

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)**ScienceDirect**

Procedia - Social and Behavioral Sciences 106 (2013) 2855 – 2858

**Procedia**  
Social and Behavioral Sciences4<sup>th</sup> International Conference on New Horizons in Education

## The importance of vocabulary conceptualization in digital dictionary software development

Gamze Sarmaşık Abur<sup>a</sup>, M. Volkan Coşkun<sup>b\*</sup>

<sup>a</sup> Assist. Prof. Dr., Department of Computer Education & Instructional Technology, Education Faculty, Muğla University, Turkey  
<sup>b</sup> Prof. Dr., Department of Turkish Education, Education Faculty, Muğla University, Turkey

### Abstract

While the world is becoming global, one language is rapidly spreading all over the world. Determiners of the answers to these questions will be software engineers and software specialists working on language. If the specialists working on informatics are encouraged to work on language and effective software are developed in this field, then, mastering the mother tongue will be enough to be an effective citizen in the global world. If we look through the existing software, we can see that search engines on the internet are started to be designed to translate a text written in a foreign language into one's mother tongue. Moreover, the digital dictionaries on the internet are developing rapidly. However, in these dictionaries, the main focus is on the meanings of the words. But this is not enough and works should be performed on the conceptualization of the word. It is very common in our language for words to be used with their connotative meanings. Accordingly, dictionaries should help to sort out the main and connotative meanings of the words because languages were born out of the necessities to express the existence of objects. Moreover, there are dialectical differences among the speakers of the same language. Within the same nation, the same word may convey different meanings. Overlooking the cultural differences and using general words to express objects in one language will restrict the power of the language and make the communication superficial. Yet, the software engineers and specialists who will develop such software should be knowledgeable about the characteristics of our language. Therefore, software to be developed in the field of digital dictionary preparation should be projected and encouraged. In this paper, we want to draw the attention to the importance of informing software designers who will develop dictionary software to make translation from Turkish to Turkish or to another language about the conceptual meaning of the words apart from their meanings and to the importance of supporting research into this field.

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](http://creativecommons.org/licenses/by-nc-nd/3.0/).

Selection and peer-review under responsibility of The Association of Science, Education and Technology-TASET, Sakarya Universitesi, Turkey.

Keywords: Digital Dictionary, Computer Assisted Language Learning, Computer Based Learning

\* Corresponding author. Tel.: +90 252 2111761  
E-mail address: [vcoskun@mu.edu.tr](mailto:vcoskun@mu.edu.tr)

## 1. Introduction

This century is the age of information and communication. Easiness of having access to information and speed of information sharing has facilitated the works of researchers in conducting scientific research particularly in developing countries. Foreign language competency can be a barrier hindering researchers from enhancing their qualifications and sharing their works with the world. Development of software enabling researchers to use their mother tongue will help them to broaden their horizons and increase the number of studies. This support can be provided by software engineers who can develop a search engine, digital dictionary or translation software. But for such tools to be effective, these engineers should be knowledgeable about the features of the language. Performing translations through general dictionaries or having a vocabulary repertoire dominated by words not conceptualized may solely serve the daily life needs; they are not much helpful in creating, developing, maturing the ideas or problem solving. Vocabulary repertoire of people is determined by the number of words they can conceptualize. Development of digital dictionaries without a conceptualized vocabulary repertoire may lead to superficiality in scientists' explaining their works and understanding other scientific studies.

## 2. Cognitive Evolution of Human

Historical periods are analyzed as prehistory and history. The division between these two periods is the invention of writing. The scientific evolution of human starting with the pictures they drew on the walls of caves proceeded with the invention of paper, printing press, telegraph, telephone, radio, television and finally with the invention of computer technologies in the last century. Cognitive development of human beings has come up to now with further developments such as internet, satellites, laptops, mobile phones, etc., see Fig 1 (Sarmaşık, 2012).

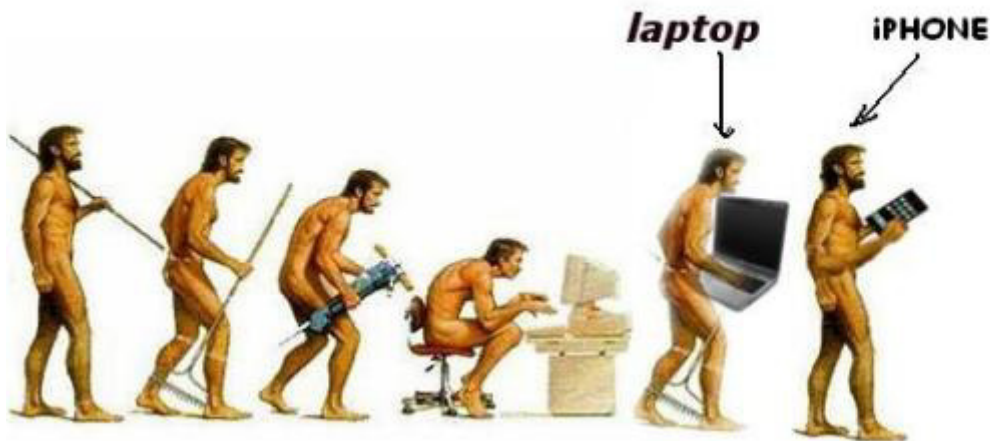


Fig. 1. cognitive evolution of human

## 2.1. Future of the Cognitive Evolution of Humans

The main question to be answered today is how the cognitive development of humans will go on. The new patterns and mechanisms that will emerge in future may exclude the individuals lacking the required skills or put them into position of someone not producing but consuming information (Akpınar, 2005).

## 2.2. Technological Developments

The computer screen will be replaced by digital glasses or lenses that have GPRS, chronometer and can take photos and record videos, see Fig 2.a & b. Such tools are already on the market.



Fig. 2. (a) digital glasses; (b) digital lenses

We can translate the texts written in our mother tongue into other languages through free digital dictionaries and search engines in internet. This may help the elimination of dependence on one language in the globalized world and in the near future, software programs that will enable us to translate spoken or written foreign languages into our language will make it possible for us to carry out spoken or written communication in any language.

## 3. Digital Dictionary Software and Meaning in Word

The already existing digital dictionaries mostly focus on the main meanings of words. However, words are living organisms like languages. Words may attain new meanings different from their main meanings over time.

### 3.1. Meaning in Word

The primary and general meaning conveyed by a word is called its real meaning. The meaning of a word given in a dictionary is usually its primary meaning. The real meaning of a word is its common meaning known by everyone. Different meanings emerging in association with the real meaning over time are called auxiliary meanings. Apart from its real meaning, a word may attain auxiliary meanings over time.

### 3.2. Word Conceptualization

Word conceptualization means understanding what main and auxiliary meanings of a word. “Conceptualization is related to conception and sorting out of emotional and intellectual worlds of words. Every word has its own emotional and intellectual worlds emerging from its historical evolution. Penetrating into

emotional and intellectual worlds of words requires chronological and spontaneous thinking and researching. For instance: In order to conceptualize the world of 'stone', there is a need, on one hand, to set out a chronological journey in which its functions in hunting, defending, sheltering and communication are considered and on the other hand, set out a spontaneous journey in which its functions in the fields such as art, literature, shelter, offense, transportation, secrecy should be considered (Coşkun, 2008)"

Words can have meanings on their own and may attain new meanings depending on the context in which they are used. Therefore, the digital dictionary software programs to be developed should be arranged in such a way as to include examples for their usages.

#### 4. Result

The new generation consist of individuals not crushed under the unknown, because having access to any topic over the internet and also having the skill of using technologies better than their instructors. So instructors should redesign the education system for this new generation should be able to determine the needs of future and arouse the curiosity of researching information by making use of the opportunities of information technologies. In order to be able to supply such information systems, there is a need to make great investments in information technologies and software development issues. The present paper talks about why software engineers and specialists should be aware of the importance of word conceptualization for information technologies. In this way, software specialists should be able to develop digital dictionaries and translation software that can translate the sentence by considering the meanings of the words within their context. Hence, we need to direct software engineers and specialists towards to such projects.

#### References

- Akpınar, Y. (2005). *Bilgisayar destekli eğitimde uygulamalar*. (2. Baskı). Ankara: Anı yayıncılık.
- Sarmaşık G., & Abur S. (2012). *Dijital bilgi paylaşımı ortamında üniversitelerin geleceği*. Mantık, Matematik ve Felsefe X. Ulusal Sempozyumu, Foça/İZMİR, İstanbul Kültür Üniversitesi Yayınları, ISBN: 978-605-4233-89-2, pg: 157-168.
- Coşkun, M. V. (2008). "Kavramlaştırmanın Kelime Hazinesi ve Dil Gelişimine Katkısı", Fazıl Hüsnü Dağlarca Ulusal Sempozyumu, Mehmet Akif Ersoy Üniversitesi, Burdur.
- Figure1. <http://ucnoktaforizma.wordpress.com/evrim/bizde-evrim-dusuncesi-neden-gelisemedi/evrim-2/>
- Figure2(a). <http://www.kagitpil.com/2268-bekledigim-sey-yakin-oled-gozluk.html#axzz22NssO9O9>
- Figure2(b).<http://fotogaleri.ntvmsnbc.com/gelecegi-sekillendirecek-teknoloji-artirilmis-gerceklik.html?position=1>