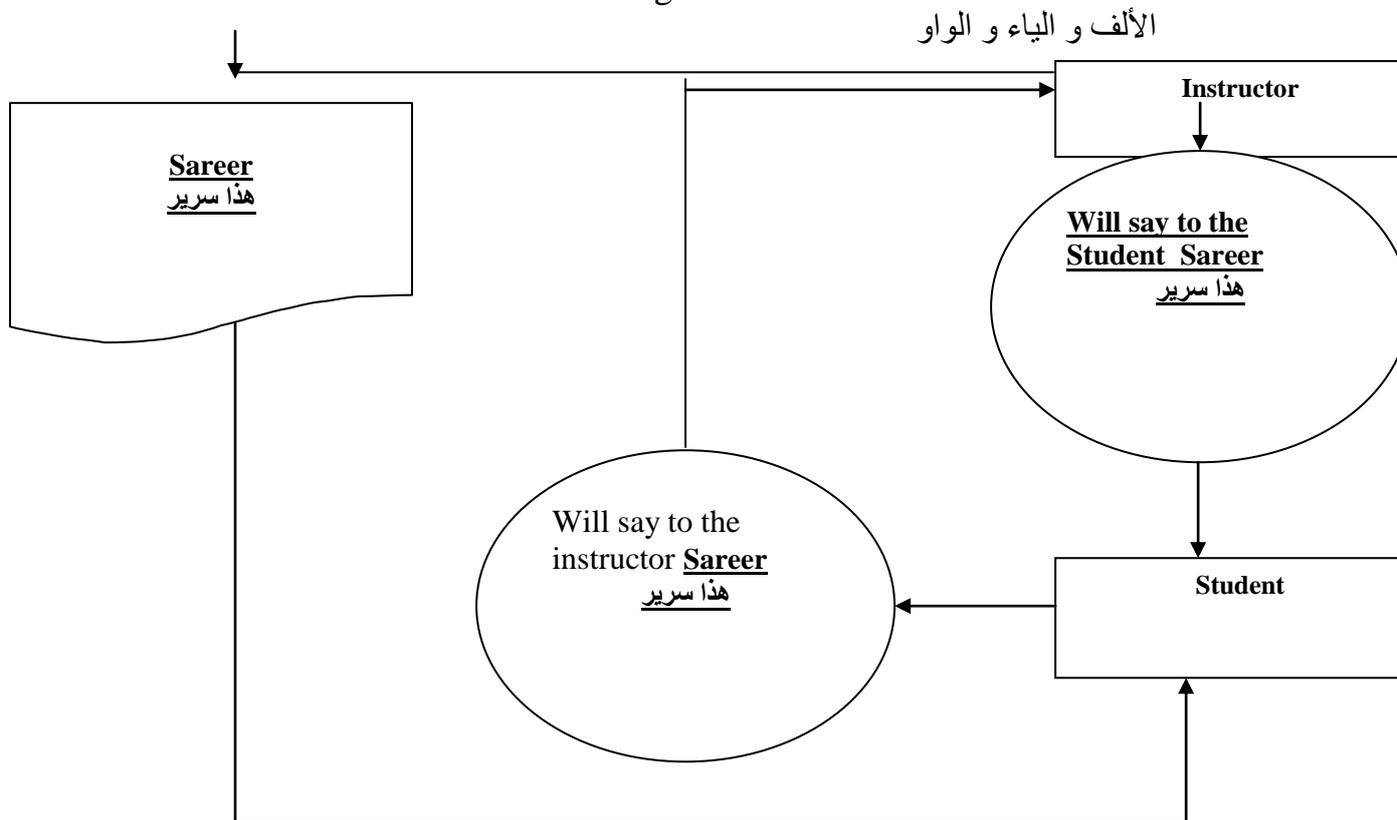
الألف و الباء و الواو



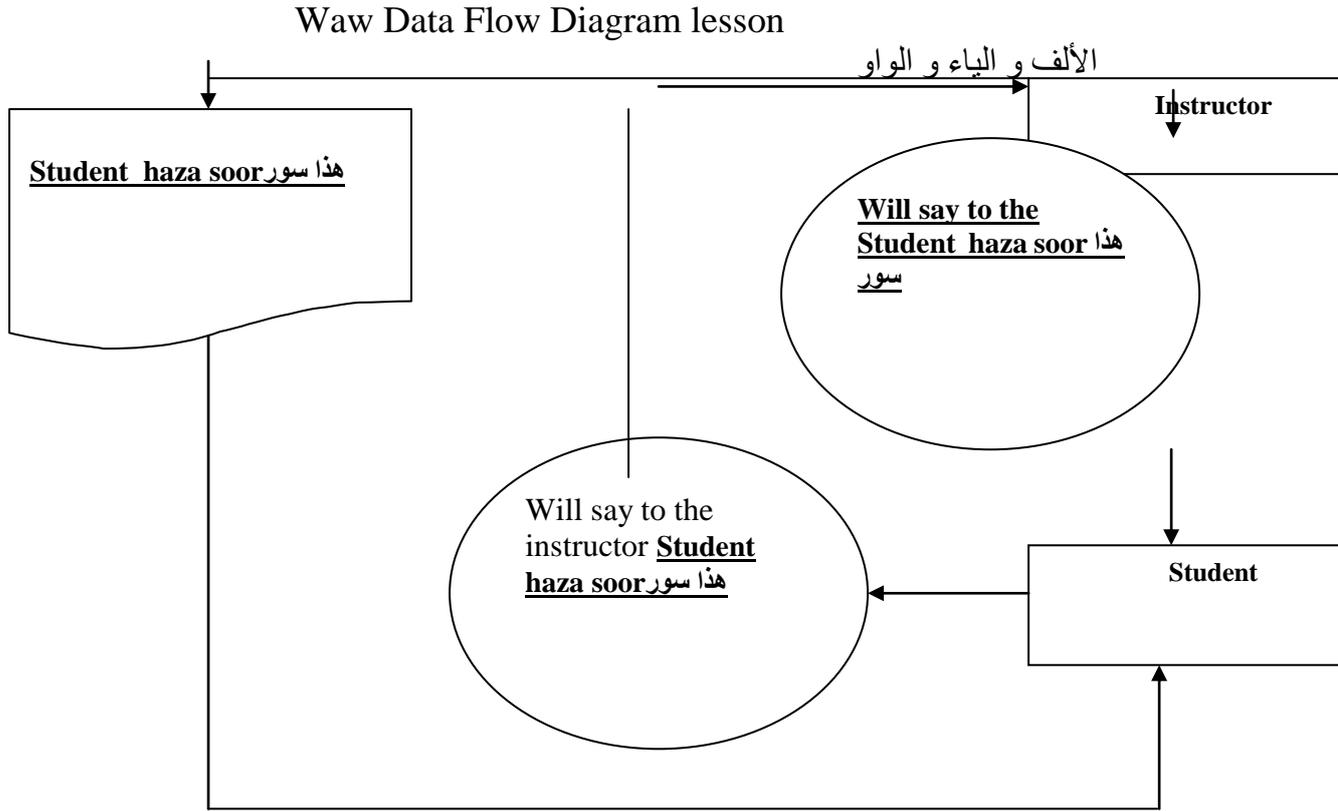
## 4-9 Lesson Two Data Flow Diagram

Long Sound letters Like Alif and Yaa and Waw.

Yaa Data Flow Diagram lesson



Lesson Two Data Flow Diagram  
Long Sound letters Like Alif and Yaa and Waw.

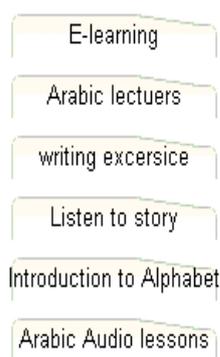


# **Chapter Five**

## **Screens**

## 5-1 Screen One The Main Screen

Describes the Main Menu of the program which any one can use and explore the lessons.



E-learning is the acquisition and use of knowledge distributed and facilitated primarily by electronic means. This form of learning currently depends on networks and computers but will likely evolve into systems consisting of a variety of channels (e.g., wireless, satellite), and technologies (e.g., cellular phones, PDA's) as they are developed and adopted. E-learning can take the form of courses as well as modules and smaller learning objects. Elearning may incorporate synchronous or asynchronous access and may be distributed geographically with varied limits of time.

• [more . . .](#)

أ ب ت ث ج ح خ د ذ ز ر س ش

ص ض ط ظ ع غ ف ق ك ل م ن

**Arabic Alphabetical Letters**



CLICK DOWNLOAD THE IMAGE

[GIF SIZE \(19 KB\)](#)

الحروف الأبجدية العربية

## 5-2 Screen two which describes the Arabic Alphabets.

### THE LETTERS

Arabic writing is an alphabetic script, based upon distinct characters, adjoined to other characters, which in most cases change their looks depending on where they stand in the word. The Arabic alphabet developed from [Nabatean](#) characters, one of the West Aramaic languages of the ancient Middle East.

ا	ب	ت	ث	ج	ح	خ
a	b	t	th	j	h	kh
د	ذ	ر	ز	س	ش	ص
d	dh	r	z	s	sh	ṣ
ض	ط	ظ	ع	غ	ف	ق
ḍ	ṭ	ẓ	ʿ	gh	f	q
ك	ل	م	ن	ه	و	ي
k	l	m	n	h	w/ū	y/ī
ء	ة	ـ	ـ			
No sound	Gives "a" in the end of words	a	u	i		

**EXPLANATION**  
For some letters two transcriptions are given. The first is the correct one (with dots), the second (bold letter) is used in this encyclopedia due to font limitations.

ARABIC ALPHABET

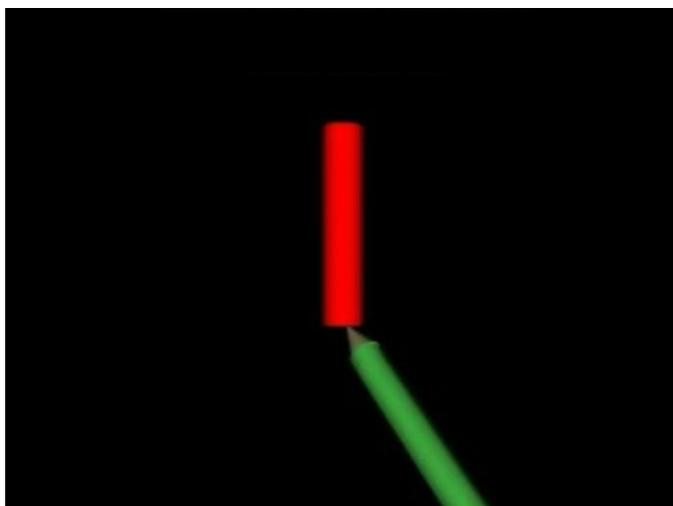
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**5-3 screen three the Arabic audio and video lessons.**

**Arabic Audio lessons**

Aleph Letter	أ
Baa Letter	ب
Taa' Letter	ت
Thaaa Letter	ث
Geem Letter	ج

**5-4 The Arabic Video lessons**



## **Recommendation**

Every program will need an update which can be available through the internet for every user.

My recommendation is to develop the program so as to be artificially used for voice recognition to see how much right the student can vowel the Arabic letter.

Isam.

## References

### 1- Nazim Mohamed Ali

Alketab Alasasi for learning Arabic for non speakers

Dar Aleloom Alarabia

1999

### 2- Web addresses

<http://derekstockley.com.au/elearning-definition.html>.

12/02/2008

<http://www.mod.uk/dcsa/organisations/cba/e-learning/elearningpolicy.htm>.

12/02/2008

<http://www.mod.uk/dcsa/organisations/cba/e-learning/elearningpolicy.htm>.

15/2/2008

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أ ب ت ث ج ح خ د ذ ر ز س ش

ص ض ط ظ ع غ ف ق ك ل م ن

### Arabic Alphabetical Letters

ا	ب	ت	ث	ج	ح	خ
a	b	t	th	j	h	kh
د	ذ	ر	ز	س	ش	ص
d	dh	r	z	s	sh	ṣ
ظ	ط	ظ	ع	غ	ف	ق
ḍ	ṭ	ẓ	ʿ	gh	f	q
ك	ل	م	ن	ه	و	ي
k	l	m	n	h	w/ū	y/ī
ء	ة	ـ	ـ			
	a	u	i			

**EXPLANATION**  
 For each letter, the first letter is given. The first of the second and third letters (dh, dh, gh) are used due to their similarity with the first letter.

## Arabic Alphabetical Letters

ا	ب	ت	ث	ج	ح	خ
a	b	t	th	j	h h	kh
د	ذ	ر	ز	س	ش	ص
d	dh	r	z	s	sh	ṣ s
ض	ط	ظ	ع	غ	ف	ق
ḍ d	ṭ t	ẓ z	ʿ	gh	f	q
ك	ل	م	ن	ه	و	ي
k	l	m	n	h	w/ū	y/ī
ء	ة	ـ	ـ			
No sound	Gives "a" in the end of words	a	u	i	<b>EXPLANATIONS</b> For some letters two transcriptions are given. The first is the correct one (with dots), the second (bold letter) is used in this encyclopedia due to font limitations.	

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ا	ب	ت	ث	ج	ح	خ
a	b	t	th	j	h h	kh
د	ذ	ر	ز	س	ش	ص
d	dh	r	z	s	sh	ṣ s
ض	ط	ظ	ع	غ	ف	ق
ḍ d	ṭ t	ẓ z	ʿ	gh	f	q
ك	ل	م	ن	ه	و	ي
k	l	m	n	h	w/ū	y/ī
ء	ة	ـ	ـ			
No sound	Gives "a" in the end of words	a	u	i	<b>EXPLANATIONS</b> For some letters two transcriptions are given. The first is the correct one (with dots), the second (bold letter) is used in this encyclopedia due to font limitations.	

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ENCYCLOPEDIA OF THE ORIENT					
ا	ب	ت	ث	ج	ح
a	b	t	th	j	h   h
د	ذ	ر	ز	س	ش
d	dh	r	z	s	sh   s
ض	ط	ظ	ع	غ	ق
ḍ   d	ṭ   t	ẓ   z	ʿ	gh	f   q
ك	ل	م	ن	ه	و
k	l	m	n	h	w/ū   y/ī
ء	ة	ـ	ـ		
No sound	Gives "a" in the end of words	a	u	i	
ARABIC ALPHABET					

ENCYCLOPEDIA OF THE ORIENT					
ا	ب	ت	ث	ج	ح
a	b	t	<u>th</u>	j	h   h
د	ذ	ر	ز	س	ش
d	<u>dh</u>	r	z	s	<u>sh</u>
ض	ط	ظ	ع	غ	ف
ḍ   d	ṭ   t	ẓ   z	ʿ	<u>gh</u>	f
ك	ل	م	ن	ه	و
k	l	m	n	h	w/ū
ء	ة	ـ	ـ		
No sound	Gives "a" in the end of words	a	u	i	
ARABIC ALPHABET					

**EXPLANATION:**  
For some letters two transcriptions are given. The first is the correct one (with dots), the second (bold letter) is used in this encyclopedia due to font limitations.

## The Arabic Language:

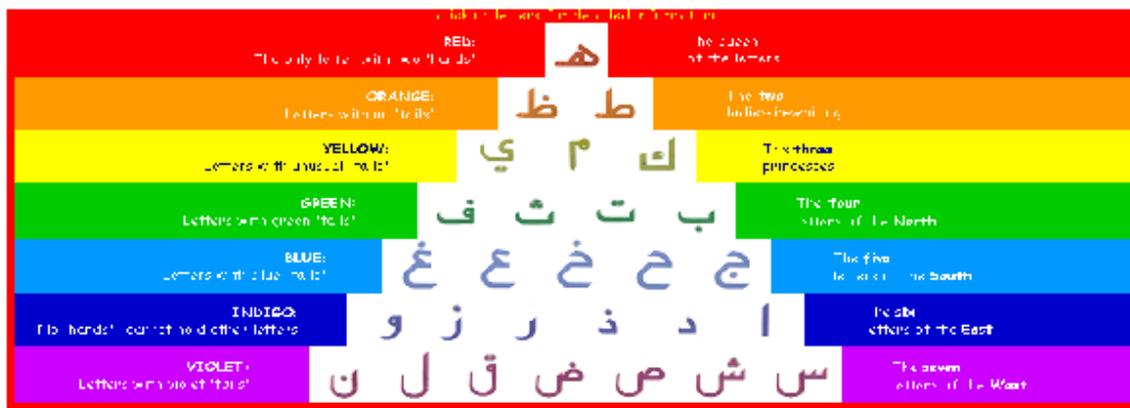
The language that was chosen by Allah the All-Mighty to be the language of Revelation that was given to his Trusted Prophet (PBUH) the Seal of the Prophets Mohammed (PBUH).

Learning it, is worship and communicating by it, is Sunnah and speaking it, is a must on every muslim that enters Islam and worshipping his Lord.

It's an honor for Turath Center to present to the English-speaking muslims and to all who have interest in learning the Arabic language through this interesting program.

Arabic letters are divided into many levels below you can find the Arabic letters pyramid according to their phonemes and sounds.

### Abjad's Rainbow Pyramid



## Arabic Audio lessons

Aleph Letter	أ
Baa Letter	ب
Taa' Letter	ت
Thaaa Letter	ث
Geem Letter	ج

