# **Revenue Model for Language Learning Applications**

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#### Abstract

This paper addresses how we can build a sustainable and profitable E-learning application for language learners. Most of applications in this kind have been developed authors' viewpoint. They usually neglect what users really want. To be an application sustainable and profitable, it should satisfy users' need. This naturally induces that applications should provide what users want according to their preferences. But existing applications are not capable of satisfying each user's preferences. For an alternative, this paper suggests a split interface-contents structure for applications for language learning. By splitting like this, it is possible to open a possibility of supplying required new contents continuously to users through the interface. This structure also gives a clue for a revenue model. In this new model, consumption is taken place continuously whenever users consume contents provided by the applications.

Keywords: E-learning, preference, sustainable profit model, language learning

#### **1. Introduction**

This paper will address how to create not only sustainable but also profitable E-Learning applications in the domain of language teaching and learning. Since Computer Aided Education (CAE) was introduced, authorizing of E-learning application have been flourishing along with the fast advancement of personal informative devices and related technologies. Many E-learning applications for languages have been developed in various styles to meet various purposes. To date, by the way, few have discussed on the question of users' acceptability and providers' profitability. Different from applications of other categories, it is about true that there is no *killer application* among them.

Examining existing applications, we arrived to say that this results from the failure of targeting proper clients. The most conceivable solution for this failure is customizing. Since E-learning applications are difficult to have large enough number of users to produce earning, the alternative is providing customized contents to each user according to his or her levels and preferences. If an application provides user-satisfying contents *continuously*, it can be sustainable in use. Continuity, in its turn, makes us rethink about the profitability. If users repeat buying new contents according to their taste and purposes, profitability is expected.

So in this study, I will address how this new E-learning application model can be designed and what we should take into consideration to realize it. Customizing contents and continuity will be the key to design sustainable profit model of E-learning applications.

#### 2. Problems

There may be many possible reasons why existing applications for language learning are not profitable and not sustainable. But the main reason that I am presuming here is the failure of targeting proper clients. It is very natural that products have their own

consumers. E-learning applications for languages, however, seem not have, in the marketing viewpoint, meaningful number of clients to meet profitability.

At the marketing viewpoint, a product should have meaningful number of customers and be suitably designed for them satisfying what they want and need in order to be profitable. At this aspect, e-learning applications for languages are very unusual as commercial products in the sense that they have difficulty in properly aiming their consumers.

There will be many possible reasons. But one of the most conceivable reasons is that these applications are, by nature, boring despite of required strong interaction between users and applications.(Sungyung Lee & Sora Lim, 2015) One another we should take into consideration is that there is almost nothing in common among targeted consumers. Most existing Language Learning Applications are designed for beginners because only they have something in common as language learners. At the beginning level, all language learners begin with pronunciation, basic grammar and daily used words and expressions. But as their levels go up, common points among them disappear. Disappearing common points among language learners, e-learning applications for languages lose its aiming point. In commercial terms, application developers and providers cannot invest just for one or very limited number of users because it cannot meet profitability.

The next difficulty that comes to my mind is preferential diversity. As everyone has his or her taste, language learners show also preferential difference that should not be neglected. Even though users are at the same language level, they show preferential differences using contents and materials that the applications provide. For example, while someone loves soap opera to enhance his or her language skill, some other hates it and loves science fiction instead. Goals and professions also play crucial role in choosing adequate materials and contents.

The burdensome initial cost is a barrier to stimulate consumption. Users are usually asked buy a package as a whole even though it only matches partially to his or her purpose and preference. Despite that the quality of the applications is not satisfactory and they are not designed for continuous use, the end-users are obligated to spend relatively considerable money for purchasing the applications. This uncertainty on price-quality makes users hesitate buy e-learning applications for languages This is big difference comparing with other applications such as word-processors, graphic applications and database tools that are used constantly and productively. Furthermore these applications are just for one-time use. As Language learning applications are one-time applications, they cannot trigger further consumption.

# 3. Concept

There are two types E-learning applications for language learning. One is the levelbased application and the other is goal based one. Level-based applications are dominant between two. Level-based applications are generally designed for children or for beginners. It is very rare to see applications for higher or advanced level learners. This is, as it is mentioned above, due to the lack of revenue model. For beginning level, it is possible to expect meaningful number of customers but it does not with advanced level learners because there are very few common interests among them. Because of this, almost every applications for learning languages focus on elementary courses.

But even for the basic level courses, authorizing it without users' preference becomes intervening factors that make users reluctant to use applications constantly. Especially as levels go up and after entering advanced level, preferences are becoming more and more important. Hence it is required to design a new kind of E-learning applications that satisfy not only level requirements but also users' preference to maximize the learning effect.

What brings us to consider preferences is to provide user-friendly contents in order not to lose their interesting. It is vital to create sustainable application in the sense that users feel special running them. It can provide special feeling to user as if it was constructed just for him or her. Every each user believes that he or she has unique contents. This may help continuous application using by touching personal preferences.

Despite of this, existing E-learning applications give little attention to preference. It is because that most applications have been developed in the direction of satisfying levels but not personal tastes. Following diagram shows basic idea about customized E-learning applications.



**Figure 1. Evaluation Process** 

Above flow has two components that do not exist in other applications. The first one is preference selection. After selecting levels, users have one another step of choosing their preferences. This is crucial in this work to build learner-driven E-learning model because this keep users not loose interests in running applications. And simply for the purpose of education, the maximum efficiency is expected when learners do what they like.

The second particularity of the above flow is evaluating and feedback procedure. The importance of graded education program should not be ignored. So whatever applications may be, level classification will be one of the first that we take into consideration when we design an E-learning application. Almost every existing application does not have this kind of evaluating component. They have only correct answer checking component. The basic function of this component is checking if correct answers are input. But its main function is opening next stages according to users' preferences.

It deserves attention in the way that it not only evaluates users' strong and weak point but also suggests what is adequate for next step. At the beginning, users select their levels and preferred materials by themselves without intervention of application. But from the second time, with the data previously entered, the application chooses adequate levels and materials to users. Big data analysis technics is used in the evaluation processing. Thus every time they run the application, the accuracy rate is increased.



Figure 2. Evaluation & Manual Matching Process

Main function of this component is not just verifying correctness of input answers but analyzing them and deciding adequate further study materials for users in order to efficiently reduce mistakes or to enhance knowledge on the languages in studying.

## 4. Split Interface-Contents Structure

Sustainability depends on two elements: the capability of providing new contents continuously and the acceptability of users. We have discussed about the acceptability of users in terms of preferences. Now it is time to think about how we ensure the continuity of new contents supplies.

Present E-learning applications are classified into two groups in a broad sense: standalone type and web-based type. Theoretically web-based applications are relatively more flexible than stand-alone type in the possibility of supplying new contents. But practically existing applications we observed have no way of supplying new contents. Due to the lack of this possibility, existing E-learning applications seem difficult to satisfy the various demands of each user.

In order to facilitate supplying new contents, in this paper, it is suggested a split interface-contents structure in designing e-learning application for languages.



Figure 3. Split Platform-Contents Form

This diagram shows the alternative e-learning application is composed of two split components: application platform in user environment and contents in application environment.

Main interface -application platform- is running on users' devices in independent mode. Application platform is a kind of template form with essential functions as e-learning tools. This is installed in users' devices. But all contents are stored in the servers of the providers and downloaded into the platform on users' demand. Application authors upload constantly new materials in various themes and levels and users can select some of them according to their preferences and levels. This may get users feel new whenever they access the applications to learn languages.



Figure 4. Composing Customized Contents

This split structure makes contents supply possible at every moment of running the applications. If the archive has enough contents in quantity and quality, furthermore if it is

added up continuously, users who download contents can find new contents they like every time run the applications. Previous applications were developed with closed structure without allowing new contents supply.

#### **5. Preference**

As it is mentioned previous section, sustainability depends not only on the possibility of supplying new contents but also on the acceptability of users. However the applications and contents are good, they cannot survive any more if users turn away from them. So ensuring acceptability of users is one of key elements that decide sustainability of the applications in question.

Presenting above flow 1 as a concept for new form of E-learning application, I introduced a preference selection component. The reason why I interested in preferences is that I believe this is the key to get the acceptability of users. And After all, it is certain that language learners reach maximum efficiency when they study with their preferred materials and subjects. In fact, those who finish basic courses or reach a certain level of a language, they look for something interesting as their language training materials.

As it is shown in Figure 4, content providers or developers upload new learning materials into the archive component. All learning materials are indexed along with a predefined classified table. There are many conceivable classifications like Library of Congress Classification, Subject Classification System and Dewey Decimal System.

100	100	Philosophy
	110	Metaphysical Philosophy
	120	Epistemology

Table 1. Example of Dewey Decimal System

Existing classification systems are useful to narrow the interesting subject. Users are now capable of reaching, step by step, the final subject that they are looking for. It is true that this kind of classification system is convenient and makes easy to build reaching subject procedures. Furthermore, it reflects preferences of users when they choose one from the others. If it is not professional objective, it can be said that selecting subject reflects also individual preference of users.

But it seems this is not sufficient to reflect individual preferences when subjects are in the same domain. For example, when users select actualities, the news that each user wants to read and see is not same. One prefers politics rather than cultural affairs, and vice versa. Preference is matter of individual taste. Those who seek same subject may show different preferences.

Speaking of preferences, many marketing researches have been done under the name of consumption value. Among many others, this paper uses semiotic square of consumption values proposed by Floch(1990). He suggests four values as consumption values: critical value, practical value, ludic value and utopic value.

# Table 2. Definition of Consumption Values of Floche (Melo and de Lencastre,2010)

Critical Valorization	is the denial of the utopian valorization, seen as a withdrawal from the existential values through the logic of calculation and interest, characterized by separation and comparison. Quality/price, economy, innovation/cost will be important criteria, frequent in critical evaluation	
Practical Valorization	is the values of use, conceived as opposing the existential ones, also possible to be designated as "utilitarian values". Its aim is eminently concrete and utilitarian and the	

	product will be appreciated for being practical, functional		
	and adequate to its function.		
	is the denial of practical valorization and centers itself on values of gratuitousness (of pleasure or aesthetic) such as		
Ludic Valorization	luxury, refinement, impulsive act or "small act of madness". It lies at an emotional and sensorial level, the		
	product having to provide pleasure, amusement.		
	is the basic values, conceived as opposing the practical ones, also possible to be designated as "existential		
Utopian	values": identity, life, adventure, etc. According to this		
Valorization	valorization, the product will always be the		
	accomplishment of something, touching expectations such		
	as self-fulfillment or identification.		

Following is the semantic square with these four values proposed by Floch(1990).



Figure 5. Semiotic Square of Consumption Values (Floche, 1990)

Consumption values are subjective and emotional. So they have to be very personal. And it must be said that the evaluation of these values are exchangeable according to not only contexts but also consumers (Lee and Lee, 2013).

To meet every user's preference, all learning materials are required tagged according to classification systems and to consumption values at the same time.

Categories Tags	Sub-categories Tags	
Genre	Literature, Classic, Horror, Fiction, Actuality, etc.	
Emotion	Sadness, Happiness, Pleasure, Light, Heavy etc.	
Consumption values	Practical, Utopic, Critical. Ludic.	

 Table 3. Examples for Preference Tags

Given sufficiently large prepared materials in the archive, now the question is how users select and let applications know their preferences. The idea that comes first in mind is asking users enter tags manually at the beginning of its use in order to establish a kind of filters that exclude contents of no preference. The tags are pre-defined and users select some of them according to his or her preference. This is the classical way of defining and reaching what users like. But it is not convenient for users because they are asked select some tags every time run the applications. It is undesirable if users have to spend unexpectedly extra time due to unessential reasons. For this reason, it is good to design defining procedure of user's preference run in background.

Nowadays, there exist more effective preference tracking solutions that do not annoying users by asking select tags. In fact many application today use big data analysis technics to provide more user customized content. In addition, these systems run in background mode without hindering users' attention. With big data analysis technics, users only run the application and the latter does all to satisfy users' personal preference.

To make this possible, it is required a process that can determine each user's preferences from the materials that they have used. As all materials are classified and properly tagged before according to pre-defined properties, extracting common features is possible comparing those tags within used materials. The more materials are used the more accuracy results.



Feedback with preference and level matched adequate materials

Figure 6. Automatic Processes of Customized Contents

According to the above flow, the application provides constantly more appropriate and adequate materials to users based on previously consumed materials and results.

At the beginning, users have no other choice than choose manually what they want because the application has no information of their preferences and study achievement. But constant accessing of the application accumulates necessary information and it make the application possible to choose user-customized materials in background. Namely, users provide necessary data unconsciously to server without any extra works and the application automatically chooses and provides user-customized materials. The higher the frequency, the more accuracy has the application.

Users' preferences may vary from day to day. But as long as the application server keep large quantity of pre-determined materials classified by various preferences and levels, the applications that we suppose here can still provide preference calibrated contents to users.

#### 6. Profitability

The reason why existing e-learning applications for languages have difficulty in profitability is that users are not confident with them to purchase paying considerable amount of money. As I pointed out above, the existing applications were developed for general purpose and in stand-alone type, they cannot satisfy individual customers' requirements. In general, users are forced buy a whole package that they may not finish at all. Or users have no choice but buy a whole package including unwanted or unnecessary contents. And mostly, users do not want spend to buy applications that do not meet his or her demand.

Furthermore, as long as those applications are given as a stand-alone package type, users do not need to pay extra money to use after first purchasing. For this reason, the prices of E-learning applications are generally high because developing cost is included in it and there is no other option to compensate it after sold. To be an application in discuss profitable, it is necessary to lower cost barrier. If the initial cost is sufficiently low, users may not hesitate to experience the application without great risk of losing money.

The revenue model of the suggested e-learning application for languages is not application itself but the contents stored in provider's server. Application itself may be offered gratis with sample contents. By the way downloading contents produces revenue.

To be more profitable in this sense, the application above all should provide large enough quantity of contents to customers according to their preferences and study achievement. Stand-alone type applications cannot realize this. That is why we suggest a server type application. Servers are storages where all kind of materials are archived. And the applications serve as interfaces and have functions of choosing and providing customized materials to users.

Since users now need not to worry about to make a wrong choice of applications, they willingly pay initial purchasing cost that is not high. And the split interface-contents structure opens a new possibility to produce revenue by selling customized contents. It lightens the burden of initial purchasing cost for users and allows a sustainable profit for developers.

## 6. Conclusion

E-learning applications, by nature, generally have difficulties to keep users constantly use them. Particularly, those applications for language learning have more difficulties because every user has different levels and knowledge. It is practically impossible to develop an application that satisfies all users. Most of existing language learning applications is developed focusing on universality in terms of language skills. From this, individualization cannot be expected. To satisfy users' personal demand, applications have equipped with sufficiently large enough pre-determined texts and materials in various levels, themes and types. So application authors should supply them constantly and file them up in a place to where users can access at anytime they want after they have purchased the application.

This has double effects. First, for users, they can avoid the risk of buying an application that does not adequate for them. As users can adjust levels and materials by their language skill and preferences whenever they want, they will be free from unwanted mistake of wrong purchasing. And as paid contents are stored separately in servers, initial cost of users can be dramatically lowed. This makes users access more easily to applications without financial burden and minimizing risk of unwanted purchasing.

Second, for application authors, they can have new sustainable profit model. Users need to pay some amount of fee to download the contents they like. It can be volume rate or fixed rate. Whatever it may be, users pay fee as long as good materials are provided constantly.

Even though there exists many E-learning applications in the market, no one has great success or get worldwide reputation. I believe this is not because of technical subject or difficulty, but because of product positioning failure. The basic of marketing is to determine and clarify target of selling product. Naturally, every product has its target customers, homogenous in terms of preferences, functions, prices and *etc.* However, E-learning applications in question do not seem have those targets. As language learners are heterogeneous in terms of studying levels and preferences, generalized applications cannot satisfy customers' requirement. Following marketing theories, E-learning applications should meet customers' requirement for success. In this paper, I proposed that the split interface-contents structure with preference evaluating mechanism would be a solution that satisfies users' each requirement. What is more is this can be a sustainable profit model for E-learning application for languages.

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