

The Puzzle of Words: Discovering Semantic Change in Malay–Sanskrit Loanwords Shared With Thai

Kowit Pimpuang

Department of Thai Language, Faculty of Humanities, Kasetsart University, Thailand

Abstract—The objectives of research were 1) to examine the historical background and influence of Sanskrit in both Malaysia and Thailand; 2) to investigate the semantic changes in Malay words of Sanskrit origin that also appear as loanwords in Thai; and 3) to explore the effectiveness of using a crossword puzzle game as a tool for learning Thai vocabulary of Sanskrit origin derived from Malay. The sample group consisted of nine master's degree students enrolled in the course 01361513 Foreign Languages in Relation to the Thai Language at Kasetsart University during 2024. Both qualitative and quantitative methods were employed for analysis. The findings revealed that Sanskrit, Malay and Thai belong to distinct language families: Sanskrit is part of the Indo-European family, Malay belongs to the Austronesian family, and Thai is a member of the Tai language family. Sanskrit first appeared in South Asian inscriptions during the early centuries of the Common Era and subsequently exerted a wide-ranging influence across the South Asian subcontinent and much of Southeast Asia, including regions where Malay is spoken. The Thai language has likewise been influenced by Sanskrit for centuries. A comparative analysis of Sanskrit-derived words in Malay and Thai demonstrated notable semantic shifts. The most frequently observed type of semantic change was widening of meaning, followed by narrowing and transferring. The use of a crossword puzzle game proved to be an effective supplementary tool. Evidence from pre-test, post-test and intervention data indicated improvements in students' understanding of Sanskrit-derived vocabulary in both Malay and Thai.

Index Terms—Malay word, Sanskrit Loanword, Thai, crossword puzzle, game

I. INTRODUCTION

Student learning has evolved significantly from the past to the present day. Pimpuang and Yuttapongtada (2023) noted that Bloom's Taxonomy (1956) has been adapted for application in the digital era, offering lists of related action verbs that instructional designers can use to formulate effective learning objectives. In this context, the digital taxonomy incorporates contemporary terminology and tasks relevant to digital learning environments, integrating activities that support modern pedagogical practices.

The crossword puzzle game exemplifies a creative and engaging technique inspired by Bloom's taxonomy, adapted to suit the digital age. As learners today are immersed in a digital environment, instructional strategies that align with this context are essential. Werbach and Hunter (2012) stated that although gamification is a relatively recent pedagogical innovation, it has been successfully applied in the business sector. Gamification involves the use of game elements and design techniques in non-game settings and has demonstrated effectiveness in motivating learners, empowering them, and fostering a relaxed and engaging learning environment. These pedagogical factors highlighted earlier by Brown (1994) are considered essential components of effective teaching and learning (Jorge, 2015, p. 32).

Previously, instruction on semantic changes in Malay words of Sanskrit origin—many of which also serve as loanwords in Thai—had not incorporated crossword puzzle activities in the Thai language program at Kasetsart University. Traditional teaching approaches relied heavily on rote memorization within the cognitive domain of Bloom's original taxonomy. Learners were often expected to memorize extensive lists of vocabulary without a deeper understanding of the relationships between Malay and Thai words of common Sanskrit origin. Such methods frequently resulted in disengagement and poor learning outcomes, as students struggled to retain information or make meaningful connections.

To address this issue, the adoption of creative and engaging instructional techniques is essential. Instructors should consider implementing innovative learning approaches such as the use of crossword puzzle games as adjunct tools to support the teaching of topics related to the historical influence of Sanskrit on Malay and Thai and the comparative semantic changes of shared lexical items.

Therefore, the application of crossword puzzle games in the learning process of Malay words of Sanskrit origin, as well as their Thai cognates, represents a promising and creative instructional strategy. This method has been incorporated into the teaching process to promote student success, enhance engagement, and foster a more enjoyable and productive learning experience. Based on the findings of this study, the researcher is confident that integrating this

component into the course will yield substantial benefits for students in their understanding of linguistic relationships and semantic development.

II. REVIEW OF LITERATURE

Learning in the Modern Era

Learning in the modern era has undergone significant transformation, evolving from traditional methods to more dynamic and student-centered approaches. Unlike the past, when education was primarily teacher-centered and classrooms were dominated by lecture-based instruction, modern learning environments emphasize active student engagement. This shift reflects broader educational reforms aimed at enhancing learning outcomes through innovative strategies such as active learning and game-based learning.

Among these approaches, game-based learning has emerged as a particularly effective technique. It challenges and motivates students by incorporating elements of play into the educational process, thereby increasing learner engagement and participation. Students who engage in lessons through games often demonstrate higher levels of enthusiasm, critical thinking, and sustained interest. Therefore, integrating game-based learning into classroom practice is an important consideration for educators seeking to enhance student-centered learning.

Boonlue (2018) stated that game-based learning operates across three distinct phases. First, before gameplay, learners encounter a challenge and set specific goals to achieve during the activity. This initial phase stimulates curiosity and establishes a clear purpose. Second, during gameplay, learners experience reduced stress and become immersed in the task. They are often able to temporarily suspend their real-life identities and take on roles or actions they have never attempted before, all while striving to win rewards or achieve in-game objectives. Finally, after gameplay, learners recognize that the activity was a simulated experience unrelated to their personal lives. Nonetheless, the intrinsic enjoyment of the game often leads to a desire to engage in similar learning experiences again.

In conclusion, the evolution of modern learning has highlighted the importance of innovative, student-centered methods such as game-based learning. When effectively implemented, these strategies not only enhance learner motivation, but also contribute to meaningful and memorable educational experiences.

The Crossword Puzzle as a Form of Game-Based Learning

Lestari and Yulia (2018) stated that the crossword puzzle is a type of word game that consists of a grid of squares into which words, numbers, or letters are inserted, often guided by numbered clues. As a form of game-based learning, the crossword puzzle has gained recognition for its effectiveness in enhancing vocabulary acquisition and reinforcing learning.

Research conducted by Franklin et al. (2003) found that crossword puzzles can significantly improve students' vocabulary mastery. Similarly, Weisskirch (2006) emphasized the value of crossword puzzles in reviewing course materials. In this approach, learners complete a crossword puzzle prior to an examination and another one afterward, supporting both preparatory and reflective learning.

The educational benefits of using crossword puzzles in the teaching and learning process are manifold. One of the key advantages is the ability to increase student motivation, particularly when learning new vocabulary in the classroom. Dashela et al. (2017) outlined several additional benefits of using crossword puzzles as follows:

1. The crossword puzzle is an effective tool for vocabulary instruction and enrichment because it reinforces meaning through the inclusion of definitions or synonyms directly within the clues.
2. Crossword puzzles encourage learners to consult dictionaries or thesauruses, and they facilitate the acquisition of specialized terminology in particular subject areas. They are also suitable as quizzes or review tools at the conclusion of a lesson, chapter, or unit.
3. Crossword puzzles are simple for instructors to design and adapt for student use, making them a practical and flexible educational resource.

Therefore, the crossword puzzle is an effective and engaging instructional tool that instructors can employ to enhance students' vocabulary development. Although easy to implement and accessible to learners, it provides a dynamic and enjoyable learning experience that supports both comprehension and retention.

Sanskrit in Southeast Asia and Malaysia

Andaya and Andaya (1982) observed that by the seventh century, a significant number of Sanskrit-derived words had been incorporated into Old Malay, largely due to the cultural and economic influence of the Indian subcontinent. This influence was prominent before the widespread adoption of Islam by Malay rulers on the Malay Peninsula. Following the conversion to Islam, Arabic began to exert increasing lexical influence on the Malay language (p. 53).

In tracing the historical presence of Sanskrit in Southeast Asia, Sarkar (1985) highlighted that historical records indicate sustained cultural contact between the Indian subcontinent—particularly under the Pallava and Chola dynasties, and several Southeast Asian polities, including Ilamandalam (Sri Lanka), Sri Vijaya (Sumatra), Chavakam (Java), Kambuja (Cambodia), Kadaram (the Malay Peninsula), and Champa (Vietnam). The enduring legacy of these interactions is evident in the region's art, architecture, and cultural expressions. From the early centuries of the Common Era, Southeast Asia emerged as a significant center for the diffusion of Indian, especially Sanskritic cultural and religious traditions. Many Southeast Asian languages bear the imprint of this deep-rooted Sanskrit influence.

Bronkhorst (2011) provided a comprehensive account of the spread of Sanskrit across South and Southeast Asia. According to his research, Sanskrit first appeared in inscriptions in South Asia during the early Common Era and gradually expanded its reach, ultimately becoming the principal language of inscriptions across the Indian subcontinent and into Southeast Asia. For nearly a millennium, Sanskrit maintained this dominant status, prompting Pollock (1996) to refer to the region as the “Sanskrit cosmopolis,” which he dates from approximately 300 to 1300 CE.

In light of this historical evidence, it is apparent that Sanskrit played a pivotal role in shaping the linguistic and cultural landscape of Malaysia and other parts of Southeast Asia. Through sustained cultural exchange, particularly in the domains of religion, philosophy, and governance, Malay absorbed a substantial number of Sanskrit loanwords. Despite Malaysia’s present-day status as a Muslim-majority nation, the Malay language retains a considerable inventory of Sanskrit-derived vocabulary. Jefbeck (2023) emphasized that the relationship between Sanskrit and Malay is characterized by cultural exchange and mutual enrichment, with Sanskrit contributing not only lexical items but also philosophical concepts and cultural practices to the development of Malay language and society.

Malay Words of Sanskrit Origin

Following the introduction of Sanskrit into the Malay Peninsula and surrounding islands, a substantial number of Sanskrit words were assimilated into the Malay language. The Malay-speaking population gradually adopted Indian vocabulary alongside indigenous Malay terms, resulting in a significant infusion of Sanskrit-derived lexicon. As in other Southeast Asian languages, Sanskrit vocabulary in Malay is particularly prevalent in domains related to religion, philosophy, and classical literature.

A considerable portion of this lexical borrowing stems from Sanskrit epics such as the *Ramayana* and the *Mahabharata*, which introduced numerous cultural and philosophical concepts to the region. Consequently, many Malay words are traceable to Sanskrit roots. Examples include *manusia* (from Sanskrit *manusya*, meaning human), *sakti* (from *sakti*, meaning power or divine energy), *ratna* (from *ratna*, meaning jewel), *isteri* (from *strī*, meaning woman or wife), and *asmara* (from *samara*, meaning passion or love).

These examples illustrate the extent to which the Malay language has drawn from Sanskrit, particularly from early Indian literary and religious traditions. Even in contemporary usage, a substantial portion of the Malay lexicon retains Sanskrit-origin terms. Samad Ahmad (1974) noted that the prevalence of Sanskrit in Malay is so extensive that nearly every sentence in spoken Malay is likely to contain at least one word of Sanskrit origin. This observation underscores the profound and enduring influence of Sanskrit on the Malay language.

Shared Religious and Philosophical Sanskrit Loanwords in Malay and Thai

Matminchainara (n.d.) observed that the widespread dissemination of Sanskrit across Southeast Asia led to its extensive use in religious, philosophical, and belief-related discourse. This observation aligns with the view of Samad Ahmad (1974), who, in his work *Sanskrit Words in Malay*, noted that contact between the Indian subcontinent and the Malay world dates back approximately 2,000 years. According to Ahmad, Sanskrit was introduced to the Malay-speaking regions alongside the transmission of Brahmanism, Hinduism, and Buddhism by Indian emissaries who sought to promote prosperity and spiritual development among the peoples of Southeast Asia, who at the time practiced animistic belief systems.

Over time, Sanskrit began to play a significant role in the spoken language of the early Malay population. Many of the Sanskrit words adopted into Malay were drawn from Hindu scriptures and classical Indian literature, including the *Jataka* tales and the *Pañcatantra* (rendered as *Panca Tanderan* in Malay).

A parallel linguistic process occurred in Thailand, where Sanskrit words also entered the Thai language—initially through religious texts associated with Brahmanism and Hinduism. This simultaneous adoption in both cultural-linguistic spheres demonstrates the extensive influence of Sanskrit on the languages of Southeast Asia. As a result, Malay and Thai now share a considerable number of Sanskrit-derived loanwords, particularly in religious and philosophical contexts.

Hence, the religious and philosophical traditions that accompanied the spread of Sanskrit contributed to its integration into both Malay and Thai. The enduring presence of these loanwords underscores the profound and lasting impact of Sanskrit on the linguistic and cultural development of both nations. Evidence of this influence is clearly documented in major lexicographical works, such as contemporary Malay dictionaries in Malaysia and the dictionaries produced by the Royal Institute of Thailand. Supporting this view, Matminchainara (n.d.) confirmed that a significant number of Sanskrit-origin words remain embedded in the Malay lexicon. Similarly, Thongprasert (1977) remarked that in dictionaries compiled by the Royal Institute of Thailand, more than half of the entries consist of Sanskrit loanwords, thereby attesting to the magnitude of Sanskrit's impact on the Thai language (p. 37).

Semantic Change and Its Application to Sanskrit Loanwords

In historical linguistics, the concept of semantic change refers to the evolution of word meanings over time. Khanittanan (1984) clearly stated that semantic change involves alterations in the meaning of a word, which may include the addition, removal, or modification of its senses and connotations. Over time, such changes can result in cognates across different languages or periods having significantly divergent meanings.

The theory of semantic change provides a useful framework for analyzing how Sanskrit loanwords have evolved in both the Malay and Thai languages. This theoretical lens is particularly applicable to the study of Pali and Sanskrit vocabulary as used in contemporary Southeast Asian linguistic contexts. Pimpuang (2016) stated that semantic change

typically occurs in three main forms: widening of meaning (generalization), narrowing of meaning (specialization), and transferring of meaning (semantic shift). These categories serve as key analytical tools in identifying and interpreting changes in word meaning across languages and over time.

In his survey of Sanskrit loanwords in Malay, Jefbeck (2023) noted that many of these terms have undergone semantic transformation. As Sanskrit words were assimilated into Malay, they often acquired new meanings and connotations distinct from those in their original cultural and linguistic context. This transformation was influenced by the socio-cultural and linguistic environments of the Malay-speaking population. For instance, the Sanskrit term *karma*, which in Hindu and Buddhist philosophy refers to the concept of action and its consequences (Apte, 2010, p. 339), has been semantically broadened in Malay to mean 'fate' or 'destiny' in a more general sense.

This example illustrates how Sanskrit words, when adopted into the Malay language, undergo semantic change driven by the needs, usage patterns, and cultural perspectives of the receiving linguistic community. A similar process occurs in Thai, where Sanskrit loanwords are likewise subject to the same types of semantic transformations outlined in the universal theory of semantic change. Thus, the application of semantic theory provides valuable insight into the dynamic and adaptive nature of Sanskrit-derived vocabulary in Southeast Asian languages.

Using a Crossword Puzzle Game to Learn Malay and Thai Words of Sanskrit Origin

The crossword puzzle, as a form of educational game, can be effectively utilized by instructors to design engaging and interactive classroom activities—particularly for teaching Malay words of Sanskrit origin that are shared as loanwords in the Thai language. The rationale for selecting the crossword puzzle as an instructional tool lies in its simplicity and effectiveness. It provides an enjoyable platform that encourages students to actively engage with the learning material, stimulating their critical thinking and enabling them to apply their knowledge in academically meaningful ways. Moreover, it motivates learners to consult dictionaries and actively participate in vocabulary learning with enthusiasm.

In the context of teaching content such as Sanskrit-derived words in Malay and Thai, traditional lecture-based methods may prove less effective—especially in the current digital era. Therefore, innovative, creative, and learner-centered strategies are needed to maintain student engagement while promoting deeper learning. When properly implemented, vocabulary games such as crossword puzzles not only make the learning process more enjoyable, but also contribute to learners' cognitive development, linguistic awareness, and practical language skills.

Harwika (2018) emphasized that vocabulary is a crucial component in language acquisition, as it serves as the foundation connecting the four core skills: listening, speaking, reading, and writing. In this regard, employing crossword puzzles in the classroom offers an effective and engaging means to enhance students' mastery of Sanskrit-origin vocabulary in both Malay and Thai. This technique fosters both retention and understanding through active, playful, and contextualized learning.

Based on the literature reviewed in support of this research, a conceptual framework was developed to guide the study. This framework was designed to achieve three primary objectives: 1) to examine the historical background and influence of Sanskrit in Malaysia and Thailand; 2) to analyze the semantic changes in Malay words of Sanskrit origin that are also used as loanwords in Thai; and 3) to investigate the effects of using crossword puzzle games as a pedagogical tool for learning Sanskrit-derived Malay vocabulary in the context of Thai language education.

III. RESEARCH METHODOLOGY

Sample of the Study

The sample for this study consisted of nine graduate students from Kasetsart University who were enrolled in the course 01361513: Foreign Languages in Relation to the Thai Language, part of the Master's degree program in the academic year 2024. This research focused on Malay words of Sanskrit origin that also function as shared loanwords in the Thai language.

While numerous Malay words of Sanskrit origin have cognates in Thai, a total of 50 such words specifically related to religion and philosophy were selected for investigation using a purposive sampling technique. The rationale for selecting words within the domains of religion and philosophy is grounded in the historical context of Sanskrit's transmission to the Malay Peninsula. Sanskrit entered the region primarily through religious and philosophical channels, and it is within these domains that shared loanwords are most prominently found in both Malay and Thai.

Methodology

This research employed a mixed-methods approach, combining both qualitative and quantitative methods within an overall inductive framework. The research procedures were conducted as follows:

1. Data surveying and collection focused on 50 Malay words of Sanskrit origin related to the fields of religion and philosophy, which are also shared loanwords in the Thai language. The primary sources for data collection included: 1) Sanskrit Words in Southeast Asian Languages compiled by the Somaiya Centre of Buddhist Studies (2005), 2) A Dictionary of English and Sanskrit compiled by Monier-Williams (1999), and 3) The Dictionary of the Royal Institute published by the Royal Institute of Thailand (2013).
2. From these sources, 50 Malay words of Sanskrit origin, which are also loanwords in Thai, were selected for inclusion in the crossword puzzle game platform. A pre-test and post-test were developed using these words to assess learner proficiency before and after engaging with the crossword puzzle activity.

3. The collected lexical items were classified into three groups: Sanskrit, Malay, and Thai. The Malay and Sanskrit words were analyzed in terms of their role as loanwords within the Thai language.
4. Descriptive and analytical accounts of the Malay words of Sanskrit origin, which also appear as loanwords in Thai, were prepared. Subsequently, crossword puzzle games were designed to facilitate learning these terms.
5. The pre-test and post-test scores were evaluated according to five performance categories: “very good” (90–100), “good” (70–80), “acceptable” (50–60), “low” (30–40), and “very low” (0–20). Students achieving scores within the “very good” range (90–100) on the post-test were considered to have met the learning standards.
6. The pre-test was administered prior to classroom instruction to assess learners’ baseline knowledge, while the post-test was conducted after the crossword puzzle intervention to evaluate improvements in the identification of Malay words of Sanskrit origin shared with Thai.
7. Each student’s pre-test and post-test scores were compared against established learning standards. The research findings, including conclusions and discussion, were presented using descriptive narratives supported by figures and tables to illustrate the results clearly.

IV. RESEARCH RESULTS

The primary objectives of this research were to examine the history and influence of Sanskrit in Malaysia and Thailand, to investigate the semantic changes of Malay words of Sanskrit origin that function as shared loanwords in Thai, and to evaluate the effects of using a crossword puzzle game to facilitate the learning of Malay words of Sanskrit origin in the context of Thai language acquisition. The key findings are as follows:

The Appearance of Sanskrit in Malay and its Relationship to the Malay Language

Samad Ahmad (1974) asserted that contact between the peoples of the Indian subcontinent and the Malay world dates back approximately 2,000 years. During this period, Hindu and Buddhist missionaries introduced Sanskrit through religious texts to facilitate the propagation of their religions in the Malay Peninsula. Sanskrit entered Southeast Asia, and by the seventh century, numerous Sanskrit-derived words had been incorporated into Old Malay, largely as a result of the cultural and economic influence exerted by the Indian subcontinent prior to the adoption of Islam by several Malay rulers (Andaya & Andaya, 1982, p. 14).

This perspective is further supported by Sarkar (1985), who traced the spread of Sanskrit in Southeast Asia and Malaysia through archaeological evidence, including art and architecture. Southeast Asian countries, including Malaysia, became prominent centers of Indian cultural influence from the early centuries of the Common Era. Bronkhorst (2011) corroborated this account by dating the earliest Sanskrit inscriptions in South Asia to the early centuries of the Common Era, after which Sanskrit gradually spread, impacting numerous languages across the South Asian subcontinent and much of Southeast Asia, including Malay-speaking regions.

Pollock (1996) estimated the period of Sanskrit’s expansion to Southeast Asia as spanning approximately from 300 to 1300 CE. Based on these historical findings and related evidence, it can be concluded that Sanskrit has a longstanding presence in Malaysia. The relationship between Malay and Sanskrit is fundamentally one of cultural exchange, with Sanskrit contributing extensively to the Malay language and culture through vocabulary, philosophical ideas, and cultural practices from antiquity to the present.

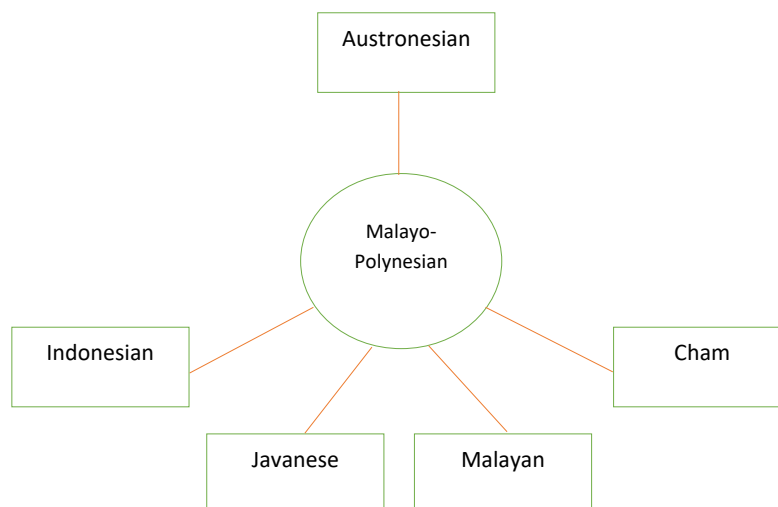


Figure 1. The Austronesian Language Family

The Relationship Between Malay and Thai Words Derived From Sanskrit

Although Malay belongs to the Austronesian language family and Thai to the Tai language family, both languages have incorporated a significant number of loanwords from Sanskrit. This linguistic borrowing is especially evident in

vocabulary related to religious and philosophical concepts. Several examples of Malay and Thai words of Sanskrit origin, particularly in these domains, are presented below:

TABLE 1
EXAMPLES OF WORDS OF SANSKRIT ORIGIN SHARED BETWEEN MALAY AND THAI

Malay of SKT	Austronesian	Original SKT	Indo-European	Tai	Shared Word in Thai
Bahasa (language)	⇔	BhÁÓÁ (language)		⇒	pha:-sá: (language)
Dewa (god)	⇔	Deva (god)		⇒	the:-wa:, thê:p (god)
Suria (sun)	⇔	ḌÚrya (sun)		⇒	sù-rá-já?, sù:n (sun)

Although Malay and Thai belong to different language families, some loanwords of Sanskrit origin exhibit similarities, despite slight variations in their written forms due to the distinct linguistic systems of each language.

Semantic Change in Malay and Thai Loanwords of Sanskrit Origin

This research identified three types of semantic change in Pali and Sanskrit loanwords: 1) widening of meaning, 2) narrowing of meaning, and 3) transferring of meaning. These can be explained as follows.

Widening of Meaning

Pali and Sanskrit words with originally narrow meanings may be employed with broader meanings, particularly when newly specified senses are added to the original definitions. Through such semantic change, these Pali and Sanskrit words acquire meanings that are more expansive than their originals. The new meanings may encompass a variety of senses or connotations; for example:

TABLE 2
EXAMPLES OF WIDENING OF MEANING

Malay of SKT	Meaning	Original SKT	Meaning	Shared Word in Thai	Meaning
Gangгаа	The deified Ganges, in Malay often an indefinite honorific suggesting the divine (see also nilaganga) e.g. naga ganga-a supernatural dragon, gangгаа Melayu-artificial alphabet used for clandestine correspondence. In Perak, gangгаа Melayu is a cryptic alphabet.	GaÉgÁ	The river Ganges, the most sacred river in India. The Ganges is personified as a goddess.	กขกค (khon-kha:)	The river Ganges in India, rivers in general.
Saambuu	The benevolent, Siva, the crocodile spirit	svayambhÚ	Causing happiness, granting prosperity; Samhuh-name of Siva	สขมขุ (sà-jòm-phu:)	Self-produced, Siva, it means Buddha in the context of Thai society, a Buddha statue.
Karma	The law of cause and effect	karma	Action, work, deed, execution, performance, business, office, duty a religious rite, a specific action, moral duty, fate, the certain consequence of acts done in a former life.	กขคค (kam)	Action, work, errand, sin, bad luck, death

The examples of Malay and Thai words of Sanskrit origin, which function as shared loanwords in the Thai language such as *gaÉgÁ*, *svayambhÚ* and *karma*, are employed in both Malay and Thai with meanings broader than those of the original Sanskrit terms.

Narrowing of Meaning

The meaning of a Pali or Sanskrit loanword becomes less general or inclusive than its original sense. This type of semantic change is also referred to as specialization. One characteristic of a Pali or Sanskrit loanword with a narrowed meaning is that it may acquire either positive or negative connotations due to semantic restriction (Makchaeng, 1982). For example:

TABLE 3
EXAMPLES OF NARROWING OF MEANING

Malay of SKT	Meaning	Original SKT	Meaning	Shared Word in Thai	Meaning
agaa maa	Religion, belief in god, Hindu,	Ágama	A traditional doctrine or precept, a sacred writing or scripture, a voucher or written testimony, science, a system of philosophy, the Vedas, the sacred scripture, Satra, coming, approach, acquisition, birth, origin	อักขม (ʔa:-khom)	magic, spell, enchantment, sorcery, charm, enchantment,
anuugeraah	Favour, grace, gracious, award, gift (from a ruler or superior), bounty (of princes or gods)	anugraha	favour, kindness, obligation, showing favour, rewarding, assistance, help (shown to the poor in feeding them), facilitating by spells, acceptance, princely bounty	อนุเคราะห์ (ʔà-nú-khráʔ)	favour, help
bahaagia	Joy, good fortune, blessing, happy,	bhÁgya	Lucky, fortunate, fate, destiny, luck	ภาคย์ (phâ:k)	luck, lucky

Examples of Malay and Thai words of Sanskrit origin, such as *Ágama*, *anugraha* and *bhÁgya*, are used in their respective languages with meanings that are less general or inclusive than those of the original Sanskrit terms.

Transferring of Meaning

Pimpuang (2008) stated that the original meaning of a Pali or Sanskrit word is discontinued in usage, and a new meaning is explicitly coined and employed in its place (p. 124). For example:

TABLE 4
EXAMPLES OF TRANSFERRING OF MEANING

Malay of SKT	Meaning	Original SKT	Meaning	Shared Word in Thai	Meaning
maara	Advance, progress, peril, danger, misfortune, evil, injury, calamity	mÁra	Killing, slaughter, slaying, an obstacle, hindrance, opposition, the god of love; death	มาร (ma:n)	Ogre, enemy, a person who is an obstacle to making merit
sengsaara	Hazard, peril, difficulty, trouble, affliction, suffering, misery, torment, torture, pain	saꜥsÁra	The misery of the mundane world, course, passing, mundane existence, transmigration	สงสาร (sǒŋ-sā:n)	Having compassion, Being merciful
asaa	Hope, trust	ÁĐÁ	Hope, expectation	อาสา (ʔa:-sā:)	Offering oneself to do some thing

Examples of Malay and Thai words of Sanskrit origin, which function as shared loanwords, have lost the original meanings of the three Sanskrit words *mÁra*, *saꜥsÁra* and *ÁĐÁ*. Instead, new meanings have been coined and are now employed in place of the originals.

As a result of a comparative study examining three types of semantic change; widening, narrowing, and transferring in Malay and Thai loanwords of Sanskrit origin, it was found that among the 50 Malay words sampled in this research, the majority (24 words) exhibited semantic widening. This was followed by 22 words demonstrating semantic narrowing, and only 4 words showing semantic transferring. The figure below illustrates the semantic changes observed in the 50 Malay and Thai words of Sanskrit origin.

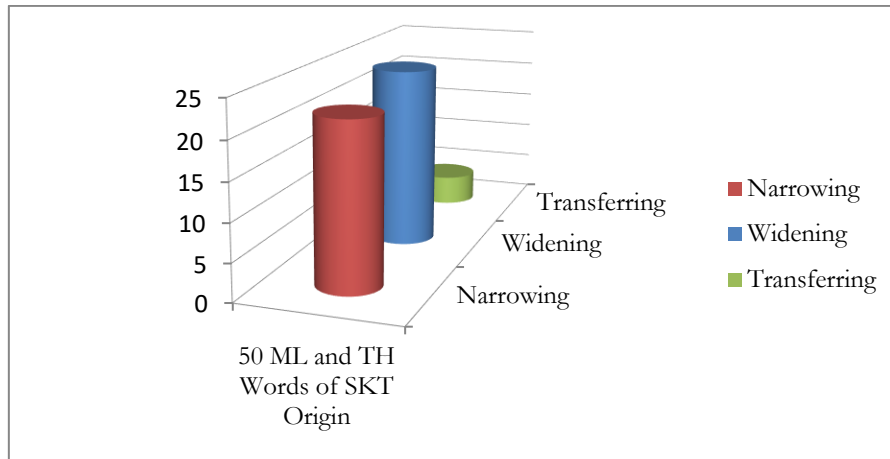


Figure 2. Results of Semantic Changes of 50 Malay and Thai Words of Sanskrit Origin

Using Crossword Puzzles to Learn Malay Words of Sanskrit Origin in Thai

Regarding the use of crossword puzzle games to facilitate the learning of 50 Malay words of Sanskrit origin, which are shared loanwords in the Thai language, crossword puzzles were employed to assist lecturers in creating interactive classroom activities. Simultaneously, this approach helped students engage with the content more effectively while enjoying the learning process. Rahayu et al. (2021) outlined the following steps for learning Malay words of Sanskrit origin—also loanwords in the Thai language—through the use of crossword puzzles:

TABLE 5
STEPS OF IMPLEMENTING THE CROSSWORD PUZZLE GAME

Steps	Description
Step 1	Write the keyword (clue) terminology related to the assigned subject matter.
Step 2	Create boxes to accommodate the length of each answer, whether long or short.
Step 3	Formulate questions that correspond to the keywords.
Step 4	Distribute crossword puzzle sheets to the students.
Step 5	Set a time limit for completing the activity.
Step 6	Assess students both individually and in groups.

As shown in the table above, six preparatory steps are necessary prior to implementing the crossword puzzle game for teaching Malay words of Sanskrit origin, which are shared loanwords in Thai, within vocabulary instruction.

Effectiveness of Learning Through the Crossword Puzzle Game

The effectiveness of learning 50 Malay words of Sanskrit origin, which are shared loanwords in the Thai language, through the use of the crossword puzzle game is illustrated and discussed in Figure 3.

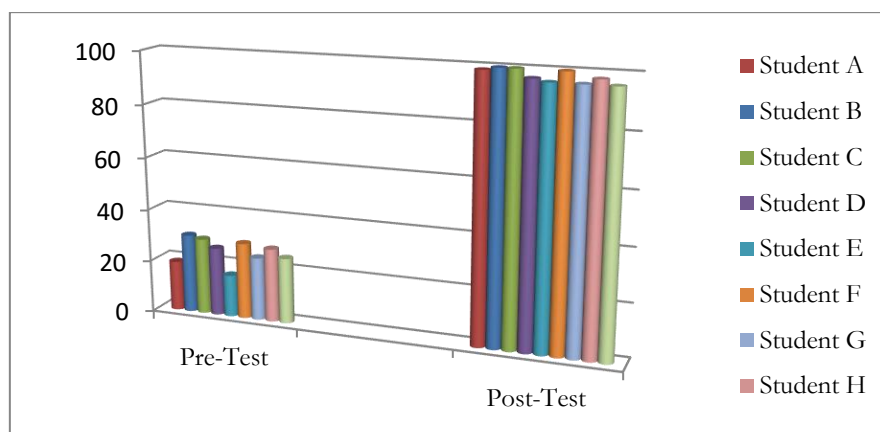


Figure 3. Effectiveness of Learning After Pre-Test and Post-Test

Figure 3, as presented above, illustrates the effectiveness of learning Malay words of Sanskrit origin shared as loanwords in the Thai language through the use of a crossword puzzle game. The figure provides both pre-test and post-test scores to facilitate a comparative analysis. Subsequently, statistical analysis was conducted, and the results were categorized into five performance levels: “Very Good” (90–100), “Good” (70–80), “Acceptable” (50–60), “Low” (30–40), and “Very Low” (0–20). The extent of the differences between students’ performance in the pre-test and post-test was then analyzed and interpreted as follows:

TABLE 6
DEVELOPMENT SUMMARY AND ACHIEVEMENT LEVEL

Student	Pre-test	Post-test	Development Summary	Achievement Level
A	Prior to engaging with the crossword puzzle game designed to teach Malay vocabulary of Sanskrit origin that also exists as shared loanwords in the Thai language, Student A demonstrated limited knowledge and understanding of the target vocabulary, correctly identifying only 19% of the words in the pre-test.	In the post-test, Student A demonstrated a strong understanding of the vocabulary, accurately identifying 99% of the target words.	Upon completion of both assessments, Student A successfully met the expected learning standard.	Very Good
B	Before engaging with the crossword puzzle game designed to teach Malay words of Sanskrit origin, which are shared loanwords in the Thai language, Student B achieved a score of only 30% on the pre-test.	In the post-test, Student B demonstrated complete mastery of the vocabulary, accurately identifying 100% of the target words.	Upon completion of both assessments, Student B successfully achieved the expected learning standard.	Very Good
C	Before engaging with the crossword puzzle game focused on Malay words of Sanskrit origin—shared loanwords in the Thai language—Student C was able to correctly identify only 29% of the words in the pre-test.	In the post-test, Student C demonstrated a clear understanding of the vocabulary and achieved a perfect score of 100%.	Upon completion of both assessments, Student C successfully met the expected learning standard.	Very Good
D	Before engaging with the crossword puzzle game focused on Malay words of Sanskrit origin—shared loanwords in the Thai language—Student D demonstrated a very limited understanding of the vocabulary, correctly identifying only 26% of the words in the pre-test.	In the post-test, Student D demonstrated a solid understanding of the vocabulary, correctly identifying 97% of the words.	Upon completion of both assessments, Student D successfully met the expected learning standard.	Very Good
E	Before engaging with the crossword puzzle game focused on Malay words of Sanskrit origin—shared loanwords in the Thai language—Student E possessed very limited knowledge, achieving a score of only 16% on the pre-test.	However, in the post-test, Student E demonstrated a strong understanding of the vocabulary, achieving a score of 96%.	Upon completion of both assessments, Student E successfully met the expected learning standard.	Very Good
F	Before engaging with the crossword puzzle game focused on Malay words of Sanskrit origin—shared loanwords in the Thai language—Student F demonstrated limited understanding, correctly identifying only 29% of the words in the pre-test.	However, Student F demonstrated clear proficiency, correctly identifying 100% of the words in the post-test.	Upon completion of both assessments, Student F successfully met the expected learning standard.	Very Good
G	Before engaging in the crossword puzzle game focused on Malay words of Sanskrit origin, which are shared loanwords in the Thai language, Student G exhibited very limited understanding and scored only 24% on the pre-test.	In the post-test, Student G demonstrated a strong understanding of Malay words of Sanskrit origin, which also function as loanwords in the Thai language, achieving a score of 96%.	Upon completion of both assessments, Student G successfully met the expected learning standard.	Very Good
H	Before engaging with the crossword puzzle game focused on Malay words of Sanskrit origin—shared loanwords in the Thai language—Student H demonstrated limited understanding, correctly identifying only 28% of the words in the pre-test.	However, Student H demonstrated strong proficiency, correctly identifying 98% of the words in the post-test.	Upon completion of both assessments, Student H successfully met the expected learning standard.	Very Good
I	Before engaging with the crossword puzzle game focused on Malay words of Sanskrit origin—shared loanwords in the Thai language—Student I demonstrated very limited understanding, obtaining a score of only 25% on the pre-test.	In the post-test, Student I demonstrated a solid understanding of Malay words of Sanskrit origin, which also serve as loanwords in the Thai language, achieving a score of 96%.	Upon completion of both assessments, Student I successfully met the expected learning standard.	Very Good

Therefore, the use of the crossword puzzle game in this study appears to have served as a highly effective supplementary tool, significantly enhancing student learning outcomes. Improved performance in acquiring Malay words of Sanskrit origin shared as loanwords in the Thai language was clearly observed following the implementation of the crossword puzzle game in the learning process.

V. DISCUSSION AND CONCLUSION

In conclusion, the analysis of the research findings yields several key insights. Although Malay and Sanskrit originate from distinct language families—Malay from the Austronesian family and Sanskrit from the Indo-European family—historical contact facilitated the adoption of numerous Sanskrit-derived words into the Malay lexicon. This linguistic influence can be traced back to the early centuries of the Common Era, when Sanskrit inscriptions began to emerge across Southeast Asia. As Pollock (1996) notes, Sanskrit played a pivotal cultural and linguistic role in the Malay Peninsula and surrounding regions between approximately CE 300 and 1300.

This assertion supports the earlier claim by Samad Ahmad (1974), who noted that people from the Indian subcontinent had interacted with the Malay population for over 2,000 years. As Sanskrit spread, it gained prominence as a liturgical language of Hinduism, Buddhism, and Jainism. It was introduced as a written language in Southeast Asia, facilitating the assimilation of Sanskrit vocabulary into local languages, including Malay (Jefbeck, 2023).

Present-day Malay retains many Sanskrit-origin words such as *Dewa* (god), *Bahasa* (language), *Indera* (god Indra), *Guna* (virtue), and *Setia* (loyalty). Interestingly, these words are also found in the Thai language as shared loanwords, albeit with potential phonological and semantic modifications due to the distinct linguistic systems of Malay and Thai.

The semantic changes observed in these Sanskrit-derived Malay and Thai words include semantic widening, narrowing, and shifting (transference). Among these, semantic widening was most frequently encountered, followed by narrowing and transference. As noted by Pimpuang and Yuttapongtada (2023) while the core religious concepts conveyed by these Sanskrit terms remained relatively stable, their meanings evolved when used in secular contexts, resulting in various types of semantic shifts across different cultures and societies.

In terms of pedagogical implications, the integration of a creative digital tool the crossword puzzle game proved highly effective in enhancing vocabulary learning. This innovative approach not only supported students' comprehension but also increased their motivation and enjoyment. As Rahayu and Srirahayu (2019) emphasize that crossword puzzle games are effective tools for improving vocabulary mastery. In this study, the game served not only to reinforce the learning of Sanskrit-origin Malay words but also to foster an engaging and dynamic classroom environment.

These findings align with the observations of Pimpuang et al. (2023), who advocated for inno-creative approaches in teaching Thai to students in the digital era. The use of crossword puzzle games in this study significantly improved learning outcomes. Pre-test results indicated limited prior knowledge, while post-test results showed clear improvements in understanding, vocabulary acquisition, and achievement of learning standards.

Furthermore, the increased student interest and enjoyment suggest that such game-based strategies enhance both cognitive and affective aspects of learning. This is consistent with the findings of Rahayu et al. (2021), who noted that crossword puzzle games create an engaging classroom atmosphere, promote vocabulary development, and sustain students' attention.

Finally, the broader implications of this research suggest a shift from rote memorization to more interactive and creative learning strategies. Traditional methods of memorizing Sanskrit-origin Malay and Thai words were often ineffective. However, the use of the crossword puzzle game significantly improved learning outcomes and student satisfaction. Therefore, this approach could be extended to other languages with Sanskrit influence, such as Indonesian, to support vocabulary acquisition and foster meaningful learning experiences.

REFERENCES

- [1] Andaya, B. W., & Andaya, L. Y. (1982). *A history of Malaysia*. St. Martin's Press.
- [2] Apte, V. S. (2010). *The practical Sanskrit-English dictionary*. Motilal Banarsidass.
- [3] Bloom, B. S. (1956). *Taxonomy of educational objectives* (handbook: The cognitive domain). David McKay.
- [4] Boonlue, S. (2018). *Gamification in education*. <http://qa.hcu.ac.th/km/Fileuploads/Gamification-2561.pdf>/ Retrieved July 11, 2025.
- [5] Bronkhorst, J. (2011). "The spread of Sanskrit in Southeast Asia." In Manguin, Pierre-Yves, Mani, A., & Wade, Geoff (Eds.), *Early interactions between South and Southeast Asia: Reflections on cross-cultural exchange* (pp. 263–275). Institute of Southeast Asian Studies.
- [6] Brown, H. D. (1994). *Principles of language learning and teaching*. Prentice Hall.
- [7] Dashela, T., Supardi, I., & Wardah. (2017). Improving students' vocabulary in irregular and regular verbs by using Crossword Puzzle. *Jurnal Pendidikan Dan Pembelajaran Khatulistiwa*, 6(5), 1-10.
- [8] Franklin, S., Peat, M., & Lewis, A. (2003). Nontraditional interventions to stimulate discussion: The use of games and puzzles. *Journal of Biological Education*, 37(2), 79–84.
- [9] Harwika. (2018). *Using Wordwallmedia to improve the students' vocabulary mastery at the seventh grade of SMPN 4 Marioriwana Kab, Soppeng* [Master's thesis]. TarbiyahFaculty State Islamic Institute.

- [10] Jefbeck, E. (2023). *Malay words from Sanskrit: A linguistic analysis with 20+ vocabulary*. <https://ling-app.com/ms/malay-words-from-sanskrit/> Retrieved April 8, 2025.
- [11] Jorge, F. F. (2015). Using gamification to enhance second language learning. *Digital Education Review*, 27(21), 32-54.
- [12] Khanithanan. W. (1984). *Historical linguistics: Evolution of Thai and English*. Thammasat University Press.
- [13] Lestari, N., & Yulia, Y. (2018). The use of Crossword Puzzle to improve vocabulary mastery of the fifth grade students of SD N GOLO. *Journal of English Language and Language Teaching*, 2(2), 71-79.
- [14] Makchaeng, S. (1982). *Pali-Sanskrit in Thai language*. Department of Thai Language, Faculty of Humanities and Social Sciences, Thonburi College of Teachers.
- [15] Matminchainara, P. (n.d.). *Malay words in Thai*. Department of Thai Language and Oriental Languages, Faculty of Humanities and Social Sciences, Prince of Songkla University.
- [16] Monier-Williams. (1999). *A dictionary of English and Sanskrit*. Motilal Banarsidass.
- [17] Pimpuang, K. (2008). *Pali-Sanskrit loanwords*. Bangkok: Department of Thai Language, Faculty of Humanities, Kasetsart University.
- [18] Pimpuang, K. (2016). Fundamental sentence structure of Pali and English: A comparison for translating into Thai language. *Journal of International Studies*, 6(2), 46-66.
- [19] Pimpuang, K., Yuttapongtada, M., & Sunghor, N. (2023). Thai conversation learning and teaching for foreigners based on Thai culture context in the CTLF program at Kasetsart University: Evolution and inno-creative approach. *Theory and Practice in Language Studies*, 13(10), 2536-2543.
- [20] Pimpuang, K., & Yuttapongtada, M. (2023). Effectiveness of learning English words of Sanskrit origin as loanwords in Thai through WordWall Gamification. *LEARN Journal: Language Education and Acquisition Research Network*, 16(2), 451-468.
- [21] Pollock, S. (1996). 'The Sanskrit cosmopolis, 300-1300: Transculturation, vernacularization, and the question of ideology'. In Jan E.M. Houben (Ed.), *Ideology and status of Sanskrit: Contributions to the history of the Sanskrit language* (Brill's Indological Library, 13, pp. 197-247). Leiden: E.J. Brill.
- [22] Rahayu, A. C., Yosephin, M., & Sophia, T. C. (2021). The use of Crossword Puzzle in teaching English vocabulary. *Proceeding of English Teaching, Literature and Linguistics (Eternal) Conference*, 1(1), 271-283.
- [23] Rahayu, Y. S., & Srirahayu, A. (2019). *The effectiveness of crossword puzzles game towards improving students' vocabulary mastery* [Unpublished pre-experimental study]. SMP Muara Madani, Indonesia.
- [24] Royal Institute. (2013). *Dictionary of the royal institute B.E.2554* (2nd ed.). Royal Institute.
- [25] Samad Ahamad, A. (1974). *Sejarah Kesusasteraan Melayu 1*. Dean Bahasa Dan Pustaka, Kementerian Delajaran Malaysia.
- [26] Sarkar, H. B. (1985). *Cultural relations between India and Southeast Asian countries*. Motilal Banarsidass.
- [27] Somaiya Centre for Buddhist Studies. (2005). *Sanskrit words in South-East Asian languages* (Satyavrat Sastri, Kalpakam Sankaranarayanan, Parineeta Deshpande, Eds.). Somaiya Publications.
- [28] Thongprasert, C. (1977). Karn nam kam balee leah sanskrit ma chai nai pasa Thai [Application of Pali and Sanskrit in the Thai Language]. *Royal Institute*, 3(2), 37-40.
- [29] Weisskirch, R. S. (2006). An analysis of instructor-created Crossword Puzzles for student Review. *College Teaching*, 54(1), 198-201.
- [30] Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Wharton Digital Press.



Kowit Pimpuang was born in Buriram (Thailand) in 1976. He is an Associate Professor of the Department of Thai Language, Faculty of Humanities, Kasetsart University Bangkok (Thailand) from 2007 to the present. He earned his Ph.D. in Sanskrit (Sanskrit-language, philosophy and literature) from the University of Pune (India) in 2004. He is an expert in teaching Thai for international students from 2010 to the present. His 66 academic articles were published in national and international journals. Associate Professor Dr. Kowit Pimpuang won the Best Presentation Award in ICHLSS Brisbane, Australia.