



## UTILIZING INFORMATION TECHNOLOGY IN DICTIONARY COMPILATION FOR PRESERVING AND PROMOTING THE LANGUAGE OF KHMER ETHNIC MINORITY GROUP IN VIETNAM

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**Abstract** – In Vietnam, the Khmer is one of the ethnic minority groups with the fifth largest population among the 53 ethnic minority groups, with their own language and script. Nowadays, participating in the globalization process is an objective and inevitable trend for countries around the world, especially for developing countries like Vietnam. Originating from the practice, the need for learning, researching, diplomacy, and trade, as well as the need for mutual language understanding is increased. In this trend, with the support of computers and information technology, the compilation and dissemination of the Vietnamese – Khmer bilingual dictionary in both print and electronic versions is an urgent need. It not only contributes to preserving the oral and written languages of the Khmer ethnic minority group in Vietnam but also meets the needs of teaching and learning the Vietnamese and Khmer languages, as well as diplomacy and trade for people in Vietnam and Cambodia. The research aims to apply information technology to develop Vietnamese – Khmer bilingual dictionary compiling software, in which the Khmer vocabulary database is collected, synthesized, and analyzed based on the method of field linguistics at densely populated regions of Khmer people in Southern Vietnam, typical areas in Cambodia, and with the participation of Cambodian international students at Tra Vinh University, Vietnam.

**Keywords:** dictionary compiling software, information technology utilization, Khmer language, Vietnamese – Khmer bilingual dictionary, Vietnamese language.

### I. INTRODUCTION

Vietnam is a multi-ethnic country, in which the Khmer ethnic group has the fifth largest population among 53 ethnic minorities in Vietnam [1]. In Southern Vietnam, among the ethnic minorities, the Khmer is known as the ethnic group with largest population [2]. Khmer people have their language and script which are considered to be the soul of the ethnical culture, a means of conveying and transmitting art, connecting, and maintaining the customs of the Khmer ethnic group in Southern Vietnam. In the era of integration and development, like other languages, the Khmer language faces many challenges that require timely and effective preservation solutions.

The preservation of the mother tongue of Khmer ethnic minority group in Vietnam has been implemented in various forms. Early on, the preservation of the Khmer script and

language has taken place in Khmer Theravada Buddhist pagodas in every Phum, Srok<sup>1</sup> in the Southern Vietnam. Every day, in classrooms within the pagoda grounds, the Monks and Achars teach the Khmer children to read and write Khmer language. In the awareness of preservation their cultural heritage, Khmer people, from generation to generation, have been going to the pagoda to teach and learn their language. It is invaluable that learners do not have to pay any fees, and teachers do not receive any compensation. In addition to the teaching of Khmer language at Theravada Buddhist pagodas, the teaching of Khmer language has also been provided at schools in the localities in Southern Vietnam, where there are a large proportion of Khmer people living. The teaching and learning ethnic minority languages in general, as well as the teaching and learning Khmer language in particular, is a crucial policy of Vietnamese Government in preserving and promoting the values of language and culture of ethnic minority groups. Therefore, Vietnamese Government always encourages and creates favorable conditions for Khmer students whose aspirations to learn their mother language. At provinces and cities in Southern Vietnam, the teaching and learning of Khmer language is implemented in all levels of primary school, junior high school, and high school. Moreover, Khmer language is also taught in training and retraining programs for officials and managers who are working in areas with a large proportion of Khmer people living.

Resolution of the 5<sup>th</sup> Plenum of the Party Central Committee (8<sup>th</sup> tenure) stated: *"Preserving and developing the languages and scripts of ethnic groups. Along with official language and script, the young generation of ethnic minority groups is encouraged to learn, understand, and use their languages and scripts proficiently..."* [3]. In this policy, the use of Vietnamese as the official language among the ethnic groups in Vietnam is emphasized as well as the preservation and development of the languages and scripts of the ethnic minority groups within the country. In Southern Vietnam, Khmer people live together with Viet people (Kinh ethnic community), so it is a practical need for Khmer people to use Vietnamese fluently, and for Viet people to understand Khmer language. In particular, regarding issues of managing and planning ethnic policies in Khmer areas, being able to know, to understand and to communicate by Khmer language is the best way to get extensive knowledge of the Khmer culture. This is an implication for local authorities in developing and implementing practical and appropriate policies that meet the needs and desires of the people, contributing to improving the management quality of the State.

Besides, in the current context of Vietnam, being proficient one more language is a favorable condition for most employees to have stable jobs, contributing to the socio-economic development of the country. Traditionally, Khmer people in Vietnam only live within their community in Phum, Sroc, but now they are gradually moving out, integrating, exchanging with other ethnic groups for economic and social development, and for promoting their ethnical cultural identity. Because of that, Khmer people themselves are aware of the importance of fluently using both official language and their mother tongue. Tran Tri Doi [4] stated that being proficient in both official language and their ethnic language will allow ethnic minority people to access higher education and receive higher income. This is a dialectical relationship between economy and culture. Thus, it can be affirmed that there is a high demand within the Khmer community to use both official language (Vietnamese) and Khmer language – their ethnic

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<sup>1</sup> "Phum, Srok" refers to the "village" of the Khmer people in Southern Vietnam.

language, with initial purpose is to preserve their cultural identity and then contribute to economic development and improve the quality of their life.

Khmer people in Southern Vietnam and Khmer people in Cambodia are the same ethnicity with familiarity in ethnic characteristics and the same Khmer script and language. Therefore, Khmer is not only the language of Khmer ethnic minority in Southern Vietnam but also the official language of Cambodia. Vietnam and Cambodia are two neighboring countries with a tradition of good friendship and long-term attachment throughout history. The two countries have signed agreements for cooperation in education over periods. The cooperation agreement on education for the period of 2021 – 2025 between Vietnam and Cambodia was signed by the leaders of the two countries at the Kingdom of Cambodia in December 2021. Accordingly, both sides commit to continuing annual exchange programs for delegations at all levels, strengthening exchanges between educational institutions, scientific research, and student exchanges. In recent years, Vietnamese Government has granted 120 scholarships each year to Cambodian students to study in Vietnam at higher education institutions. In implementing the guidelines and policies of the State and Ministry of Education and Training (Vietnam) on training international students, since 2012, Tra Vinh University has participated in training human resources for Cambodia, with the first enrollment round attracting 37 successful candidates. From 2012 to 2020, Tra Vinh University has enrolled and trained 125 students in fields such as health sciences, economics, and technology – engineering. In the academic year 2022 – 2023, Tra Vinh University opened a Vietnamese language class for 36 Cambodian international students who were admitted under the scholarship program. After one year of Vietnamese language training, Cambodian international students will be consulted by Tra Vinh University to choose the majors that suit their aspirations.

Nowadays, participating in the globalization process is not only an objective tendency but also an inevitable requirement for countries around the world, especially for developing countries like Vietnam. This leads to increase the demand for learning, researching, diplomacy, trade,... as well as for mutual understanding of languages. Therefore, the emergence of a series of translation dictionaries between Vietnamese and other foreign languages is essential. In general trend, with the support of computers and information technology, the compilation and dissemination of Vietnamese – Khmer bilingual dictionaries in both print and electric versions is an urgent need, contributing to preserving the language and script of Khmer ethnic minority group in Vietnam and also meeting the demand of teaching and learning Vietnamese, Khmer language as well as the diplomatic and trade needs of people in Vietnam and Cambodia. Therefore, the research aims to apply information technology to develop Vietnamese – Khmer bilingual dictionary compiling software, in which the Khmer vocabulary database is collected, synthesized, and analyzed based on the method of field linguistics at densely populated regions of Khmer people in Southern Vietnam, typical areas in Cambodia, and with the participation of Cambodian international students at Tra Vinh University.

## II. REVIEW OF STUDIES

In Vietnam, the compilation of Vietnamese – Khmer, and Khmer – Vietnamese bilingual dictionaries has been interested by researchers, many meaningful works have been done. Though the number of works remains modest, the works have enormous contributions to learning and teaching the Khmer language to the Khmer community in Southern and are the

critical and foundational reference for further research.

The two dictionaries including *Vietnamese – Khmer Dictionary* published in 1979 (Social Sciences Publishing House) [5] and *Khmer – Vietnamese Dictionary* published in 1979 (Ethnic Culture Publishing House) [6] compiled by Hoang Hoc are considered the earliest bilingual dictionaries of Vietnamese – Khmer, Khmer – Vietnamese which cover vocabulary in terms of daily life, economic, politic, military and culture. In *Vietnamese – Khmer dictionary* [5], Khmer language is presented in handwriting form, and in *Khmer – Vietnamese dictionary* [6], Khmer language is in typing form which make the special feature of the dictionaries. The two dictionaries are pioneering contributions to the development of following works.

In 1999, Tran Thanh Pon and Sorya published the *Vietnamese – Khmer Dictionary for Students* with 10,500 words [7]. Later, the authors published the *Khmer – Vietnamese Dictionary for Students* with 10,500 words [8]. Both dictionaries primarily focus on words used in daily life and contain few specialized terms.

In the same year of 1999, Son Phuoc Hoan also compiled a *Vietnamese – Khmer dictionary*, published by Vietnam Education Publishing House [9]. This is a small dictionary with 9,000 entries, gathering words used in daily life, convenient for students and beginners learning the Khmer language.

In 2011, Ngo Chan Ly compiled *Vietnamese – Khmer Glossary* [10] and *Vietnamese – Khmer Basic Medical Terminology* [11] in 2014, published by Vietnam News Agency Publishing House. The *Vietnamese – Khmer Glossary* with 16,000 headwords, including colloquial, literary, dialectal and everyday words, mostly words spoken by Khmer people in Cambodia. The *Vietnamese – Khmer Basic Medical Terminology* has 15,000 headwords, and the transcription of Khmer language into Vietnamese is quite accurate.

Tang Phi Hung's *Online Vietnamese – Khmer Dictionary* [12] is a pioneering tool in the field of the Khmer language, providing easy access for learners and researchers of Vietnamese – Khmer bilingualism. However, the limited number of words is seen as the significant limitation of this online dictionary, which mainly focuses on Vietnamese words derived from Khmer and vice versa, Khmer words rooted in Vietnamese.

In Vietnam, the number of Vietnamese – Khmer and Khmer – Vietnamese bilingual dictionaries are limited, in which online dictionaries are more limited. Meanwhile, in Cambodia, many monolingual Khmer and bilingual Khmer – English and English – Khmer dictionaries are more abundant. Regarding to the situation of compiling and publishing dictionaries related to the Khmer language in abroad, we found some typical works as follows:

Regarding the monolingual dictionary, a typical work compiled by venerable Choun Nath in 1967: the *Khmer – Khmer Dictionary* (Samdech Porthinhean) published by Buddhist Institute of Cambodia is considered one of the valuable references for following Khmer dictionary publications [13]. Currently, the *Khmer – Khmer Dictionary* [13] has also been republished, in both printed and digital versions for computer and mobile devices. In addition, many specialized monolingual dictionaries on vocabulary have been compiled and introduced early in Cambodia, such as *Dictionary of New Words* compiled by Ko Vith, published in 1967, *Pali – Khmer Dictionary* and *Dhammapada Glossary* by Kim To (1994) published by Buddhist Institute of Cambodia. These works are conducted on different scales with high professionalism, aiming at various aspects of daily life. They are developed and updated regularly to create credibility and meet the increasing demands of society.

Regarding bilingual dictionary compilation, Cambodia has a variety of bilingual dictionaries compiled by Cambodian and Western scholars, with the earliest example is *Cambodian – English Dictionary* compiled by Robert K. Headley, Jr. et al. and published in 1977 by Catholic University of American Press [14]. Since 2000, many bilingual dictionaries have been published, including the *English – Khmer Dictionary* of Mark Ben (2012) published by Angkor Thom Publishing House [15], *Khmer – English Dictionary* by Mok Peng (2012) by Presses Universitaires de France [16].

Cambodia consists of a wide range of bilingual dictionaries (*Khmer – English, English – Khmer*), and trilingual dictionaries (*Khmer – English – French*) cover a wide range of fields, including information technology, environment, law, administration, medicine, economics, agriculture, culture, and the arts. Specific examples of bilingual dictionaries in Cambodia include *Economics and Finance Dictionary (English – Khmer)* by Hing Thoraxy, Hean Sahib (2004) published by Cambodian Institute of Economics and Finance [17]; *English – Khmer – English Information Technology Dictionary* by Chho Ran (2018) [18]; *Accounting and Auditing Glossary (English – Khmer)* by National Audit Authority (2009) [19]; *Medical Dictionary (Khmer – Khmer)* by Tan SuKun (2010) [20]; *Law Dictionary (English – Khmer, Khmer – English)* by Phou Laysun and Pau Vit Chheng in 2012 [21]; *Medical Dictionary (Khmer – English)* by Southearithy Ek (2015) [22]; *Lexicon of Climate Change (Khmer – English)* published by the Ministry of Environment in 2017 [23];... In response to the urgent need to standardize specialized terminology and keep up with global trends in the natural and social sciences, the Royal Academy of Cambodia has approved and published many trilingual Khmer – English – French vocabulary books, including *Glossary of Country Names, Capitals and Territories (Khmer – English – French)* (2013) [24], *Lexicon of Science and Technology (Khmer – English – French)* (2013) [25], *Lexicon of Political Science and Diplomacy (Khmer – English – French)* (2014) [26], *Lexicon of Medical and Agriculture (Khmer – English – French)* (2015) [27]; *Lexicon of Culture and Arts (Khmer – English – French)* by the Royal Academy of Cambodia (2015) [28]. In addition, in 2015, Specialized Committee on Legal Terminology compiled and published glossaries of legal terms as *Lexicon of Civil Law in English – French – Khmer (English – French – Khmer)* [29], *Lexicon of Law and Administration (English – French – Khmer)* [30].

Like monolingual dictionaries in Vietnam, general and specialized monolingual Khmer dictionaries in Cambodia have been compiled with varying degrees of investment and are highly qualified, relating to fields in daily life. These works are regularly updated and developed, creating credibility, and better meeting the needs of society. In addition, Cambodia has also developed specialized monolingual dictionaries and other works of ingual and trilingual dictionaries between Khmer and English, French, and Russian. Moreover, Khmer – English and Khmer – French dictionaries have been not only developed by Cambodians but also researched and published by English and French language experts.

Regarding Khmer – Vietnamese bilingual dictionaries in Cambodia, we have only found one work, which is the *Khmer – Vietnamese Dictionary* by So-ma-reth, Hun Kim-sia, and Soth-Sa-run published in Phnom Penh in 1968, containing 20,000 headwords [31]. This dictionary collects various types of words used in daily life, with illustrated examples accompanying each entry. However, the arrangement of the headwords has not been uniformly standardized in the dictionary, which makes it difficult to look up words and reduces the

systematic nature of the dictionary.

By referring to popular monolingual and bilingual dictionaries in Vietnam and Cambodia, this study has inherited vocabulary and compilation experience from the Vietnamese – Khmer bilingual dictionaries, especially from valuable corpus in early published dictionaries in Vietnam such as the *Vietnamese – Khmer Dictionary* (1979) [5] and the *Khmer – Vietnamese Dictionary* (1979) by Hoang Hoc [6], or publications in Cambodia such as the *Khmer – Khmer Dictionary* (Samdech Porthinhean) (1967) by Buddhist Patriarch Choun Nath [13], the *Khmer – Vietnamese Dictionary* (1968) by the group of authors So-ma-reth, Hun Kim-sia, and Soth-Sa-run published in Phnom Penh [31]. The study also determined several limitations of published dictionaries. First, the Vietnamese – Khmer or Khmer – Vietnamese bilingual dictionaries focus on collecting common lexical units, with few or no updates on new lexical units, thus the number of words in these dictionaries is still quite limited; Second, the compilers have not focused on updating new meanings as well as derivative meanings of ancient words and have not diversified the entries, inconsistent in the distribution of entries.

### III. METHODOLOGY

The method of field linguistics involving notetaking, interview, and observation was used in this study to examine and analyze data which was collected from the daily speech of the Khmer community in different localities in Southern Vietnam and several representative areas in Cambodia, from international Cambodian students studying at Tra Vinh University who come from Siemreap, Svayrieng, Kompong Spur, Preyveng, Kompong Cham, and Phnom Penh Capital. **Simultaneously**, desk research method was also utilized to collect data from available resources related to the Khmer language, such as folk literature documents, discourse from newspapers and mass media, and published studies by Vietnamese and international scholars.

Based on the collected data, a Khmer vocabulary bank has been formed, in which the meaning of words is determined by the direct usage in the community or extracted and inherited from existing works such as dictionaries, books, and stories. The lexicographic methods have been used to determine macro and microstructures; organize word entries, identify parts of speech, present information in each entry, and provide annotations.

Data analysis methods was also utilized to process and computerize raw data of the first language (Vietnamese) and the second language (Khmer language), then systematize the two databank of Vietnamese and Khmer language which is prompt, accurate, and sufficient for dictionary compiler in updating, searching, and processing. In this study, the model of dictionary compilation support system is proposed as in Figure 1.

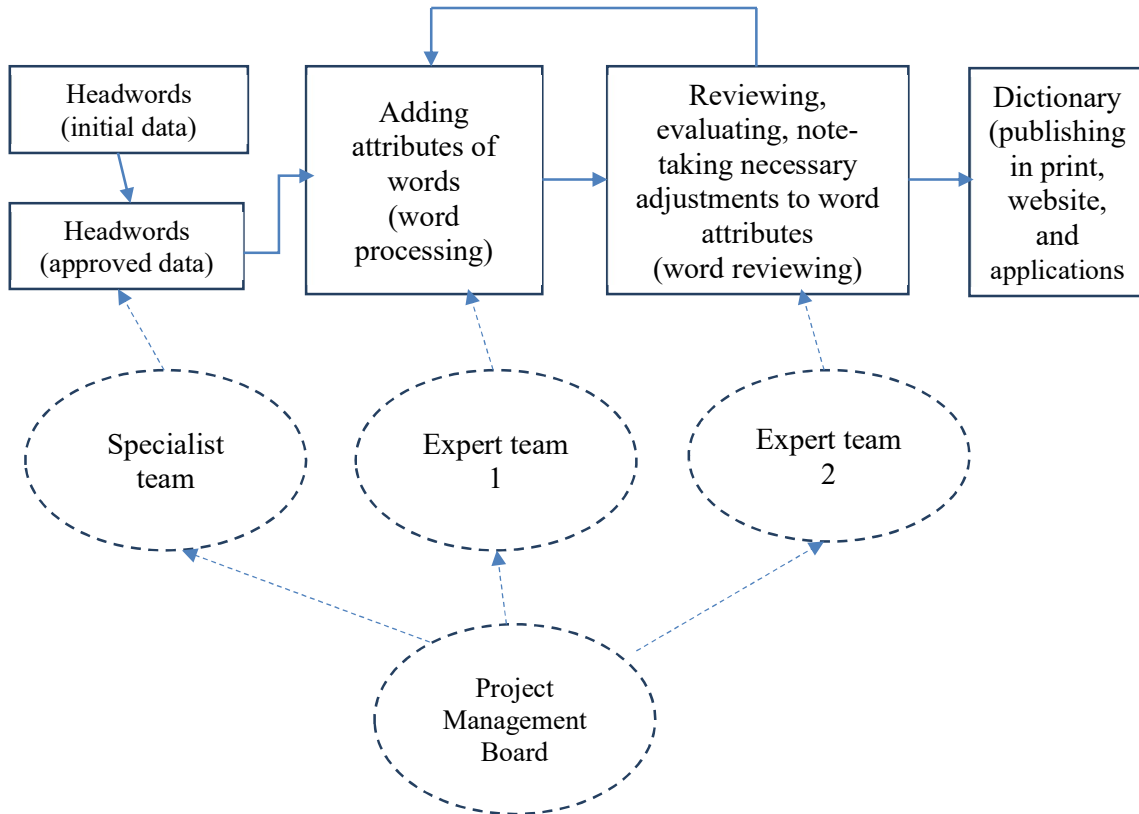


Figure 1. Model of dictionary compilation support system

#### IV. RESULTS AND DISCUSSION

##### A. Building lexical database

The study identified that the bilingual Vietnamese – Khmer dictionary is a translation dictionary, compiled based on modern dictionary criteria, in which Vietnamese is source language, written in Vietnam national official language and Khmer is the target language, written in modern Khmer language. The table of headwords is synthesized in fields of economics, politics, military, culture, science and technology, education, society, and health; including proper names, nomenclature, abbreviations with illustrated images; as well as Vietnamese and Khmer idioms and proverbs, with 42,000 headwords.

The table of headwords is compiled including local language and official language, high-frequency vocabulary, and academic vocabulary so that the vocabulary shown in the dictionary ensures the most practicality for users, helping users can understand and generate target language. The structure of a dictionary entry consists of the following parts: Vietnamese words, equivalent Khmer words, and the meaning explanation of words. The headwords are displayed in Vietnamese alphabetical order: A, Ă, Â, B, C, D, Đ, E, Ê, G, H, I, K, L, M, N, O, Ô, Ơ, P, Q, R, S, T, U, U', V, X, Y Z; in order of tone-mark: flat accent (unmarked), grave, hook above, tilde, acute, dot below. In each word, the meanings of this word are arranged according to common meanings and word classes.

The target words in the dictionary are translated from the source language according to the principle of meaning equivalence. When implementing this principle, the semantic equivalent in the source language can be a word, a phrase or an explanatory sentence,

depending on the characteristics of the semantic relationship between the source language and the semantic structure of the words in the target language. The translation of source words into target languages in this study is divided and processed according to the following situations:

Firstly, for terms referring to things or phenomena of the source language that have no equivalent words in the target language, these are usually proper nouns or idiomatic expressions in each language. In this circumstance, the translation in the target language is usually descriptive explanation.

Secondly, for terms referring to things or phenomena of the source language which are completely equivalent in meaning to words in the target language. However, in some circumstances, a word in the source language may have multiple equivalent words in the target language. Therefore, all words that are similar in meaning in the target language compared to the source language are listed for the convenience of users to look up and select.

Thirdly, for terms referring to things or phenomena of the source language has similar terms in the target language, but the two terms are not completely equivalent in meaning. In such situations, the study divided them as follows circumstances:

**The** first circumstance is that the terms in source language and target language share some equivalent meanings, while the remaining meanings are different, which indicate the intersecting relationship between the two languages. For example, the term "chóa" in Vietnamese and the term "ស្រាំង" in Khmer. In Vietnamese, "chóa" has two meanings: (1) reflecting light with a glittering luster and (2) confusing the sight of by means of excessive brightness. In Khmer, "ស្រាំង" has two meanings: (1) to dazzle or blind someone's eyes and (2) to be absorbed in something. Therefore, there is only one equivalent meaning between the two languages.

The second circumstance is that the meaning of the term in source language is narrower meaning than in target language, indicating a type of inclusion relationship (hyponymy) between the two languages, in which the term in the target language contains the term in the source language.

The third circumstance is that the meaning of the term in source language is broader than in target language, indicating a hypernymy where a term in source language encompasses the term in target language. For instance, the term "chiu" in Vietnamese has multiple meanings including (1) to accept something unpleasant or disadvantageous for oneself; (2) to be affected by an external influence; (3) to adapt to something unfavorable for oneself; (4) to owe something to someone and have not yet paid it back; (5) to acknowledge the good or superiority of others; (6) to accept one's own powerlessness or inability to do something; (7) to agree to something despite not wanting or liking it; and (8) to voluntarily make an effort to do something. (According to Hoang Phe, ed., 2001, p.164 [32]). However, Khmer language has only five equivalent meanings: (1) ទទួល (taking responsibility: ទទួលខុសត្រូវ); (2) ស្តីទៅ (Children under their parents' rights: កូនចៅស្តីទៅនឹងការគ្រប់គ្រងរបស់ឪពុកម្តាយ); (3) ជឿ (buying on credit ទិញជឿ); (4) ព្រមចុះចាញ់សារភាពចុះចាញ់ (I find this math problem difficult, I give up. សំបាក់គណិតនេះពិបាកណាស់ខ្ញុំព្រមចុះចាញ់); (5) ព្រម (Do you agree, Mom? ព្រមទេ?). The term "chính thức" (official) in Vietnamese has three meanings but only two equivalent meanings in Khmer language, similarly, the term "chính quyền" (government) has two meanings in Vietnamese and only an equivalent meaning in Khmer.



In addition to translation, the study also provides examples and their translations following the above rules. The examples used are appropriate for the grammatical structure and nuances of each language. Therefore, the examples in the dictionary will help users better understand the meaning and usage of each term in each language. Examples in the dictionary may be presented in various forms of language, such as a phrase, a clause, or a concise sentence in simple and understandable language, minimizing the occurrence of cross-referencing.

*B. Developing and using dictionary compilation software*

After the members of the dictionary compilation team complete the selection of headwords into an Excel file of raw data file, the data will be imported into the database to create initial data for the system. The words at this stage are considered unlabeled data. Then, each word will have its own code to be easily collated and controlled during the word processing.

From the database, the system administrator (who has full permissions) will distribute words to team members for further processing. Words can be distributed continuously or based on the competence level of each member according to the administrator’s evaluation.

Then, labeled words will be processed by the assigned team member (called as processor). The processor will perform the translation of words that adheres the conditions initially specified by the system. Once the translation is completed without other meanings or word types, the word will be sent by the processor to the word reviewing board for approval.

After receiving the words from the processor, the word reviewing board will check if the words adhere to the compilation conditions. If the word adheres to the conditions in terms of meaning, word type, etc., the board will add it to the dictionary, and vice versa, it will be sent back to the processor along with specific requirements for revisions or additions in the notes section. The steps of processing – reviewing words will be repeated until the word meets the requirements and is added to the dictionary. The word processing and reviewing are illustrated in Figure 2.

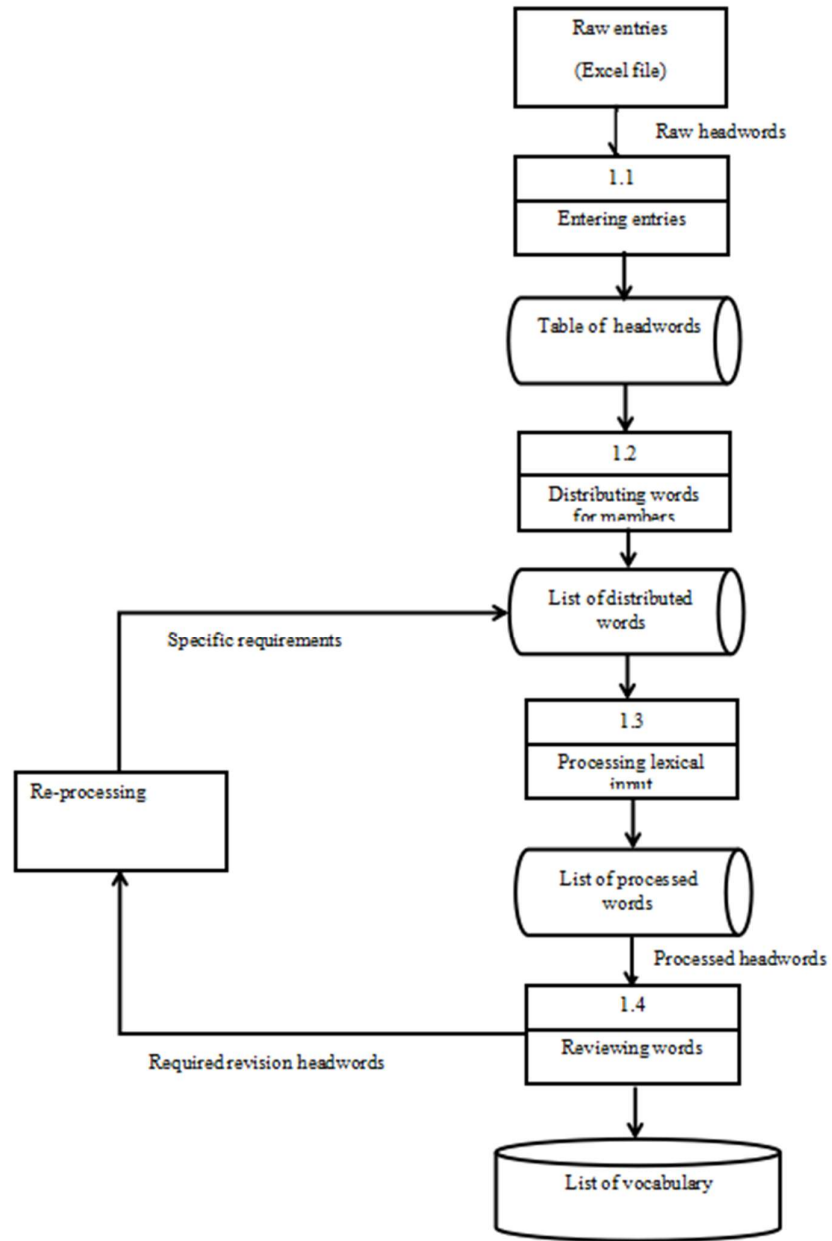


Figure 2. Data flow diagram

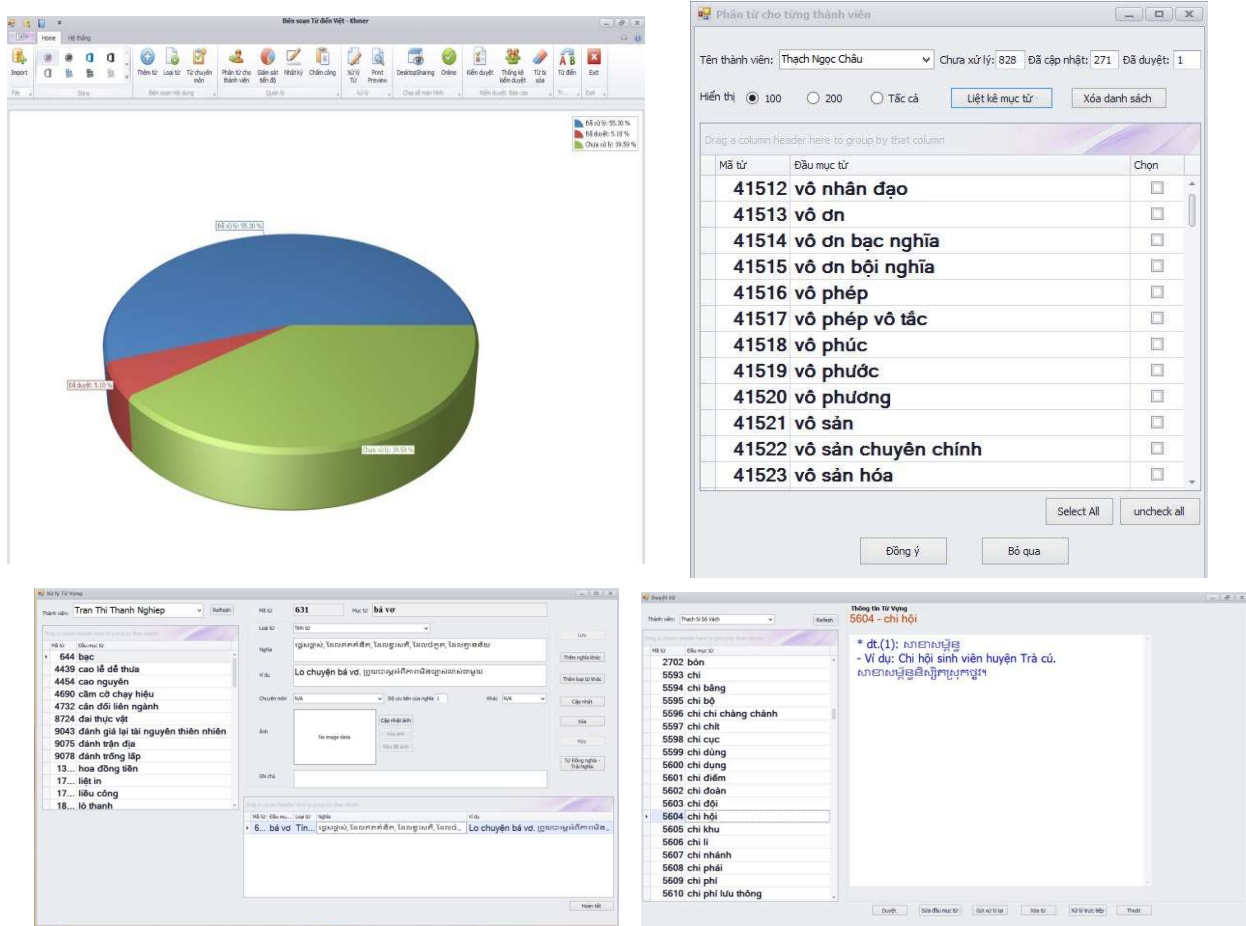


Figure 3. Interface of dictionary compilation software

Figure 3 displays the interface of distributing words to members responsible for compiling, processing, and reviewing. Processed data are transferred to Vietnamese – Khmer dictionary applications running on any browser and mobile applications.

Dictionary compilation software shows its value by creating convenience for controlling the compilation process, supporting word distribution, and limiting duplication. Processed data are stored on its server with strict protection preventing unauthorized access. However, the use of dictionary compilation software encounters several objective and subjective obstacles. First of all, many Khmer scholars are apprehensive to use computers during the dictionary compilation process. Many of Khmer intellectuals are often aged and technologically challenged. Second, the dictionary compilation software requires a basic computer configuration (Windows 8) for installation and Internet connection for the compiler to access the database and carry out processing.

### V. CONCLUSION

Globalization is becoming extensive which greatly increases the interrelationships, influences, impacts, and interdependence of all regions, countries, and ethnic groups

worldwide. In this context, the issue of communication through media language is considered a crucial factor contributing to understanding among different cultures, economies, and ethnicity. Based on these factors, the compilation of the Vietnamese – Khmer bilingual dictionary is an indispensable and helpful tool. One of the weight values of this dictionary is to contribute significantly to the preservation of the oral and writing language of the Khmer ethnic minority group in Vietnam. Together, it is a solid foundation for successful communication between the Khmer and Vietnamese in Vietnam that build close ties for mutual development, which is a precondition for strengthening and sustaining the relationship between Vietnam and Cambodia. By applying information technology to develop Vietnamese – Khmer bilingual dictionary compilation software, the dictionary has achieved a total of 42,000 headwords, with richer content based on inheritance and development of the strengths of previous works. The dictionary has become an essential language reference tool (Vietnamese, Khmer) for researchers, teachers, students, and pupils in both countries and around the world. The Vietnamese and Khmer language databases have been computerized as an invaluable scientific corpus to serve the continued compilation of specialized Vietnamese – Khmer dictionaries, meeting the various needs of communication, learning, research, and trade between the Khmer and Vietnamese in Vietnam in particular and between Vietnam and Cambodia in general.

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