

The Psychological Reality of English Phonaesthemes: A Theoretical and Empirical Investigation

Lecturer Ahmed Sahib Jabir Mubarak, M. A.

١. Introduction

The relationship between sound and meaning is universally believed to be symbolic and arbitrary. Whereas this seems to be generally true, there are some indications that specific sound clusters can be seen as signs of word meanings. It has long been noticed that some consonant clusters indicate certain meanings in a number of words. For instance, it has been asserted that the initial cluster *gl-* is found in words referring to light or vision, like *glitter*, *glimpse*, *gleam*, etc. The idea that such clusters, generally known as **phonaesthemes**, indicate certain meanings has motivated some linguists to consider them as having the status of morphemes, an idea which is rejected by others. In this paper, an attempt is made to explore this phenomenon to answer two main questions: (١) What is the status of the phonaestheme? Is it a mere phoneme cluster or should it be considered as a morpheme? and (٢) Is the idea of phonaesthemes has a practical significance in teaching? To answer these two questions, the paper first surveys the related literature, examining and discussing the different viewpoints researchers hold concerning the status of phonaesthemes hoping that a conclusion about their status will be arrived at. Then the Cambridge Advanced Learner's Dictionary (CALD) will be surveyed to find out whether or not the percentages of the phonesthemic words for each phonaestheme are of practical significance. Answering the two questions above (specially the second one) is supposed to be of some pedagogical significance for EFL teachers and students particularly those teaching (or learning) reading and listening comprehension skills.

٢. What are Phonaesthemes?

The idea, not the term, of the phonaestheme has a long history in the linguistic literature. It is assumed that the first to write about this phenomenon was John Wallis in his book *Grammar of the English Language*, ١٦٩٩ (Bergen, ٢٠٠٤: ٢٩١). The term, phonaestheme, was coined by Firth (١٩٣٠: ٥٠) to show the correlations of certain word initial or word final phonemes with meanings, e.g., in the words *flame*, *flash*, *flag*, *flake*, *flap*, etc., the phonemic cluster *fl-* is said to designate the sense of 'movement'. He claimed that people were affected by initial and final phoneme groups, and “the more consistently similar sounds function in situations having a similar affective aspect, the clearer their function would be” (ibid: ٥١).

In other words, the phonesthemic function of these clusters lies in the correlation between the way they sound and certain “common features of the contexts of experience and of

situation in which they are used” (Firth, ١٩٥٧: ٤٤). This sound-meaning association is most eloquently described by Bloomfield: “Every word, in so far as it is semantically expressive, may establish, by haphazard favoritism, a union between its meaning and any of its sounds” (Bloomfield, ١٨٩٥: ٤٠٩–٤١٠ cited in Mela-Athanasopoulou, ٢٠٠٧: ٢٢٤). Bolinger (١٩٦٥: ٢٢٧), on his part, asserts that phonaesthemes are sub-morphemic units of potential interest in linguistic studies that can be simply defined as components of words that seem to correspond with an aspect of a word's meaning. Hutchins (١٩٩٨: ٣٦), giving a similar definition, states that the *phonaestheme* is a sub-morphemic unit that has a predictable effect on the meaning of a word as a whole. Blust (٢٠٠٣: ١٨٨) seems to agree with these definitions proclaiming that phonaesthemes may be represented as units, below the level of the morpheme, but above the level of the phoneme. Bergen (٢٠٠٤: ٢٩٠) defines phonaesthemes twice. First, he defines them as “frequently recurring sound-meaning pairings that are not clearly contrastive morphemes.” This definition relies on a negative criterion, and a subjective one: the clarity of a particular sound-meaning pairing’s status. In his second, narrower definition he views phonaestheme as “form-meaning pairings that crucially are better attested in the lexicon of a language than would be predicted, all other things being equal.” He (ibid) adds that generally phonaesthemes seem to appear in content words over function words, and in more specific (or subordinate level) rather than more general (or basic level) words. Shisler (١٩٩٧ b) believes that “the validity of a phonestheme is, in the first instance, contextual only: if it fits the meaning of the word in which it occurs, it reinforces the meaning and, conversely, the more words in which this occurs, the more its own meaning is strengthened.” Additionally, He (ibid) points out that phonaesthemes are most active in *simplex words*. Simplex words, he explains, are either monosyllabic words or bisyllabic words which are primarily stressed on the first syllable. In this connection, another terminological note needs to be clearly stated. Shisler (ibid) mentions that “the shared cultural response to a phonaestheme is called phonaesthesia. Cornish (٢٠١٠) describes phonaesthesia as a type of conventional sound symbolism whereby phonemes, clusters or syllables are associated with a sub-lexical meaning. The study of phonaesthemes and phonesthesia is called ‘phonesthetics’. As a final point, it is worth mentioning that Firth (١٩٣٠) uses the spelling *phonaestheme*, which is also sometimes spelled *phonaesthesia*. Some researchers, however, use the spelling *phonestheme*. The first spelling (*phonaestheme*) is used throughout this paper.

٣. Comparing Phonaesthemes to Morphemes

To begin with, a word about phonaesthemes should be mentioned. This phenomenon has not been paid enough attention due to the fact that it opposes Saussure’s theory of the arbitrariness of the linguistic sign. Moreover, while proposing over a hundred phonaesthemes in English alone, linguists have long struggled with their status in theories of natural languages:

whether or not they qualify as morphemes, how they are related to sound symbolism, and how to decide if they are real rather than mere coincidences in the lexicon (Shisler, 1994a). Echoing this dispute, this section will attempt to discuss this issue to discover the status of phonaestheme and its relation to morphemes. The morpheme is generally defined as the smallest meaningful unit of grammatical analysis that cannot be further divided into smaller elements with meaning (Bybee, 1985: 121). This means that it has a definite meaning that applies to all words it is attached to and a definite (unchanging) sound form. In this regard, there are some similarities between the phonaestheme and the morpheme. A morpheme, such as the prefix *pre-*, has both a distinctive sound and a meaning. A phonaestheme, such as the initial cluster /gl/ also has a distinctive sound and a meaning. This is one of the reasons why some linguists consider phonaesthemes to be nothing more than particular type of morpheme (Shisler, 1994a). Confusing the issue is the word *morpheme* itself. A *minimal sign* is a linguistic sign that does not contain smaller elements. Properly, a *morpheme* is a set of minimal signs with identical content. For example, the /z/ of *boys*, the /iz/ of *stitches*, and the /s/ of *cats* are minimal signs of the same morpheme. Unfortunately, the common definition of the morpheme, "the smallest meaningful unit", seems to blur the distinction between morphemes and other minimal signs. A phonaestheme is a type of minimal sign: the same speaker always pronounces instances of the same phonaestheme in the same way. Nonetheless, morphemes are said to be *segmentable* (i. e.) can be separated from the word to which it is attached. Phonaesthemes, on the other hand, cannot be *meaningfully* separated from the word it is attached to. For example, in a sequence such as *gl-* in *glow*, *glisten*, *glitter*, *glimmer*, etc., by removing *gl-* we are left with meaningless remainders *-ow*, *-isten*, *-itter* and *-immer*, which nevertheless may occur in different environments as in *blow*, *listen*, *bitter*, and *simmer* (Mela-Athanasopoulou, 2007: 220). Shisler (1994b), discussing the syntactic role of the phonaestheme, proclaims another difference: morphemes play a syntactic role in a word while phonaesthemes do not. Morphemes can change the part of speech of a word and, often, morphemes can be inserted only in certain locations within a word. Phonaesthemes, in contrast, can appear anywhere in a word and they never play any syntactic role in a word and thus cannot change its part of speech. In relation to meaning, Loehrlein (2009: 2) asserts that the semantic content of a morpheme, which is often directly present in dictionary denotations (i. e. their meaning is explicit), is more potent than that of a phonaestheme. For example, just about every *proto-* word has something to do with "earliness" but only a fraction of *gl-* words have anything to do with "light" or "shining." The issues of productivity and compositionality also distinguish phonaesthemes from morphemes. The latter are well-known as being highly productive and compositional. A morpheme (free or bound; inflectional or derivational) can be used to generate a good deal of new words. Phonaesthemes, on the other hand, are, in addition

to being non-compositional, are only partially productive, if ever (Bergen, ٢٠٠٤: ٢٩٢). Reflecting on the above discussion, it can be concluded that phonaesthemes cannot be considered as morphemes neither are they mere phoneme clusters. Instead, they are to be seen as in-between units sharing certain sound forms and reflect potential meanings that can be found in a limited number of a language's words. And this conclusion answers the first question mentioned in the Introduction section of this study.

٤. Empirical evidence for the psychological reality of phonaesthemes

After reaching a conclusion regarding the (syntactic) status of phonaesthemes, the study now will consider the second question: Is the idea of phonaesthemes has a practical significance in teaching? To answer this question, a comprehensive survey of the Cambridge Advanced Learner's Dictionary (CALD) will be carried out to find out the words containing phonaesthemes with the specified meaning. Drellishak (٢٠٠٦: ١٧) asserts that a straightforward method of estimating which words are correlated with a particular phonestheme makes use of the frequencies of these words. He (ibid) gives the following explanation: Suppose we have a set of words that might contain a phonestheme. The frequency of a word in the set is defined as the number of times it occurs divided by the total number of word in the set. Now we have, for each word, two frequencies, one for the proposed phonestheme and one for the whole set. The ratio of these two values (frequency in the phonestheme set divided by frequency in the whole set) is the RELATIVE WORD FREQUENCY (RWF), and it tells us which words occur more frequently on average in the phonestheme set. If a phonestheme is real, we would expect that words with the highest RWF to be words associated with the phonesthemic meaning. Table (١) below shows the initial and final phonaesthemes dealt with in this study with their meanings.

The phonaestheme		Its meaning
Initial	gl-	light or vision
	fl-	Movement
	sl-	pejorative meaning
	thr-	violent motion
	str-	Strength of the thing signified
	sw-	(gliding) movement
Final	-idl	a matter of little value or importance
	-ik	Quick sound
	-ip	Quick Movement
	-up	Action that strikes then glides off

Table (١) Some phonaesthemes and their meanings

The Psychological Reality of English Phonaesthemes:

Choosing only these phonaesthemes is made because of two reasons: (١) it is, surely, impossible to cover all the phonaesthemes in this study (this will make hundreds of pages!) so only a limited number has to be selected and (٢) these phonaesthemes are the ones which have clear and indisputable meanings (see Shisler, ١٩٩٧a). To discover the practical significance of these phonaesthemes, the number of words having the proposed meaning of the phonaestheme is counted as well as counting the total number of the words having the same phoneme cluster (this is done following Drellishak, ٢٠٠٦: ١٧ as mentioned above). For example, the number of English words which begin with the cluster /gl-/ is ninety -one among them seventeen ones give the meaning of “light” or “vision”. Following this process, the results shown in the following sections are arrived at.

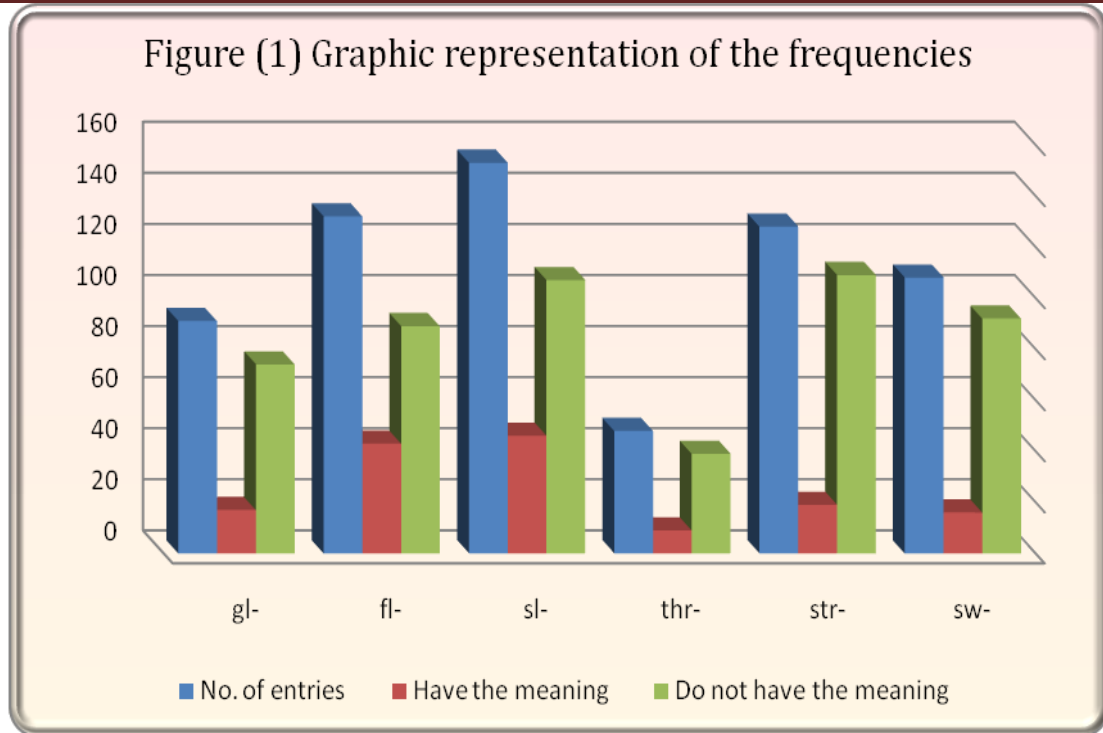
٤. ١. Initial phonaesthemes

Initial phonaesthemes are those which occur at the beginning of the words. Table (٢) shows the results of the frequencies of the words that have initial phonaesthemes. As it can be obviously seen in Table (٢), the number of the words with initial phonaesthemes is much less than those without them.

Phonaestheme	No. of entries	Have the meaning	Do not have the meaning
gl-	٩١	١٧	٧٤
fl-	١٣٢	٤٣	٨٩
sl-	١٥٣	٤٥	١٠٨
thr-	٤٨	٩	٣٩
str-	١٢٨	١٩	١٠٩
sw-	١٠٨	١٦	٩٢

Table (٢) Frequencies of words with initial phonaesthemes

Figure (١) below graphically represents these data to supply the reader with a clear picture to visualize the results. In addition, Appendix (١) presents a list of the phonaesthetic words with initial phonaesthemes dealt with in this study as they are found in CALD.

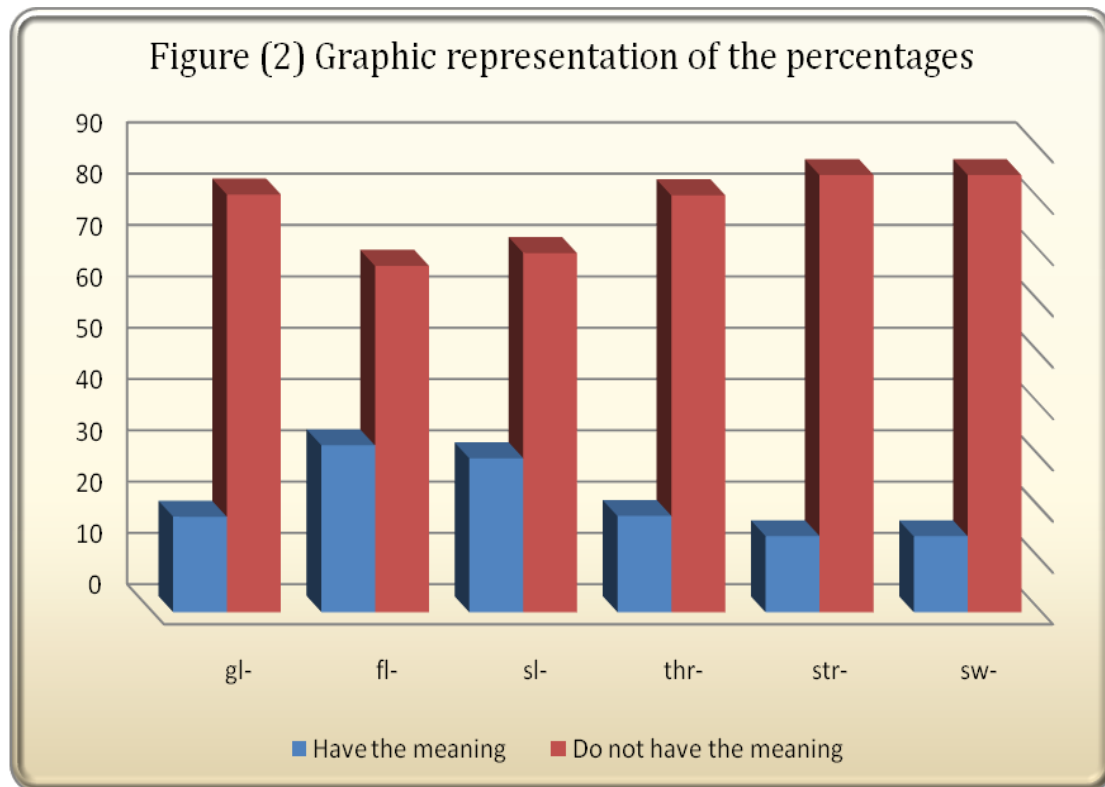


Because the differences in the number of entries shown in Table (٢) above, frequencies will not give a very clear picture about the practical significance of these phonaesthemes. Consequently, percentages will be calculated. These percentages are shown in Table (٣) below.

phonaesthemes	Have the meaning %	Do not have the meaning %
gl-	١٨,٦	٨١,٤
fl-	٣٢,٥	٦٧,٥
sl-	٢٩,٤	٧٠,٦
thr-	١٨,٧٥	٨١,٢٥
str-	١٤,٨	٨٥,٢
sw-	١٤,٨	٨٥,٢

Table (٣) Percentages of the phonaesthemic words

As Table (٣) shows, the percentages of the English words that have the specified meaning of the initial phonaesthemes are generally low (about ١٨-١٥%) except for the second and the third ones (namely: sl- and thr-) for which the recorded percentages amount to about (٣٠%). Figure (٢) below puts forward a graphic representation for Table (٣).



٤. ٧. Final phonaesthemes

Final phonaesthemes are those which occur at the end of words. It is worth mentioning here that the search for initial phonaesthemes is relatively straightforward since they are generally found under one “letter” in the dictionary entry. The search for final phonaesthemes, on the other hand, is quite difficult and thorny since here all the dictionary has to be checked, a matter which demands a lot of time and great effort. This is the third reason why only four final phonaesthemes are selected in this study, added to the two reasons mentioned at the end of page (٨) above.

Table (٤) below shows the results of the frequencies of the words that have final phonaesthemes. From Table (٤), it can be clearly seen that the number of the words with final phonaesthemes is much less than those without them.

Phonaestheme	No. of entries	Have the meaning	Do not have the meaning
-idl	٨٦	٢١	٦٥
-ik	٥٣	٩	٤٤
-ip	٦٩	١١	٥٨
-up	٥٩	١٥	٤٤

Table (٤) Frequencies of words with final phonaesthemes

Figure (٣) below graphically represents the data of Table (٤) to provide the reader with an clear picture to visualize the results. In addition, Appendix (٧) presents a list of the phonaesthetic words with final phonaesthemes dealt with in this study, the majority of which are found in CALD.

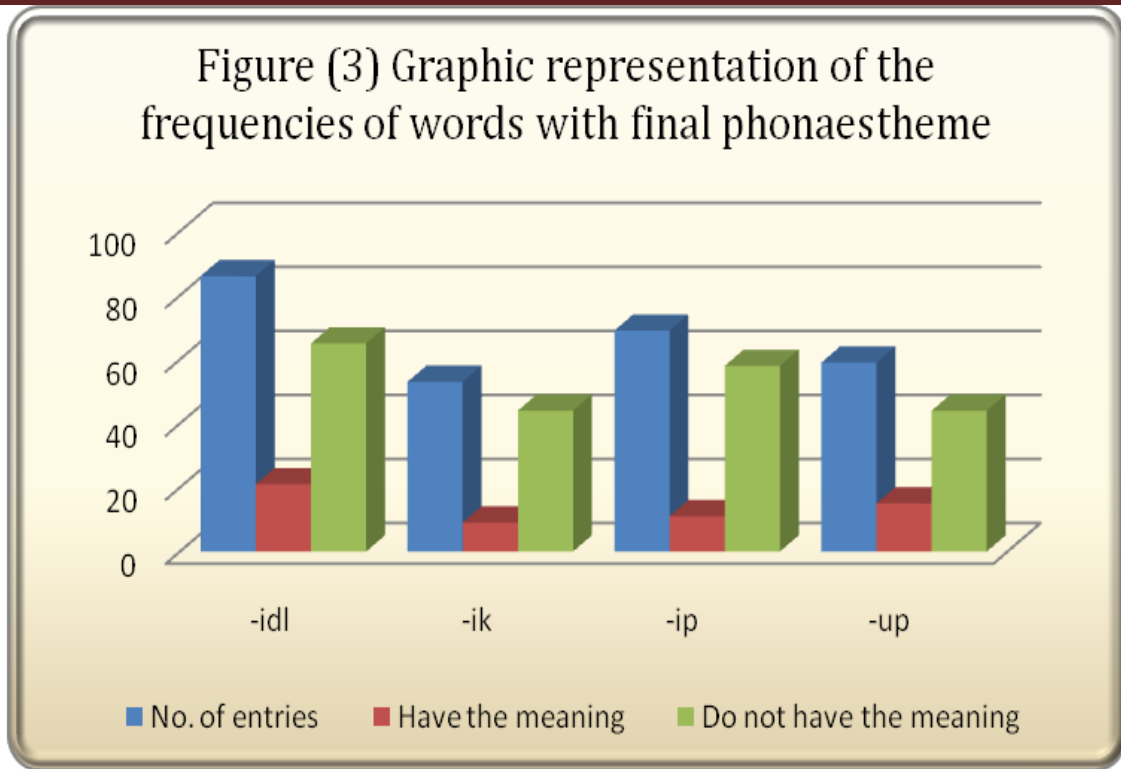
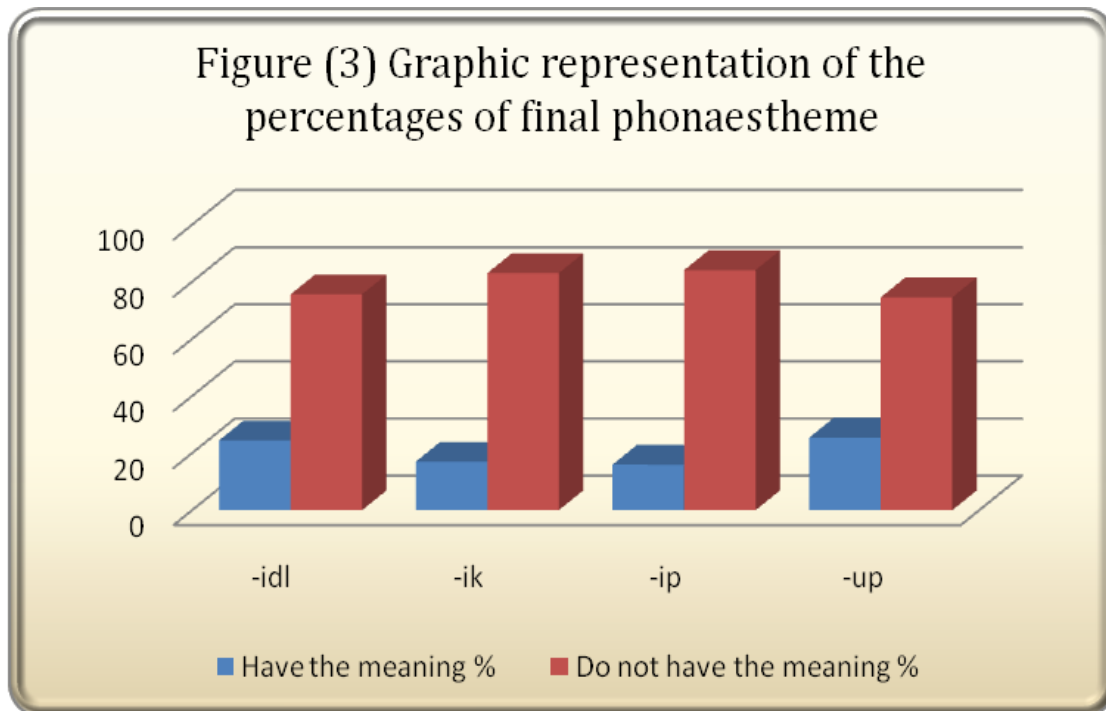


Table (°) below shows the data of final phonaesthemes in percentages.

phonaesthemes	Have the meaning %	Do not have the meaning %
-idl	٢٤,٤٢	٧٥,٥٨
-ik	١٦,٩٨	٨٣,٠٢
-ip	١٥,٩٤	٨٤,٠٦
-up	٢٥,٤٢	٧٤,٥٨

Table (°) Percentages of the words with final phonaesthemes

As Table (°) shows, the percentages of the English words that have the specified meaning of the final phonaesthemes are generally low since the highest percentage recorded is only ٢٥,٤٢% which constitutes only one quarter of the total number. Figure (٤) below puts forward a graphic representation for Table (°).



Since the percentages for the phonaesthetic words are not in any way high, it can be inferred that the idea of phonaesthemes is not of solid practical significance. To put in mind that, in the best case, less than one-third of the words may carry the supposed meaning of the phonaestheme, whether initial or final, means that teaching them to students will not be of much help. What is suggested here is not neglecting that topic as a whole but it can be suggested that phonaesthemes may be presented to students indirectly during discussing the meanings of words in the class since spending time on teaching them in comprehension lessons, for instance, may not be that rewarding.

•. Conclusions

This study raises in its Introduction two questions regarding the status of phonaesthemes and their practicality in teaching. With respect to these questions the following conclusions are arrived at:

١. Phonaesthemes cannot be regarded as, or equated to, morphemes since they are non-segmentable and non-compositional parts of the word.
٢. The idea of explicitly teaching phonaesthemes seems not to be of tangible practical significance since the best percentage recorded for phonaesthetic words, both with initial or final phonaestheme, only amounts to about (٣٠%).
٣. It appears sensible and reasonable that phonaesthemes may be taught indirectly in comprehension lessons, for examples, since they do not seem to record a satisfactory high percentage in English.
٤. Phonesthetics still forms an important subject of future investigation in linguistics. Actually, further and more detailed research need to be carried out to discover more and more about this interesting subject.

References

- Bergen, B. (٢٠٠٤). "The Psychological Reality of Phonaesthemes." *Language*, ٨٠(٢), ٢٩١-٣١١.
- Blust, R. (٢٠٠٣). The phonestheme η in Austronesian languages. *Oceanic Linguistics* ٤٢: ١٨٧-٢١٢.
- Bolinger, D. L. (١٩٦٥). "Shivaree and the phonestheme." In *Forms of English: Accent, morpheme, order* (pp. ٢٢٧-٢٢٩). Cambridge: Harvard University Press.
- Bybee, J. L. (١٩٨٨). "Morphology as lexical organization." In *Theoretical morphology: Approaches in modern linguistics* (pp. ١١٩-١٤٢). San Diego: Academic Press, Inc.
- Cornish, J. (٢٠١٠) "Tracing the Roots of Phonaesthesia: An Investigation of the *gl-* and *sl-* Phonaesthemes."
- <http://wings.buffalo.edu/org/gggaas/GLAC⁹/LinksToAbstracts.htm> Firth, John R. (١٩٣٠)
- Speech. In *The tongues of men and Speech*, ed. by Peter Strevens. Oxford, UK: Oxford University Press.
- (١٩٥٧) "Modes of Meaning". In *Papers in Linguistics 1934-1951*. London: Oxford University Press.
- Hutchins, S. S. (١٩٩٨). The psychological reality, variability, and compositionality of English phonesthemes. *Dissertation Abstracts International*, ٥٩(٠٨), (pp: ٣٦-٣٧)
- Loehrlein, A (٢٠١١) A Hybrid Approach to Faceted Classification Based on Analysis of Descriptor Suffixes. <http://www.asis.org/Conferences/AM05/abstracts/٢٠٤.html>
- Mela-Athanasopoulou, Elizabeth (٢٠٠٧) Phono-semantically Motivated Lexical Patterns: Evidence from English and Modern Greek. In E. Close, M. Tsianikas and G. Couvalis (eds.) "Greek Research in Australia: Proceedings of the Sixth Biennial International Conference of Greek Studies, Flinders University June ٢٠٠٥", Flinders University Department of Languages - Modern Greek: Adelaide, ٢٢٣-٢٢٤.
- Shisler, B. K. (١٩٩٧ a) *The Dictionary of English Phonaesthemes*. Retrieved Feb ١٣, ٢٠٠٩ from <http://www.geocities.com>.
- (١٩٩٧ b) "The Influence of Phonesthesia on the English Language" Retrieved on Feb ١٣, ٢٠٠٩ from <http://www.geocities.com>.

Appendix (١): A list of words with initial phonaesthemes

<i>gl-</i>	<i>fl-</i>	<i>fl-</i>	<i>sl-</i>	<i>sl-</i>	<i>str-</i>
glance	flag	flux	slack	sludge	strafe
glare	flagellate	fly	slag	slug	strain
glass	flail	flab	slam	sluggard	strain
glasses	flame	flambé	slammer	slum	strangle
glaucoma	flamenco	flog	slander	slump	streak
glaze	flap	floe	slang	slur	strength
gleam	flare	flurry	slant	slush	strenuous
glimmer	flash		slap	slut	stress
glimpse	flash		slapdash	sly	stretch
glint	flashback		slapper		strict
glisten	flashpoint		slash		strident
glitter	flat		slate		strife
gloaming	flay		slate		strike

The Psychological Reality of English Phonaesthemes:

gloom	flea		slattern		stringent
gloss	fledged		slaver		strive
glow	flee		slay		stroke
glow-worm	fleet		sleazy		strong
	flex		sleek		struggle
	flexible		sleepy		strung out
sw-	flick		sleet		
swab	flicker		slime		
swagger	flight		slink		
swallow	flinch		slip		
swan (v)	fling		slipshod		
swarm	flip		slit		
sway	flipper		slither		
sweep	flit		slobber		thr-
swift	float		slog		thrash
swill	flood		slope		threat
swim	flop		sloppy		thresh
swing	flounce		slosh		throb
swipe	flourish		sloth		throes
swirl	flow		slouch		throng
swish	fluctuate		slough		throttle
swivel	fluid		slovenly		throw
swoop	flutter		slow		thrust

Appendix (▼): A list of words with final phonaesthemes*

-idl	-ik	-ip	-up
biddle	click	clip	after-clap
condiddle	crick	flip	chap
criddle	flick	gnip	clap
diddle	kick	hip	flap
diddle away	nick	knip	flip-flap
fiddle	pick	nip	heel-tap
flumadiddle(a New England holiday)	prick	skip	knap
flumdiddle (frills)	snick	snip	lap
friddle	tick	tip	plap
griddle		whip	rap
middle		zip	slap
paradiddle(a quick succession of drumbeats)			snap
piddle			swap
quiddle(to procrastinate)			tap
riddle			yap
siddle			
squiddle			
striddle			
taradiddle (fib; lie)			
tiddler			
twiddle			

* few of the words mentioned here are not found in CALD but are taken from Shisler (1999 a).