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# The design of an explicit and integrated intervention program for pupils aged 10-12 with the aim to promote dictionary culture and strategies

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## Abstract

The purpose of this paper is to elaborate on the theoretical principles of an intervention program created for promoting dictionary culture through the adoption of dictionary use strategies for pupils aged 10-12 attending Greek schools and also to describe, one by one, the steps of its implementation and content. We also aim to present the pedagogical priorities, the instructional choices, in terms of materials, topics, tasks, assignments and projects, and the ways to assess the impact of the program on pupils' dictionary use. The program is integrated in the course of Greek language teaching in mainstream public schools in Greece and it follows the principles of a strategy-based, differentiated and explicit instruction.

**Keywords:** dictionary use strategies, reference skills, dictionary culture, strategy-based learning, explicit teaching, pedagogical lexicography.

## 1. Introduction

Previous research (Chatzipapa 2018; Mavrommatidou 2018, Mavrommatidou et al 2019) has shown that dictionary users do not possess dictionary culture and that they have not adopted dictionary use strategies. Dictionary culture has been defined as “the critical awareness of the value and limitations of dictionaries and other reference works in a particular community” (Hartmann and James 1998: 41). Gouws (2013) maintains that dictionary culture refers to the familiarity with dictionary using skills and knowledge of when to use a specific dictionary or other tool. On the other hand, Gavriilidou (2013), elaborating on the idea of language learning strategy (Oxford 1990), refers to strategic dictionary use and defines dictionary use strategies as techniques used by the effective dictionary user in order to decide whether to use or not an appropriate type of dictionary and make a quick and successful search in it. The development of dictionary culture and strategic dictionary use can be achieved when dictionary pedagogy and dictionary routines are introduced in everyday classroom activities in a systematic way in order to bridge the gap between lexicographers and users. Strategic dictionary instruction should be an integral part of language education (first, second, foreign or heritage), since it helps students acquire dictionary culture, gain greater proficiency and confidence in dictionary use, and become self-aware about when and how we chose to use a dictionary in an autonomous way. This training empowers dictionary users by directing them to employ effective dictionary use strategies, developing their appropriate reference skills, and allowing them to take absolute control of the process of word look ups (quickly finding the right entry and choosing the correct meaning successfully). Subsequently, successful dictionary consultations enhance users' motivation to use dictionaries more often, which may be strongly discouraged by unsuccessful dictionary use.

The purpose of this paper is to elaborate on the theoretical principles of an intervention program created for promoting dictionary culture through the adoption of dictionary use strategies for pupils aged 10-12 attending Greek schools, and also to describe, one by one, the steps of its implementation and content. We also aim to present the pedagogical priorities, the instructional choices, in terms of materials, topics, tasks, assignments and projects, and the ways to assess the impact of the program on pupils' dictionary use.

In the first part of the paper, we offer a literature review justifying the theoretical background which underlies the intervention program: the notions of dictionary culture, dictionary use strategies, strategy-based instruction, explicit and integrated teaching are briefly presented in this part. In the second part we present the learning outcomes of the program, the list of activities, the adapted activities for people with various degrees of knowledge of Greek, the material used and the criteria for the assessment of each learning outcome. The presentation ends with the conclusions and limitations of the study.

## 2. Dictionary Culture and Dictionary Use Strategies (DUS)

The educational value of dictionaries is not always acknowledged by teachers, pupils, or students. This happens because modern pedagogy and national policy makers have not highlighted the importance of including dictionary training in classroom nor have they tried to establish a dictionary culture, resulting in pupils and students considering dictionaries as boring inaccessible books that have nothing to offer. Students are left unaware of how a dictionary can help acquire new knowledge or help in problem solving situations arising inside and outside class, even though it is acknowledged that the

way a dictionary is included “in an educational system may affect the development of dictionary skills” (Campoy-Cubillo 2015: 120). Referring to dictionary culture, Nkomo (2015: 74) suggests that “a valid distinction is made between a societal or collective dictionary culture and an individual or idiolectal dictionary culture” implying that individual dictionary culture should be backed up by the society and policy makers. In other words, when an educational system incorporates dictionary use in curricula of language teaching (L1, L2, etc.) and provides constant in-service training to teachers for gaining expertise in dictionary use training, then dictionary use is valued.

Dictionary use strategies (Gavriilidou 2013) seem to be the appropriate learning tool for achieving dictionary culture. In that paper, the author connected the descriptive notion of ‘reference skills’ with the theoretical construct of ‘language learning strategies’ in an attempt to establish a strong linkage between theory (of learning) and practice (how to train dictionary use). Based on the results of a factor analysis, she classified DUS for paper dictionaries in four categories: 1) Dictionary awareness strategies which refer to the critical awareness of the value and shortcomings of the dictionary that lead to the decision to use a dictionary in order to resolve a specific problem encountered during learning inside or outside the classroom, 2) Dictionary selection strategies which allow the choice of an appropriate dictionary depending on the problem to be solved and guarantee the familiarity with one’s own dictionary, 3) Lemmatization strategies, which help dictionary users find the citation form of inflected forms found in the text by relying on morphological indices (stems, prefixes, suffixes, inflectional morphemes) of the unknown word they come across in the/a text in order to make hypotheses about the look-up form of that word. Lemmatization strategies also include skills in alphabetical sequencing, otherwise lemmatization is not possible, and 4) Look-up strategies, which control and facilitate the localization of the correct section of the entry where different meanings of the same polysemous word form are included. These four types of strategies are summarized in Tables 1 and 2. It should be mentioned here that given the variety of electronic dictionary types (De Schryver 2003), “novel ways of accessing lexicographic data” are required (Lew 2013:16); In this perspective electronic dictionary use strategies may overlap with digital literacy (Lew & De Schryver 2014) or differ than strategies employed during paper dictionary look-ups. For instance, users require navigation strategies or look-up strategies in the new electronic environment. Mavromatidou et al. (2019) offer a detailed list of DUS for electronic dictionary use.

Depending on the type of processing involved, these strategies can be further classified into metacognitive, cognitive, memory and compensation. Metacognitive DUS such as self-management, self-monitoring, self-reflection, decision making, planning, etc. (see tables 1 and 2) “are higher order executive skills” (O’Malley and Chamot 1990: 44) that can be applied in receptive or productive dictionary use for conflict resolution or evaluating dictionary use success. Furthermore, they make dictionary users aware of what they are doing and help them setting look up goals and deploying alternative plans when the goals are not met. Cognitive DUS such as inferencing or alphabetization, on the other hand, “operate directly on incoming information” (O’Malley and Chamot 1990: 44) processing it in ways that lead to successful look-ups. Memory DUS such as use of mnemonics to remember the word to be searched are used to help users remember information that facilitates look-ups. Finally, compensation DUS, such as paying attention to headwords, signposts or example sentences, enable dictionary users to better navigate the dictionary and are intended to make up for inadequate information or skills.

Like Language Learning Strategies, DUS are problem-oriented; they are used because there is a problem to solve (e.g., the need to search the meaning of a word which obscures reading comprehension), a task to accomplish (e.g., a synonym exercise in the textbook), an objective to meet (e.g., a successful look-up), or a goal to attain (e.g., new vocabulary acquisition, participation in oral communication, etc.). They are also action-based, since users have to accomplish specific actions to ensure successful word look-ups. These actions depend on users’ characteristics. Some of them contribute directly to successful look-ups (e.g., alphabetizing), while others contribute indirectly but efficiently (e.g., decision making or self-monitoring). They are not always observable and students are often unaware of using them. Furthermore, they are flexible in the sense that users chose and combine them in a quite individual manner that does not allow to identify specific sequences or patterns (Oxford 1990). Their choice depends on variables such as gender, motivation, learning style, educational and proficiency level, school type, purpose of the task to be accomplished, career orientation and general reference skills (Campoy-Cubillo 2015; Chadjipapa et al 2020; Gavriilidou et al 2020). “The dictionary skills of a language learner depend upon dictionary look-up strategies and the language learners’ ability to use the best possible strategy in a particular context and for a specific purpose” (Campoy-Cubillo 2015: 120). Finally, they are teachable through strategy training which aims to make students aware of why, how and when they should be used inside and outside the classroom (see 3 below).

Strategy Group	Representative Strategy	Definition
Dictionary awareness strategies	Dictionary use to find semantic information	Deciding to use the dictionary to look up an unknown word
	Dictionary use to find synonyms	Deciding to use a dictionary to look up a synonym of a word you need to complete a vocabulary exercise or find an appropriate synonym while writing
	Dictionary use to find antonyms	Deciding to use a dictionary to look up an antonym of a word you need to complete a vocabulary exercise or find an appropriate antonym while writing
	Dictionary use to find word families	Grouping and classifying words according to their semantic attributes
	Dictionary use to find the meaning of phraseology	Deciding to use the dictionary to look up word phraseologies
	Dictionary use to find grammatical information	Deciding to use the dictionary during productive dictionary use to look up how a word is used in a sentence
	Dictionary use to find inflection/the derivatives of a word	Deciding to use the dictionary to find derivatives of a word or verify how a word is inflected
	Dictionary use to find the spelling of a word	Deciding to use the dictionary to find the spelling of a word
	Dictionary use to find the etymology of a word	Deciding to use a dictionary to find the etymology of a word
	Receptive dictionary use	Deciding to use the dictionary during text comprehension tasks
	Productive dictionary use	Deciding to use the dictionary during text production tasks
	Dictionary use for pragmatic reasons (register)	Deciding to use dictionary labels for accessing pragmatic information
	Dictionary use at home	Deciding to use the dictionary at home for receptive or productive language skills
Dictionary selection strategies	Dictionary use for translation	Deciding to use the dictionary during translation tasks
	Recognizing different types of dictionaries and the type of information they include	Being aware of the content and form of an etymological dictionary and identifying the tasks that require the use of it
		Be aware of the content and form of a general or learner's dictionary and identifying the tasks that require its use
		Being aware of the content and form of a bilingual dictionary and identifying the tasks that require its use
		Being aware of the content and form of a dictionary of technical terms and identifying the tasks that require its use
	Self-reflection on one's needs	Deciding in advance which are the basic learning needs a dictionary can satisfy
	Key dictionary purchasing criteria	Using key purchasing criteria to make a dictionary selection
		Using content criteria to make a dictionary selection

Table 1 Dictionary Use Strategy classification and definitions I

Strategy Group	Representative Strategy	Definition
Strategies for lemmatization and acquaintance with dictionary conventions	Inferencing	Inferencing of the citation form Using available information to predict the citation form
	Self-monitoring	Inferencing of the word spelling Using available information to guess the spelling of a word Monitoring the success of a word look-up and readjusting it Monitoring the success of a proverb look-up and readjusting it
Look-up strategies	Functional planning	Acquaintance with the Introduction of the dictionary Planning to use the information from a dictionary introduction in order to find out how the entries are arranged
	Alphabetization	Abbreviation awareness Label awareness Planning to get acquainted with the abbreviation list in order to learn what the abbreviations stand for Planning for getting acquainted with the labels used to better navigate in the entries
	Memorization	Using previous knowledge on alphabetical order to locate a word in dictionary Retrieving a word from memory during word searches Use mnemonics to remember the initial letter of the word to be looked up so that to effectuate a successful alphabetizing
Self-evaluation during receptive use	Self-evaluation during receptive use	Selecting the appropriate meaning of a word assisted by the example sentences Using the context to evaluate how successful was the look-up Checking the outcomes of the look-up by returning to the text to confirm that the word matches the context
	Self-management during productive use	Selection of the appropriate grammatical form Understanding the importance of grammatical information for the successful use of the word

Table 2 Dictionary Use Strategy classification and definitions

### 3. Strategy-based Instruction in Dictionary Skill Training

Even though a dictionary is a valuable learning tool it requires special skills. Herbst and Stein (1987), Walz (1990) and Bishop (2000) are among the very few researchers who designed learning activities for training students how to use a dictionary. These first attempts to teach learners when and how to use a dictionary lacked systematicity and an underlying theoretical background that would maximize their effect.

Taking into consideration previous research which demonstrates that strategy use leads to skill-specific improvement (Chen 2007; Cohen, Weaver & Li 1998; Macaro 2001), can be taught (Cohen & Macaro 2007; O'Malley & Chamot, 1990) and, as a result, helps learners to become more efficient and self-regulating in their learning (Chen 2007; Hassan et al, 2005; O'Malley & Chamot 1990, Oxford 2011), it was decided to adopt a strategy-based instruction (SBI) model in training dictionary skills.

SBI is a learner-centered approach which refers to "any intervention focusing on strategies to be adopted and used autonomously by learners in order to improve their L2 learning and performance" (Vrettou 2015). It helps learners to take control of their learning, become autonomous and aware of their needs, strengths or weaknesses; in other words, it encourages them to 'learn how to learn'. In this approach, teachers describe and model useful strategies, elicit examples of student's experience, help learners reflect on their own strategy use, encourage them to experiment with strategy use and integrate strategies inside and outside the classroom (Cohen 2000).

The two most prominent strategy-based approaches to date are the Styles- and Strategies-Based Instruction (SSBI) model (Cohen 1998, 2000) and the Cognitive Academic Language Learning Approach (CALLA) (Chamot 2018; Chamot & El Dinary 1999, Chamot & O'Malley 1994, 1996). We opted to adopt the principles of the CALLA, considering previous literature that documented the positive effect of that approach on raising learners' autonomy (Chamot 2007; Gu 2007; Nguyen & Gu 2013).

CALLA is based on cognitive theory and integrates grade appropriate content, academic language development based on content and direct strategy instruction (see explicitness in section 4). Four types of tasks are used: a) easy and supported by the context, b) difficult but supported by the context, c) easy without the support of the context, d) difficult without any context support. Content, language and strategies are taught in a five-stage cycle (see section 5 below). This five-stage model is flexible and aims at raising learners' metacognitive skills and a gradual shift from the teacher to learner autonomy (O'Malley & Chamot 1990).

The DUS instruction program we developed follows CALLA's principles. In what follows, we set out the principles, directions and focuses that underly the compilation of the program.

### 4. Explicitness of Purpose and Integration in Language Course

Two crucial questions have to be taken into consideration when designing a syllabus or an intervention program for training learners in dictionary use strategies: the explicitness of purpose while teaching and the effectiveness of integrating strategy instruction into a language class. Previous research (Andersson 2002; Chamot 2005; Sarafianou & Gavriilidou 2015; Wenden 1986) has stressed that explicit instruction, i.e., instruction where teachers raise students' awareness by modelling strategy use, naming different strategies and creating opportunities in the classroom for strategy practice and self-evaluation of the effectiveness of strategy use, is more effective because it cultivates students' metacognition by helping them reflect on their own learning and thinking. This happens because, in explicit teaching, learners are informed about the importance of particular strategies and how to perform them successfully in specific classroom activities for facilitating attainment of learning goals. Thus, students connect specific strategies with specific learning tasks and are given feedback about their performance so that they can self-monitor their strategy use and transfer it to new situations.

Talking about dictionary use, explicit teaching of DUS results in appropriate knowledge and skill development to successfully use a dictionary, raises the independence and confidence of students as dictionary users, increases their motivation to use a dictionary, which may be negatively affected by unsuccessful look-ups, and develops their awareness of the positive strategies to be adopted while navigating dictionary entries. This is the reason why explicitness in dictionary use strategy teaching was adopted in our program.

Previous research (O'Malley & Chamot 1990; Oxford, 1993; Oxford et al. 1990; Walters 2006) has also investigated whether strategy instruction should be embedded into the language course or constitute a separate component, independent of the language course, in 'learning to learn' courses and training programs. It was demonstrated that learning in context is more effective because it is tied to specific tasks and learning goals. Furthermore, the learner realizes the usefulness of the strategies used in connection with specific activities, which facilitates retention.

In the same vein, dictionary use strategy teaching should be embedded in a language course, since research has shown that students maintain DUS when they can use them in situations similar to the ones in which they learned that specific strategy; and a language course, like everyday communication, offers multiple opportunities to look up words. More specifically, DUS training "should be tied to specific course objectives and fully integrated with other course content (Carduner 2003: 74). This means that in the frame of a language course, teachers may select DUS to teach, based on typical language tasks to be performed in the classroom (word definitions, synonym or antonym finding, etc.) and help their students see the applications of DUS in specific problem-solving situations. Thus, dictionary use strategy teaching embedded in the language course offers opportunities for contextualized dictionary practice. Additionally, during look-ups, students have the opportunity to collaborate in the class with their classmates, learn from their peers' performance and share with them successful DUS.

## 5. The Theoretical Principles of the intervention Program

In this section, we offer a detailed description of the theoretical choices adopted in our program. First of all, the program adopts the principles of *strategy-based instruction*. As already discussed in section 2, SBI enables learners to take an active role in the learning process by helping them to monitor and evaluate the way they learn (Cohen & Macaro 2007). The Cognitive Academic Language Learning Approach (CALLA) (Chamot 2007) has provided us with a useful framework for teaching dictionary use strategies. A five-phase recursive cycle for introducing, teaching, practicing, evaluating, and applying dictionary use strategies was implemented. This cycle was complemented with highly explicit instruction in applying DUS to learning tasks which gradually fades so that the pupils become more autonomous in selecting and applying their own preferred DUS. The five phases of the intervention program are the following:

- a) *Preparation*, where students identify DUS they are already using and develop metacognitive awareness about the relation between DUS and successful look-ups. Activities in the preparation stage include class discussions, interviews, or think-aloud sessions about DUS recently used for specific learning tasks. More specifically, in this program learners are asked about their dictionary use habits, for instance, how often they look up words, if it takes them a long time to find the words they need, if there are some symbols in the lemmas that they do not understand, how they select the appropriate meaning, etc. Furthermore, pupils are informed about what a user can find in a dictionary entry in addition to its meaning, namely, its pronunciation, what part of speech it is, synonyms, the role of lexicographic examples and other information depending on the type of dictionary. The above are illustrated with examples from the school dictionary «Το λεξικό μας» (Our dictionary). This discussion is important because many dictionary users just look up the meaning of a word disregarding all other information.
- b) *Presentation*, where the teacher models every DUS and explains, by using specific DUS names, how they are used, their characteristics, their effectiveness, their field of application. It is in this phase that the teacher presents in detail dictionary awareness strategies, dictionary selection strategies, lemmatization strategies (like finding the citation form of inflected forms included in the text by relying on morphological indices such as stems, prefixes, suffixes, inflectional morphemes of the unknown word they come across in the/a text in order to make hypotheses about the look-up form) and, finally look-up strategies (like alphabetizing, memorization), etc.
- c) *Practice/Scaffolding*, where pupils are asked to practice all the above mentioned DUS in authentic learning situations such as reading comprehension, writing, explaining unfamiliar words, etc.
- d) *Self-evaluation*, where pupils evaluate their success in look-ups, discuss the results of DUS practice, argue the usefulness of different DUS, talk about their favorite DUS, etc. This phase empowers pupils' metacognitive knowledge and experience, which constitutes a prerequisite for the following phase, that of expansion.
- e) *Expansion*, where the pupils apply their preferred DUS to new contexts, different courses and outside the classroom.

Another crucial characteristic of the program is that the teaching is *explicit*, meaning that teachers overtly mention specific DUS and learners are informed about how, why and when to adopt dictionary use strategies and how to evaluate them and transfer them to new tasks. Dictionary users are given the opportunity to realize the benefits of strategic dictionary use, acquire a dictionary culture, evaluate the effectiveness of their dictionary look-ups, and expand dictionary use during various linguistic tasks.

Furthermore, the program is integrated in the language course activities of upper elementary school and follows the school textbook, because practicing dictionary use on authentic language tasks enables learners to perceive the relevance of a task, enhances comprehension and retention (Chamot & O'Malley 1987), while it can also help users maintain or enhance their motivation to use dictionaries.

Finally, the program adopts differentiated learning where teachers tailor their teaching approach to match their students' learning styles and needs. This can include choice of activities with different degree of difficulty for practicing the same DUS and offer every pupil multiple learning paths. The program also proposes adapted activities in order to respond to the needs of users with disabilities (learning difficulties, impaired vision, etc.).

## 6. The Content and Learning Outcomes of the Intervention Program

The intervention program includes 12 units of targeted paper dictionary use strategy instruction for pupils attending the two classes of upper elementary schools in Greece. Each unit corresponds to and is closely connected to a different chapter of the school textbook for teaching Greek as L1. The program may be conducted over a minimum of a 4-week period. However, the duration may be extended depending on the classroom needs, level and interest. The units focus on raising students' awareness about all four types of DUS: dictionary awareness strategies, dictionary selection strategies, lemmatization strategies and look-up strategies. Table 3 presents the number of strategies included in the program by strategy category.

Educational Level	Dictionary awareness strategies	Dictionary selection strategies	Lemmatization strategies	Look-up strategies
5 <sup>th</sup> grade	36	6	14	18
6 <sup>th</sup> grade	32	6	19	21
Total	68	12	33	39

Table 3: Nr of DUS types in syllabus by educational level

The material for the 12 units was created by the researchers to complement exercises and tasks from the school textbook with teaching resources that best cater students' dictionary use skills. So, there was a shift from a textbook-based and content-based mode to a more interactive skill-based approach. The choice of the content of instruction was based on items included in the *Strategy Inventory for Dictionary Use* (Gavriilidou 2013). Table 4 provides detailed information of the content of the program.

Syllabus Unit	Textbook chapter	Focus	Types of tasks	DUS Types
introduction		Recognizing different types of dictionaries and the type of information they include	selecting to use different types of dictionaries, decision to purchase considering the type of information included	selection strategies
1	1	Finding semantic information	find synonyms find the etymology of a word find the meaning	dictionary awareness /selection strategies
2	2	Inferencing of the reference form  Finding semantic information	using available information to predict the reference form checking the outcome of a proverb look-up and start a new one in case it was unsuccessful  find word families find synonyms and antonyms	lemmatization strategies, dictionary awareness strategies, dictionary selection strategies
3	4	Inferencing of the reference form Self-monitoring  Finding grammatical and semantic information	using available information to predict the reference form checking the outcome of a proverb look-up and start a new one in case it was unsuccessful  find the derivatives of a word find synonyms find the meaning of phraseology	lemmatization strategies, dictionary awareness strategies,
4	6	Alphabetization Selecting the appropriate meaning of a word assisted by the example sentences Using the context to evaluate how successful was the look-up Finding semantic information Finding grammatical information	making assumptions about the correct section of the dictionary to look-up the word by using previous knowledge on word order using example sentences as clues for selecting the appropriate meaning of a polysemous word  checking the outcomes of the look-up by returning to the text to confirm that the word matches the context find synonyms find the derivatives of a word	look-up strategies, dictionary awareness strategies
5	7	Finding grammatical /semantic information Inferencing of the word spelling  Inferencing of the reference form	find the spelling of a word/ word families/antonyms  using available information to guess the spelling of a word  using available information to predict the reference form making assumptions about the correct section of the dictionary to look-up the word by using previous	dictionary awareness strategies, lemmatization strategies look-up strategies

		Alphabetization	knowledge on word order	
6	9	Finding semantic information Inferencing of the reference form Selecting the appropriate meaning of a word assisted by the example sentences Using the context to evaluate how successful was the look-up	find word families find synonyms find the meaning using available information to predict the reference form using example sentences as clues for selecting the appropriate meaning of a polysemous word checking the outcomes of the look-up by returning to the text to confirm that the word matches the context	dictionary awareness strategies lemmatization strategies look-up strategies
7	10	Finding semantic information Memorization of the word to look up	find synonyms find antonyms use mnemonics to remember the word to be looked up during word searches	dictionary awareness strategies, look-up strategies
8	11	Memorization of the word to look up Alphabetization Inferencing of the reference form Label awareness Finding semantic information Finding grammatical information Inferencing of the word spelling Self-monitoring Recognizing different types of dictionaries and the type of information they include	use mnemonics to remember the word to be looked up during word searches making assumptions about the correct section of the dictionary to look-up the word by using previous knowledge on word order using available information to predict the reference form planning for getting acquainted with the labels used to better navigate in the entries find the meaning find antonyms find the spelling of a word using available information to guess the spelling of a word checking the outcome of a proverb look-up and start a new one in case it was unsuccessful selecting to use different types of dictionaries decision to purchase considering the type of information included	look-up strategies, lemmatization strategies, dictionary awareness strategies, selection strategies
9	13	Memorization of the word to look up Alphabetization Inferencing of the word spelling Inferencing of the reference form Finding semantic/grammatical information	use mnemonics to remember the word to be looked up during word searches making assumptions about the correct section of the dictionary to look-up the word by using previous knowledge on word order using available information to guess the spelling of a word using available information to predict the reference form find synonyms, antonyms, word families, spelling of a word	look-up strategies, lemmatization strategies, dictionary awareness strategies,
10	15	Selecting the appropriate meaning of a word assisted by the example sentences Memorization of the word to look up Memorization of the initial	using example sentences as clues for selecting the appropriate meaning of a polysemous word use mnemonics to remember the word to be looked up during word searches	look-up strategies, lemmatization strategies, dictionary awareness strategies

		letter of the word to look up Alphabetization Using the context to evaluate how successful was the look-up Inferencing of the reference form Finding grammatical information	use mnemonics to remember the initial letter of the word to be looked up so that to effectuate a successful alphabetizing making assumptions about the correct section of the dictionary to look-up the word by using previous knowledge on word order checking the outcomes of the look-up by returning to the text to confirm that the word matches the context using available information to guess the spelling of a word find the spelling of a word find the syntax of a word	
11	16	Selecting the appropriate meaning of a word assisted by the example sentences Inferencing of the word spelling Finding grammatical information Finding semantic information	using example sentences as clues for selecting the appropriate meaning of a polysemous word using available information to guess the spelling of a word find the spelling of a word find the meaning	look-up strategies, lemmatization strategies, dictionary awareness strategies
12	17	Inferencing of the reference form Finding grammatical information Finding semantic information Alphabetization	using available information to predict the reference form find the derivatives of a word find word families making assumptions about the correct section of the dictionary to look-up the word by using previous knowledge on word order	lemmatization strategies, dictionary awareness strategies look-up strategies

Table 4: DUS instruction units

Finally, in order to be able to assess the effectiveness of the tasks included in the program for cultivating different DUS and measure achievement, we set the following learning outcomes that users will demonstrate upon successful completion of the program:

- Use dictionaries effectively and be aware of the importance of using them as tools in writing and reading
- Demonstrate awareness of when and how to use a dictionary
- Demonstrate awareness of different types of dictionaries
- Be able to select the appropriate type of dictionary according to the task to be accomplished
- Use dictionaries to find definitions, syllabication, spelling, parts of speech, synonyms, and antonyms
- Be able to alphabetize
- Be able to lemmatize using compensation or inferencing
- Know how to use headwords, example sentences, examples
- Be able to locate synonyms and antonyms
- Be able to select the appropriate meaning of a polysemous word
- Understand etymological information
- Navigate entries to find information about phraseology
- Be able to find and interpret pragmatic information
- Implement the outcomes of look-ups in situations inside or outside class
- Identify the outcome of look-up and start a new one in case it was unsuccessful
- Understand function and working of cross references

## 7. Concluding Remarks

This paper attempted to illustrate how an instructional model for enhancing dictionary use skills can originate in (cognitive) theory and research and promote classroom activities that are understandable for teachers and dictionary users. It is hoped to lead to further refinements that will expand the proposed intervention program. This is a flexible program that, with the appropriate adjustments, can be adapted for teaching different proficiency levels and in various socio-cultural frameworks. Future research should incorporate into this program activities and tasks for electronic dictionaries, focus on the implementation of the program and its effect in developing dictionary use strategies of younger or older dictionary users and train teachers to incorporate DUS in their teaching. Finally, the learning outcomes presented in section 6 should be matched to different proficiency levels in order to provide a coherent syllabus.

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