Adopted business model for MOBILE LEARNING

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Full Length Research

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Relying on the use of mobile device which is increasingly popular worldwide, mobile learning in fact extends the reach of education to all social-economic levels independent of location and time, indicating a new opportunity for education industry development. Nonetheless, there is still a lack of a comprehensive understanding of the influencing factors on the adoption of mobile learning. In this study, an adoption mobile learning model was built which is based on the business model ontology, in which, the exploratory qualitative study used case study method. Items were identified from the data and defined according to their general properties and dimensions. We recognize the main elements of mobile learning business model. According to mobile learning infrastructure and its new approaches in developing countries, sub-elements of current business model modules are varied in comparison with in developed countries. Therefore, it requires many relevant activities to support adopted sub-elements that should be attained target customers, maintained and supported them. This model hopefully provides a framework for future research and business.

Keywords: Mobile learning, business model.

INTRODUCTION

As an emerging paradigm in a long tradition of technology-mediated learning, mobile learning is defined as the acquisition of any knowledge and skill through the use of mobile technology, anywhere, anytime that results in an alteration in behavior (Geddes 2004). In recent years, there has been great interest in the potential for mobile learning. Some providers of m-learning components achieve profits by offering m-learning products. They are likely to become key players in the field of m-learning. Others developing with the same or even more efforts do not succeed in supplying m-learning products.

Currently, mobile learning is emerging as a promising market for education industry. On one hand, from a technology perspective the tipping point for mobile learning is coming closer as technology improves and standards emerge (Quinn 2008).

Mobile learning posits unprecedented opportunities for both education institutions and governments as well. In the context of education institutions, many higher education managers have seen mobile learning as a way of extending the reach and hence increasing revenues (Murphy 2006). Services acceptable and to be Whilst there is a growing interest from both academic and business communities, the issues regarding how to promote learner’s adoption of mobile learning seem to be largely unsolved, and thereby posit to be a challenge for services providers. For instance, according to Corbeil and Valdes-Corbeil (2007), students access to various mobile devices can not ensure that their ability to achieve educational goals it seems an urgent need to recognize effective factors of user intention treatments to preserve and create user fees and developing cost ( Yong Liu et al, 2010).

The business model is part of a comprehensive m-learning strategy. A business model determines strategic functions with considering economical aspects, pedagogical and technical dimensions for m-learning providers. (M, I.S., M. Hosany and R. Gianeshwar, 2006).

“Mobile Learning has a strong foundational base when it comes to how the student will learn when there is an interaction of the learning material, technological platform, and the wireless network. Just like wireless technology which was built on numerous technological advances, M-Learning also is a combination or a hybrid of more than one system. In this case, M-Learning relies
on pedagogical theories and strategies of the Behaviorist, the Cognitive, and the Constructivist Learning groups". (Mobile Learning Groups, 2004).

Only if all parties (mobile customers, network operators and service providers) can increase their profit significantly, the whole market potential might be realized. Therefore existing mobile business models have to be reconsidered with regard to, the following elements, Timmers (1998):
- Value proposition,
- Key customers
- Core activities
- Business partners
- Revenue flows

This element is a guideline for orienting research. As a first step towards developing a new business model, one can start studying a current mobile business model and identify its shortcomings.

There is no single look at the mobile learning. Actually a deep gap can be seen between researchers and policy makers in the field. In fact, effective and efficient framework and the relationship between them have not been defined and established. In this context, this study aims to develop a good and integrated business model that establishes the required relations to be used in the operation area.

Considering to recent technology advances particularly in mobile, redefining learning concept and framework becomes necessary to recognize the role of mobility and communication in the learning process, and deformation in the digital networks to protect virtual social networks and removing their obstacles (Martinovic et al, 2010).

All PC-based learning content cannot convert into a mobile format, but to consider how the mobile devices can be used to make efficient learning strategy through mobile format and devices. Reasoning is brought by Advanced Distributed Learning (ADL), which is help to organization to enable the interoperability, accessibility and reusability of Web-based learning content (Bayoumi, 2007).

In addition, the possibility of mobile learning can be explained from market trends. The manufacturers are providing various mobile devices now. A significant number of people are already using these mobile devices to access internet and use their documents, and so on.

**Business model**

A company's business model is simplified representing its business logic. This describes how a company provides its customer need from initial to the end point through potential and applicable resources, activities, business partners and makes money (Kemp, 2009). The business model is usually different from the business process model and the organization model. Business models can be described in a more or less formal way but A Business Process Model (BPM) is commonly a diagram representing a sequence of activities from end to end.

"Conceptualizations of business models attempts to formalize informal description building blocks and their relationships (A. Afuah and C. Tucci. 2003). In this regard we use a simple approach that consists of nine basic business model building blocks that allow us describe and draw all the aspects of a business model in a simple way.

First, core capabilities are the necessary capabilities and competencies to run a business model in the company. Second, trade unions, which supplements other aspects of business model as a network partner. Third, the logic makes for mutually beneficial business and its customers are value configuration.

Once a business provides the products or services then value proposition is appeared. Quoting Osterwalder (2004), a value proposition "is an overall view of products and services that together represent value for a specific customer segment. It describes the way a firm differentiates itself from its competitors and is the reason why customers buy from a certain firm and not from another."

Distribution channels offer by the company to deliver products and services to its business target audience for products and services. Along marketing, distribution strategy of business and customer relationship can be created the link between company and its different customer segments. The process of managing customer relationships is referred to as customer relationship management.

Last section is business finance, including cost structure, the consequences of monetary business model and means of employment income and the way a company makes money through a variety of revenue flows a company's income.

**METHODODOLOGY**

Ineffective and costly traditional learning makes clear the needs of E-learning and subsequently mobile learning. Some causes of inefficient learning system can be mentioned as follows;

- separate learning environment from actual environment,
- disintegrated business processes
- Impossibility to receive necessary learning sometimes as a result of the appearance of problems
- Requirement of immediate learning and knowledge.

There is no single look at the mobile learning. Actually a deep gap can be seen between researchers and policy makers in this field. In fact, effective and efficient framework and the relationship between them has not been defined and established. In this context, this study aims to develop a good and integrated business model that can reduce the above weaknesses and establish the
required relations to be used in the operation area.

Despite existing shortages, lack of an integrated mobile learning business model as an instrument is evident for transferring many potential opportunities to actual ones in this area. This research project intends to develop the best possible M-learning business model for Iran. To deliver on the potential of mobile learning, it is needed to consider these main questions:

- Which types of business model are best suited to mobile learning?
- What components can be in this business model?

This research is empowered with two points of view: realism and subjectivism. Once we follow to realize a business model concept it is looked within subjectivism point of view and when we want to specify our business model for mobile learning area we wear realism glasses.

Moreover, this research as an interpretive study is established on Hermeneutics and emerging nature. Generally interpretive considerations attempt to percept through phenomena sense of individuals. Interpretive research does not define dependent and independent variables in advance. As a matter of fact this research implies some parts of this philosophy and attempts to study on reality to enable provide business model expansion.

In case of similar problems to this subject, the research method will rely on former specified and step by step methods, but for the essence of new and complicated problems, the previous methods must be reviewed even to make a new research methodology. This subject is consisted of management, electronic commerce and their practical subjects. To sum up intellectual questions and cognitive disturbance, it was indicated that study on business models area can be respondent to researchers internal requirements and has adequate strength in researchers provocation. So for this research follow process has been lunched:

- Select appropriate subject proportionate to our internal requirement
- Evaluation and design of research methodology and reliable process that facilitate researcher attain her goals by a certain method
- Initiation of business model perception and explaining it in mobile learning industry
- Attempts to necessities recognition, applications mobile learning and business model specialty and reach to customized model
- Explanation of extract model and its relations
- Make reliance of results and publish them

This research direction also in search of clear space study can be called an exploratory research. Especially during the exploration part of the transparency in the existing business models focuses on mobile learning. Research strategy of this study is case study that it has been selected two cases in the area of virtual/mobile learning industry which is relatively complete range of material discussions on issues.

According to the few Iranian active companies in mobile learning, these two case studies were closer to the subject and they could cover relatively complete spectrum of subject materials in our discussion then open ended interviews were held for them. Before the data collection different business model references has been studied and one near business model (Business Model Ontology, Osterwalder 2004) is selected as our predicted model. The main aim was approached from the studied phenomenon to the predicted model. With the help of Grounded Theory idea, the interview concepts were open coded, reviewed, compared and launched.

Placements of launched concepts into predicted business model then subsequently the relevant relationships were determined between categories in the business model.

Business model considerations for M-learning

Unlike the Internet business model classification, mobile business is classified service model with mobile features and also Internet business features.

The mobile business model classification scheme has a couple of differences from the previous research. First, the classification is based on a business model perspective: previous mobile business classifications have been focused on service categorization, not representing the way business is run on the mobile channel. Service categorization has its own limitations to express mobile business. The new mobile classification scheme is based on a business model perspective. In fact, mobile learning offers another way to deliver content and to embed learning into daily life. The learning materials need to be developed in small, consumable bytes of format, which can be delivered through wireless network.

Customer Segments

Corporate/Business drivers

The corporate mobile learning grows louder with each day. Organizations no doubt recognize that mobile technology for learning has merit. In the corporate arena, many recognize the need for just-in-time training and performance support and are beginning to explore mobile options. In the medical, sales, and service areas, mobile is being used most widely. Specific projects related to m-Learning from the corporate side have involved organization.

Education

Mobile learning products that are fun, interactive, and instructionally sound is suited for this segment. The
instructional designers, content developers, animators, graphic designers, and child psychologists has designed interactive learning products for children of diverse age groups, from kindergarten to senior high school.

Most of Iranian mobile learners are students and literate level otherwise there are in the universities or those of students who prepare to enter universities through a national exam. Thus mobile learning products and services for this segment can add value to the curriculum, allow students to apply their learning in real-world situations, and cater for different learning styles. The solutions address these issues; they are also flexible enough to incorporate the differences between cultures, curricula, and instructional methodologies. For mobile learning to enter into the mainstream the following are necessary:

- Guides for the development of mobile learning need to be produced for mainstream institutions
- Mobile messaging needs to be established as a standard administrative structure in education and training institutions; short courses, course summaries, examination preparation, needs to be developed for PDAs, smart phones and mobile phones.
- Full modules need to be developed for PDAs and smart phones; these modules need to be offered to fee-paying students, as part of the institution’s offering, with full evaluation and with normal awards and accreditation.

Government
The highly skilled in creating attractive and interactive yet accessible products that have delivered products. It can be recognized that accessibility is both urgent and imperative, especially in the government space, and it is fully geared to meet the associated developmental challenges. The capabilities also include the conversion of mobile content into accessible material.

The solution is for the requirements of clients in the government, and local and defense areas. The Subject Matter Expertise and content developmental skills add up to high quality learning content, both Web- and CD-based, in a wide variety of areas.

Value proposition
M-Learning can add value to the experiences of many learners but it may not add value equally to all. This does not justify denying those who can benefit but care must be taken to ensure others are not substantially disadvantaged. The section below illustrates a number of ways m-Learning can benefit all learners and in the process bring particular advantages to different types of disabled learner. To a disabled learner the added value of m-Learning is three fold:
- Any assistive technology benefit is more portable so the support available to the learner is available more places and more times.
- Mobile technologies are generally cheaper than PCs and laptops so more likely to be affordable.
- Mobile technologies are private and personal in use and have none of the student self-image problems that may be associated with traditional assistive technologies.

New services and new tools: Iran service providers offers an interesting products that emerged in 2008 was the availability of several specialized tools designed to create very specific types of applications such as quizzes, flash cards, tourist guides, language learning content, and performance support.

Standard Products and Services: These service providers state that they produce contents and develop their software themselves basis to their customer request specification so their products is specific to Iranian customers.

Reducing Cost: During the interview with experts is earmarked that presenting new products and services to mobile learning customers can reduce significantly time and cost because the data is transferred with fast rate and subsequently there is no need to present some learning material that are mobile potential in traditional learning. Thus it can reduce cost and create value.

Monopoly License and Software: The mobile service providers in Iran produce mobile learning products in their own License and also they develop necessary and related software according to their customer requirements.

Content Management: From these cases is cleared mobile learning providers produce and manage some their mobile learning contents. Most of the content was ported from other mobile formats, yet several of the largest educational publishers entered the market for the first time through retailing.

Distribution channel
Content delivery to mobile devices may well have a useful place in m-learning; however, there is an imperative to move from a view of e- and m-learning as solely delivery mechanisms for content. Packaged Mobile Learning content will sell through below primary distribution channels:

Retail: Packaged content products will available on dozens of retail sites. The retailers reached a relatively small number of customers but they can drive the market with online retail content stores that reach a vast number of customers. The launch of these stores has given developers a direct to consumer channel.

SMS: All higher and further education institutions have a frequent need to provide information to their students about timetable changes, assessment deadlines, feedback from tutors and other urgent administrative details.

E-mail: Some products and learning materials delivers to
Iranian mobile learners through Email. **Mobile Internet:** Iranian service providers extend their distribution channel through shift technology to 3G it is optimum method that users can access to the internet through a mobile devices and capture their materials and learning contents. **E-files:** this channel is as a usual way to deliver packaged mobile learning in Iran. **High Rich Media:** Mobile learning producers provide video conference infrastructure and context for some universities and governmental organizations such as Lorestan Universities and Hygiene and Medical Education Ministry. **Brand:** There are a few brands in mobile learning field in Iran that have influence significantly in mobile learning content.

**Relationship management**

The mobile operators need a scientific method to guide the customer acquisition. The method must be able to identify the target customers precisely and analyze the customers' actual needs. And the mobile operators also need an information system to support the whole process of customer acquisition, which can improve the efficiency and effectiveness of acquisition.

For the Iranian customers, the operators can find some promotional ways to upgrade their consumption levels, which could bring more values to the organization. This depends on understanding customers’ behavior, the abilities of innovation of new services, and marketing capabilities through data mining technologies that it supports customers from start point through their personal relationships.

The type of relationships can shape and organize to lunch customer acquisition and retention. Imagine exposing a highly tailored series of M-learning modules to specific end-users. Companies already sponsor luncheons, conferences and workshops to expose their products to physicians. So why not use M-learning to do this to reinforce these efforts? By providing M-learning to the customers, it can be increased customer loyalty and potentially grow the revenue, through customer acquisition.

**Revenue streams**

It is essential to identify potential revenue streams to prepare the institution for 21st century learning. The possibilities will vary widely from institution to institution, for example, realising capital locked in city centre sites, acquiring funding from urban or rural regeneration schemes, using development funding, or tapping into new markets. Consider also:

- Ways in which mobile and wireless technologies could improve the financial standing of the institution by raising its status in the community, improving efficiency and increasing retention.
- How increased use of personal mobile devices could offset the institution's costs
- **License Fees:** the Iranian M-learning providers sell some parts of their product through selling license in which most of them are done by retail products
- Companies can send their advertisements to students on mobile devices along with the study materials which is send to them. They can give exact details of their product and their availability. As this advertisement come along with the study material they would surely have a look at that.
- Iranian providers define four types of membership to receive learning packages and alerts on time and presenting some promotions during membership on mobile devices
- Individual membership (academic institutions such as Gaj and Ghalamchi)
- Student in full-time membership (schools and universities)
- Education Provider (medicine school)
- Commercial Organization (language learning providers)

**Key resources**

Mainly the impact of technology, environment, market and regulation, network, wireless network, content and device issues have a direct influence as our key resources in business model. Environmental drivers means technology, regulations and market have a direct influence on our key resources in our business model.

M-learning providers in Iran state that they have pressed by the current regulations in this industry which they issued by governmental sections. They establish strict internal regulations for them that are effected by third parties. According to existing shortages in copy right in Iran these providers are not in safe side to produce packaged mobile learning in their own license.

Business and business model environment in practice are not static, m-learning business like the other electronic and telecommunication businesses put into practice in a rapid change environment and market, this business changes may be ascribed to internal forces, they are caused by external events as well.

With reference to the technological aspect, handheld devices, content and wireless access technologies are the most important drivers forward the change in m-learning business models (Sanz-Velasco, S.A., 2007). Five broad categories of technology were identified, within which specific technologies would need to be selected, these were: transport, platform, delivery and media technologies plus development languages.

The mobile learning network is a unique collaborative approach to encouraging, supporting, expanding and promoting mobile learning, primarily in the English further
education sector, via supported shared cost mobile learning projects. Collaboration at national level involves participating institutions and sharing the cost of projects introducing or expanding mobile learning providing a support and evaluation program.

Business cannot be devised without an understanding of the needs of potential customers of valued added m-learning (Parsons et al, 2006). The scope of mobile learning which help the supplier understand the market and focus on to gain the large quota of market.

M-learning regulation and standards is a companion document to the m-learning education and training system and drive the way m-learning can be used in teaching and learning. The m-learning regulations cover a general strategy and road map for m-learning and its standards cover topics.

Content providers offer prearranged m-learning content. Content is either standardized, or personalized or individualized. This content could be data and information products.

Probably the first device that comes to mind when mobile hardware is discussed is the PDA. These devices offer many of the features of a full-size laptop computer but in a package that fits in a pocket.

Key activities

Software development

Iranian software developer is presented the methods by which a practitioner, with limited technical knowledge and time, might produce learning objects for mobile phones by adapting existing materials that is selected three:
- A software which are used to code web pages
- A software which is freely available for educational use
- A mobile movie format called Third Generation

Partnership Project

Key partners

Iranian partners in mobile learning industry include:
- Network Operators: Hamrahe Aval, Irancell
- Holding Companies and Investors: Governmental organizations such as Radio and Television Organisation
- Software Providers: Soroush Hamrah, Souroush Data
- Third Party Partners; Universities Government

Cost structure

New phones are capable of exchanging voices, text, pictures and video. In addition, the wireless network provides high-speed connections with low costs to mobile subscribers.

Outsourcing: Information Technology (IT) governance is concerned with decision rights, resource mobilisation and strategic alignment to achieve more benefits from information systems. These mentioned providers outsourced the M-learning development it would be a quicker way from the idea, to having it ready for testing, but to integrate it with our servers and other services it could turn out to be problematic. There is needed to be able to control when and to who want to send m-learning products.

Customer acquisition cost: An important business metric, customer acquisition cost should be considered along with other data, especially the value of the customer to the company and the resulting return on investment (ROI) of acquisition. The calculation of customer valuation helps a mobile business decide how much of its resources can be profitably spent on a particular customer. One of these cases shows that has much customer acquisition cost in comparison with other case because the second one is the subsequent companies of Radio and Television Organisation in Iran and this organization optimize this cost for them through their different advertisement methods as well they have their own customers that can expand them to mobile learning customers as a pioneer in content providing in Iran.

Personnel Cost: Their personnel cost focus on salaries, employee’s insurance cost, training and providing leisure activities for them (Figure 1).

CONCLUSION

Recently the use of the Internet business has been very prevalent. There are world examples of successful managers who are using new models and have been able to succeed despite intense competition in the labor market, creating a safe place for their company among the competitors there.

This study explores to develop mobile learning business model that is able to present mobile learning Profile Products for Iranian customers of this industry. In addition, the manner of model presentation, internal relations management with market and products delivery conditions has been created to achieve stable market share and increase revenue flow.

This business model can be the ring strategy and business processes together and also can offer an example of mobile model’s elements in connection to each other which are:

1 - Product innovation
2 - Type of relationship with customers
3 - Management Structure
4 - Methods of financing

We think when talk about the business model, you should look up to the elements that can be answered the above four-question, the answer is given or not? In addition, each of these elements, have some subset of them should be considered.

Most of mobile business models are just the concepts without more discussions, the least understanding and consensus for them and this study attempts to cover
Figure 1: Please provide legend
these shortages. By this we can state this model can create new values through any direct and indirect money exchange by mobile networks and simple methods in mobile learning business to maintain stability of in market and revenue flow.

So that should be mentioned that this study wants to proceed electronic specially mobile network as a family of standards that is allowed to participants in the mobile learning business to find out truth of each other and makes communication connection based on unique basis like special framework that enables us to answer mobile learning business questions and ambiguities.

During this study we faced to some problems that it is caused we found the classic and traditional business models structures have many contradictions with today’s conditions. We think it is a rational way that managers must use purposeful and effective management techniques to become success in the future.

Generally, along this study researcher found some business models due to poor value objectives and value purposes defeat. This may happen when companies cannot understand the place of value in value chain.

This research experiences marks disability in balance with what should be done through internal capabilities, and what should be outsourced is the main reason of rejection a business model. Specific capabilities for process strategy may be obtained from existing sources may be the formation of a big mistake because useful. Moreover a next issue in business models is mismanagement and tact in the values network. Value network management can be an important factor to become successful.

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