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Strategies for Accessing Bilingual Dictionaries: A Question of Regulation

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It seems to be the case that when human beings undertake to learn and use a second language, either in the classroom or natural setting, they believe that access to a bilingual dictionary is indispensable. For centuries lexicographers have wrestled with the thorny problem of writing bilingual dictionaries that will meet the needs of their users. Fundamentally, all bilingual dictionaries are attempts to coordinate the lexical units of one language with equivalent units in another. As is well known, however, bilingual dictionaries are designed in most cases with specific populations of users in mind. That is, some dictionaries are intended for use by technical translators, others are directed at the business world, and still others are designed to be used by language learners. It is this last type of bilingual dictionary, or what is often referred to as pedagogical dictionaries, that is our focus in the present paper.

Of major concern for bilingual lexicographers, including, and perhaps most especially, those who produce pedagogical dictionaries, is how to present in an optimal way the information required by dictionary users. According to one pedagogical lexicographer, the primary goal of pedagogical dictionaries is to "help the learner to be aware of, and if possible, to avoid, common sources of error in the language he is attempting to acquire." Another lexicographer, Moulin, takes a broader view of learners' expectations regarding bilingual dictionaries when he claims that learners want to know what words mean, what they can do with them, and how they can use them to communicate. Whether they have a narrow perspective such as Cowie or a wider view as illustrated by Moulin, bilingual lexicographers have dedicated themselves to devising schemes for satisfying their users. Cowie for example, proposes a variety of ways for dealing with polysemy and collocation in pedagogical dictionaries, including the use of diacritical marks to warn students that a particular item has a restricted field of occurrence. Some, such as Nguyen, even argue that bilingual dictionaries can help teach the user with some aspects of culture reflected in either the target or the source language. The point of all this is that while pedagogical
lexicographers are genuinely concerned with the problems confronted by users when they utilize a dictionary, they attempt to solve the problems from the teaching end of the continuum without giving much attention to how learners in fact use dictionaries. This is not too surprising, however, since the language education profession in general, despite claims to the contrary, has been more concerned with the teaching of language than it has with the learning of language. As Showstack has stated so forcefully, before we can devise teaching materials and syllabi, we need to discover what learners do when they undertake to learn a second language under formal conditions. The field of language teaching is full of sure-fire ways of teaching language, but what about sure-fire ways of learning another language? What are we arguing for then, in terms of pedagogical bilingual dictionaries, is to uncover the strategies which learners utilize when accessing such dictionaries.

Dictionaries, bilingual or otherwise, first and foremost, "are a type of writing for the purpose of the continuation of writing (and reading): they are texts for other texts." Dictionaries are metatexts designed to provide access to other texts. The intent of the present paper is to report the results of an initial attempt to discover what in fact learners do when they have the opportunity to interact with the kind of metatext known as bilingual dictionaries. To be sure, this study represents only a beginning. Consequently, the conclusions drawn from our data must, for the time being at least, remain tentative.

There is a dearth of studies that deal specifically with how learners interact with dictionaries. In reviewing the literature, we have been able to uncover only two studies which examine learners' use of bilingual dictionaries. Although these studies present some interesting data on the use of bilingual dictionaries by learners, they do not provide an analysis of learners' strategies for accessing such dictionaries. Tomaszczyzk, in his discussion of learners' attitudes toward bilingual dictionaries does, nevertheless, reach the interesting, and perhaps somewhat provocative conclusion that foreign language students, especially those at the beginning level, are not yet ready to use bilingual dictionaries profitably, and as such, should be discouraged from seeking assistance from these texts as they undertake to learn other languages. As the data presented below demonstrates, it is difficult, at least in part, to disagree with Tomaszczyzk's conclusion. We will, however, attempt to offer a more satisfying explanation of why this should be so than does Tomaszczyzk.

In order to begin to deal with the issue of how learners interact with bilingual dictionaries, we undertook a study of eighty-nine students enrolled in beginning intermediate and advanced undergraduate Spanish classes at the University of Delaware during the Spring semester of 1984. The students were distributed as follows: 36 in beginning Spanish, 21 in intermediate Spanish, 32 in advanced conversation and Business Spanish combined. We assume, even though there are certain obvious problems with such an assumption, that each of the three levels represents different levels of proficiency in the language. The task set for the students was to translate in writing the fifteen sentences contained in the following list with the aid of a bilingual dictionary whenever necessary:

1. Would you mind giving me a light?
2. They got going before sunrise.
3. The records broke because I dropped them.
4. Contact me for further information.
5. The little boy's nose is running.
6. Let's make a toast to our health.
7. There is a strong odor of smoke in the house.
8. A teacher's job is to help his/her students.
9. The cat's tail is sticking up in the air.
10. John works in a greenhouse.
11. She drives me crazy.
12. Because of the heavy snow the roof fell in.
13. Mike is in the doghouse because he stayed out drinking last night.
14. He always sticks his tongue out.
15. Peter picked up his date at 8 o'clock last night.

The students were free to choose any dictionary they desired. Although most students had already purchased the University of Chicago Spanish Dictionary, many opted to use the bilingual dictionaries available in the University's library, including Cuyas, Cassell's and Collins. Because of the nature of the data, we find it unnecessary to discuss the results obtained on all fifteen sentences included in the list. We will, instead, focus on a sufficient quantity of data in order to illustrate the differences in strategies uncovered for each level of language study. We should also point out that our primary concern is not with overall accuracy in translating (e.g., morphology) but with the strategies the students employed to interact with bilingual dictionaries. Conse-
quently, whether a particular sentence was rendered accurately in its entirety is only of marginal relevance for our analysis. We are more directly concerned with when and how students accessed the bilingual dictionaries.

We begin by examining the data in 1 and 2 of Table 1 corresponding to sentences 2 and 15 in the list.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Translation Equivalents x Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Begin</td>
</tr>
<tr>
<td>1. sunrise</td>
<td>salida del sol</td>
</tr>
<tr>
<td></td>
<td>semantic field</td>
</tr>
<tr>
<td>2. picked up</td>
<td>recoger</td>
</tr>
<tr>
<td></td>
<td>semantic field</td>
</tr>
<tr>
<td>3. greenhouse</td>
<td>invernadero/ invernáculo</td>
</tr>
<tr>
<td></td>
<td>casa verde</td>
</tr>
<tr>
<td></td>
<td>semantic field</td>
</tr>
<tr>
<td>4. doghouse</td>
<td>casa de perro</td>
</tr>
<tr>
<td></td>
<td>perrera</td>
</tr>
<tr>
<td></td>
<td>semantically acceptable</td>
</tr>
<tr>
<td>5. strong odor</td>
<td>olor fuerte</td>
</tr>
</tbody>
</table>

The interesting observation here is that the students in beginning and intermediate Spanish were more accurate in their selection of salida del sol and recoger than were the students from the advanced classes. To be sure, the lower-level students had difficulties with verbal inflection in the case of recoger, but as we mentioned, this is not directly germane to our discussion. The point is why should the lexical choice of beginning students be more appropriate than that of advanced students? We can begin to answer this question if we examine the alternative options made by the advanced learners. In the case of “sunrise,” 38% of this group chose to express the English term in one of the following three ways: madrugada, llegó el sol, se levantó, and for “picked up,” 56% of the advanced group utilized one of the following possibilities; llegó a casa de su novia, encontró, fue a buscar. Although some of the lower-level students attempted to use alternative means for expressing the two terms in question, their choices were almost always unacceptable (e.g., rise de sol, sabida, somnisa). To be sure, a small percentage of these two groups opted for amanecer, a viable alternative listed in bilingual dictionaries. What seems to be happening is that advanced students simply prefer not to use a dictionary if they have or think they have a possible semantic equivalent in their lexical repertoire. As we shall see, beginning and intermediate students follow a similar strategy but with an important difference. It is this difference that, in our opinion, at least, has significant implications for lexicographers and language teachers.

If we now turn to number 3 in Table 1, we observe a somewhat, although not radically, different picture from that presented in 1 and 2. While the percentage of students in the lower-level classes opting to use the dictionary does not change much from 1 and 2, there is a marked change in the advanced group. That is, 57% of the advanced learners apparently looked up the word “greenhouse” in the dictionary. Even so, nearly 21% opted for the strategy of selecting from a semantic field an “equivalent” of the English term (e.g., casa de vidrio) rather than relying on the dictionary. Moreover, a large percentage of the beginning-level students (28%) used an equivalency strategy, but not one based on semantics, as in the case of the advanced students; rather they paid little if any attention to the semantics involved, and instead based their strategy on lexical formalism. Since the beginning students had the forms casa and verde in their linguistic competence (these forms are introduced early on in our beginning course and are used with high frequency throughout the first half of the course), they simply reverted to these forms in translating the English word. The net effect is similar to the case for the advanced students: use of the dictionary is avoided. But the strategy underlying this avoidance is different. Beginning and intermediate students continue to display a predominance of a strategy based on lexical formalism even when they decide to access the dictionary. Such a strategy becomes especially problematic in cases involving a high degree of polysemy, as will be seen below. Finally, it must be mentioned that even among the advanced group a substantial percentage (nearly 19%) translated “greenhouse” as casa verde. As we pointed out earlier, however, what it means to be a beginning, intermediate, and advanced student is not well understood, and in all likelihood is characterized by variability in linguistic competence.

Item 4 in Table 1 provides convincing evi-
idence in support of the strategic differences between lower-level and advanced students for interacting with dictionaries. On the surface, it appears that there may be little difference among the three groups in terms of their respective translations for the English “doghouse.” That is, between 50% and 58% of the students in each group apparently failed to take account of the metaphorical connotation of sentence 13 (see list) and translated the expression on the basis of lexical formalism as casa de perro. If, however, we examine the situation more carefully, we see that there are indeed important differences between lower and advanced level students, and that the differences are reflected in how each group chose to interact with the dictionary. One of the alternatives favored by a large percentage of both beginning and intermediate students (approximately 24% of both groups) was to access the dictionary, which resulted in their use of perrera. We contend that those students who opted to use the dictionary did not do so because they were searching for the metaphorical equivalent of the English term, rather, they did so because they were lacking or were unable to recover casa de perro from their linguistic competence. It seems clear that the strategy used by the majority of lower level students was based on lexical formalism. Only 8% of these students even attempted a metaphorically based translation of “doghouse.”

For the advanced students, the situation is quite different. Slightly more than 6% of this group chose perrera in translating the English word. But approximately 44% of these students employed a semantic-based strategy in translating the item whether they had recourse to a dictionary or not, as illustrated by the following: está en mala situación, se siente mal, está en mierda, se mete en líos.

We will consider one additional item that we believe further corroborates our argument regarding dictionary-related strategies. More than 81% of the advanced students rendered the expression “strong odor” in sentence 7 (list) as olor fuerte, not a surprising percentage, since translating the English in this case, for the advanced students, at least, should have been a relatively easy task. It is quite likely that this group was able to generate the Spanish equivalent without recourse to a dictionary. The students at the beginning and intermediate levels (see Table 1) reflect quite a different situation. Only 53% of the beginning group rendered “strong odor” as olor fuerte. The remaining 48% of students provided translations that were clearly indicative of a formal rather than a semantic-based search (i.e., reading) strategy. While most of the students in the beginning group were able to correctly associate “odor” with olor, they were unable to render accurately the modifier “strong.” Instead of fuerte or even the acceptable mala these students opted for such equivalents as the following: fornido, robusto, recio, all of which point to a search strategy based on lexical form rather than semantic equivalence. In other words, these students apparently looked up the English word “strong” and selected any one of the items from the menu of Spanish equivalents without regard to the semantic consequences. The impact of our claim is underlined by the seven students in beginning and intermediate classes who translated “strong odor” as mala fama. When one looks up “odor” in the Cuñas dictionary, one discovers that among the expressions listed is indeed mala fama, which is glossed in English as “to be in bad odor,” an expression that supposedly means “to be notorious” or “to be in disgrace.” If, in fact, the lower-level students had been attending to semantics, it is difficult to imagine how they could have selected an equivalent whose English meaning is so opaque. As for the intermediate students, they showed a similar strategy as that reflected by the beginning students, although they did have a higher incidence of olor fuerte among their responses.

To summarize: it seems quite clear that the students who participated in this study utilized two general, although separate, strategies for interacting with bilingual dictionaries. Both strategies first of all involve a search of one’s linguistic competence prior to accessing the dictionary. Beginning and intermediate level students appear to favor a search strategy based on lexical form, while advanced students are able to employ a more successful semantic-based strategy. The learnings then employ these same strategies once they decide to access the dictionary. It is also worth mentioning that one of the possible findings of this study is that so-called compound words in English may have variable status in the linguistic competence of native speakers. That is, even though a large percentage of students treated “greenhouse” and
“doghouse” as single lexical units, as reflected in the use of *invernadero*/*invernáculo* and *perro* respectively, a substantial number of students considered the items as composed of two morphemes each (i.e., green + house and dog + house); thus, the renderings *casa verde* and *casa de perro*. in the case of “sunrise” the evidence indicates that this word is analyzed as a single lexical unit, since not a single student at any level opted to look up “sun” and “rise” in an attempt to create a Spanish equivalent. Those who used the dictionary simply looked up “sunrise,” as evidenced by the high frequency of *salida de sol* among the beginning and intermediate students.

In what follows, we undertake to explain the appearance of the two dictionary accessing strategies which predominated in each group studied. To do this, we turn to psycholinguistic theory as developed by Lev Vygotsky and his colleagues and disciples, including Alexander Luria, Alexei Leontiev, and more recently James Wertsch. Although it is not appropriate to explain Vygotskian theory in detail here, we would like to outline briefly those aspects of the theory that are relevant to our present discussion. Contrary to Piagetian theory (so influential in second language research) where human beings begin as individuals and eventually develop to become like everyone else, Vygotskian theory argues that human beings start out like everyone else and eventually develop into individuals. The development toward individuality passes through three stages in which the person is first controlled by the objects in his or her environment, then is controlled by other individuals in the social milieu, and finally is able to gain control of the self. These stages are referred to respectively as object-regulation, other-regulation, and self-regulation. According to Vygotskian theory, the attainment of self-regulation is not a linear progression as would be the case in a Piagetian model; rather it is viewed as a dynamic process which can be reaccessed at any time. In other words, adults, supposedly self-regulated beings, do not necessarily remain in a state of self-regulation by virtue of their adulthood; they can reaccess other- or object-regulation strategies whenever they are confronted with difficult tasks, that is, tasks that are beyond their present ability to control as individuals. In such cases, the individual is either controlled by the task itself (object-regulation) or must seek assistance from other individuals to solve the task (other-regulation). One additional notion of the Vygotskian paradigm that is relevant to the present discussion is the zone of proximal development, which "is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." It is precisely in the zone of proximal development that learning takes place. In terms of Vygotskian theory, the lower-level Spanish students were not able to maintain self-regulation in the target language and, as curious as it may seem, were unable to use the bilingual dictionary as a pedagogical tool, despite the fact that most authors write and the majority of students purchase such dictionaries with precisely this purpose in mind. These students essentially reacted to the formal properties of the task and by and large were insensitive to its semantic features, a clear indication of object-regulation. The advanced students, on the other hand, showed some measure of self-regulation in the task and were therefore able to utilize a semantic strategy for completing the translations and as a consequence were able to access the dictionary more successfully.

At this point we turn to an analysis of the dictionary presented in a recent paper by Frawley. According to Frawley, deconstructionist theory makes an important distinction between work and text: a work *displays*, while a text *demonstrates*. A work is an object which can be held in the hand, has a cover and pages, and is sold in book stores. A text, on the other hand, is an activity which is self-revealing and exists in language. If we apply the distinction between work and text to the dictionary, as Frawley has done, we see that the dictionary can be considered as a work and as a text. As work, “the dictionary is the repository of the state of the language at any one time,” while as a text, “the dictionary is endless and self-deconstructing.” As text, the dictionary does not exist as something to be possessed; rather, its existence derives from the fact that it must be *read*. Even though the dictionary can be seen both as work and as text, tradition has by and large dictated that the dictionary is to be treated as a work to be consulted in order to find the
answer to some meaning problem. For this reason, the dictionary is normally located in
the reference room of a library, the room where one goes not to read but to look for
answers. In this sense, the dictionary is a singular, unambiguous object: that which con-
tains the correct interpretations of signifiers. Consultation, in turn, implies the stability,
univocality, and unequivocality of the object to be consulted. This implies that one does
not read the dictionary but “somehow peeks at it, scans it, or employs it,” rather than
engage it as an activity.

Contrary to popular belief, however, the
dictionary is not consulted; it is read precisely
because it is a text. With the dictionary as
text, one does not locate the answer to semantic
problems; one reads signifiers explicating other signifiers. Reading is essentially a
semantic rather than a syntactic strategy, which implies the construction and not the
assimilation of meaning. The dictionary then, as Frawley argues, does not offer meaning;
rather, it means.

It seems quite clear that the students in
the beginning group treated the bilingual dic-
tionary not as a text to be read but as a work
to be consulted for the answers. This, we
contend, resulted from their being object-regu-
lated by the target language and to a degree
by the nature of the task itself. Among the
beginning group, the prevailing strategy for
accessing their linguistic competence as well
as the dictionary was one based on linguistic
form rather than meaning. To read the dic-
tionary as a text, requires the implementation
of a semantic strategy, the dominant strategy
displayed by the advanced group. The ad-
vanced group was, on the whole, more self-
regulated in the target language as well as in
the task set for them. Therefore, they were
more able to engage the dictionary as an ac-
tivity rather than merely consult it in order
to find answers.

Our position then is that bilingual pedagog-
ical dictionaries have little if any value for lan-
guage students who are at the stage of object-
regulation in their development toward L2 pro-
ficiency. We would argue that it may, in fact,
be more accurate to describe learners in
terms of regulation rather than in terms of
labels such as elementary, intermediate, and
advanced. These labels are largely applied ac-
cording to the number of hours a student has
dedicated to the study of a particular foreign
language. In most university settings, for
example, students who have experienced
roughly ninety hours of study (perhaps a bet-
ter way to state it is ninety hours of teaching)
are considered to be intermediate-level stu-
dents, and those with more than approxi-
mately three hundred class hours are labeled
as advanced students. Moreover, regulation
itself is determined on the basis of the nature
of the task confronted by the individual stu-
dent. It so happens that in the case under
discussion the traditional labels of elementary
and advanced more or less coincide with ob-
ject- and self-regulation respectively. This
need not be the case, since even so-called
advanced students may become object-regu-
lated in carrying out tasks of a certain diffi-
culty. Indeed, even native-speakers may find
themselves object-regulated in certain
tasks. The crucial point here is that to pass
from object-regulation to self-regulation re-
quires mediation by another, or, as Vygotsky
argues, the path from the learner to the object
passes through another individual (other-regu-
lation). For other-regulation to be successful
requires an awareness of the individual’s zone
of proximal development and this awareness
can only come about as a result of observing
and interacting with individual learners. Bilin-
guual dictionaries, regardless of the ingenious
devices created by their authors to facilitate
their use by language learners, are not likely
to meet with much success at least for those
students at the elementary level. Nelson, for
example, suggests that “synonyms as transla-
tions can also aid users by making clear where
the boundaries of meaning differ in the two
languages, if carefully distinguished with
usage discriminations.” But differentiating
meaning boundaries seems to be of little value
for students who use a strategy based primar-
ily on lexical formalism. Bilingual dictionaries,
it would appear, cannot be sensitive to the
individual’s zone of proximal development be-
cause, for one thing, they treat all users
homogeneously rather than as individuals. Such
dictionaries, therefore, hold little prom-
ise as viable pedagogical tools, again, at least
for beginning, or even intermediate level lan-
guage students.

Since higher forms of human learning re-
quire regulation by other individuals, in the
case of second language learning, the optimal
dictionary cannot be some codified collection
of lexemes, but is the language teacher or
some other individual who has the opportunity to interact with the learner, including the learner’s peers. This we have indeed found to be the case in the method that we have been using and refining at the University of Delaware known as Strategic Interaction. In this method, the teacher or peer serves as the dictionary, because only they can be aware of the individual learner’s zone of proximal development. The learner and the knower are able to negotiate, and it is only as a result of negotiation that an intended meaning can be made clear and an appropriate term with all of its cultural connotations can be decided upon. This, of course, may seem rather obvious, but perhaps not, since lexicographers continue to concern themselves with ways of producing usable pedagogical dictionaries that ignore the importance of negotiation and the need for other-regulation. To be sure, some suggestions have been made along these lines by researchers such as Frawley, Smith and Mel’cuk. To date, however, their work has primarily been within the framework of artificial intelligence and has not yet included experimental research with human subjects.

**NOTES**

1. This paper is a revised version of a paper entitled “A Functional Dictionary in the Interactive Classroom” presented at the AATSP Convention in Mexico City, 1984.


9. In our explanation of the data presented below, we draw an important distinction between the dictionary as text and the dictionary as work.

10. We are now in the process of analyzing results from an experiment in which students were asked to translate items from English into Spanish.


12. Tomaszczyk, p. 117.

13. One cannot assume, for example, that all students at a particular instructional level are necessarily at the same proficiency level. We are currently working on a project that brings into question many of the widely accepted assumptions regarding second language proficiency. For our purposes here, however, we assume that there is more or less a rough correspondence between instructional level and proficiency.


16. Frawley, in press.

17. Frawley, in press.

18. Frawley, in press.

19. Frawley, in press.

20. Frawley, in press.

21. Frawley, in press.

22. Frawley, in press.

23. On this issue the reader is referred to work of Frawley and Lantolf cited above.
