Language Learning Strategies:
A Strategy-Based Approach to L2 Learning, Strategic Competence, and Test Validation

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Abstract:

Since the early 1970s, research concerns in the field of foreign language learning and teaching have shifted from the methods of teaching to learner characteristics and their influence on the process and product of language learning. One consequence of this refocusing has been an emphasis on the notion of language learning strategies (memory, cognitive, compensation, metacognitive, affective, and social). As a result, burgeoning attempts have been made to identify, describe, and classify these strategies, to document their contribution to language learning, and to offer different strategy training courses.

This study purported to draw on the concept of language learning strategies to address a number of interlocking issues surrounding L2 learning (linguistic approaches to L2 learning, transfer, and fossilization), the construct of strategic competence, and test validation.

The results of this study indicate the high use of metacognitive strategies in the process of L2 learning, the significant effect of cognitive strategies on linguistic

and the cloze test in view of their ability to measure the same components of strategic competence.

1. Background

It seems that in language learning research too scant attention has been devoted to the efforts learners themselves make in mastering a foreign language. Since the early 1970s, however, research concerns in the field of foreign language learning and teaching have shifted from the methods of teaching to learner characteristics and their influence on the process and product of language learning (Purpura, 1997). Significant perspectives have provided the impetus for this shift of emphasis toward learner characteristics, particularly language learning strategies: classroom realities (Candlin, 1991), the notion of "no best method" (Prabhu, 1990) and subsequently the postmethod condition (Kumaravadivelu, 1994), orientation toward communicative competence (Canale and Swain, 1980; Canale, 1983) or communicative language ability (Bachman, 1990; Bachman and Palmer, 1996), learner autonomy (Wenden, 1991; Littlewood, 1996; Yang, 1998; Cotterall, 2000), process of language learning (Chesterfield and Chesterfield, 1985; O'Malley and Chamot, 1990; Green and Oxford, 1995), and certain theoretical aspects of language learning (Brown, 1973; Dulay and Burt, 1973, 1974a; Baily, Madden, and Krashen, 1974; Kaplan, 1998). One consequence of this refocusing has been an emphasis on the notion of language learning strategies and burgeoning attempts to identify, describe, and classify strategies (e.g. Tarone et al., 1976; Hosenfeld, 1977; Cohen and Aphec, 1981; O'Malley and Chamot, 1990; Oxford, 1990; Cohen, 1998), to document the contribution of strategies to language learning (e.g. Naiman et al., 1978; Politzer and McGroarty, 1985; Vann and Abraham, 1990; Bejarano et al., 1997; Sheorey, 1999), to develop different types of strategy training courses for language learners (e.g. Holec, 1988; Oxford, 1990; Cohen, 1998), and to offer methods for investigating strategies (for reviews, see Oxford and Crookall, 1989;

Skehan, 1989; Oxford, 1990; Cohen, 1998).

This study purported to draw on the concept of language learning strategies to address a number of interlocking issues surrounding L2 learning (linguistic approaches to L2 learning, transfer, and fossilization), the construct of strategic competence, and test validation.

The first purpose of this study was to investigate the type and frequency of individual language learning strategies used by Iranian EFL learners. Teachers and researchers have all observed that some learners approach the learning task more successfully than others. The learning strategy literature assumes that part of this success can be attributed to particular sets of strategies which learners engage in. Therefore, this study purported to shed light on this aspect of L2 learning. The second purpose of this study was to explore Iranian EFL learners' use of six strategy categories (memory, cognitive, compensation, metacognitive, affective, and social) in order to provide evidence of the role each of them plays in language learning, to improve the present understanding of strategic competence as a component of communicative language ability, which is assumed to be incorporated in the construct of many proficiency tests, and to clarify the contribution of each category to the development of L2 strategic competence. The third purpose of this study was to determine the relationship of proficiency and gender with the use of total language learning strategies and strategy categories. The fourth purpose of this study was to provide evidence of the relationship of total language learning strategies and strategy categories with the TOEFL and its sections and the cloze. The fifth purpose of this study was to inquire into the relationship of the TOEFL and its sections with the cloze according to test performance and strategy use. The final purpose of this study was to appraise the four linguistic approaches to L2 learning, L1 transfer, and fossilization.

2. Methodology

The total population participating in this study consisted of 764 subjects. The characteristics of the subjects in terms of their educational setting, age, gender, and proficiency level are described below. This study was carried out in four educational settings: Allameh Tabatabai University, Tehran University (the TOEFL Department), the Iran Language Institute (the TOEFL Department in Tehran), and the Iran Language Institute (Karaj Branch). The average age of the sample was 23.890 for males and 22.58 for females. The sample consisted of 341 male and 423 female subjects, falling into four proficiency groups on the basis of their TOEFL scores: the low group (below 401), the lower-intermediate group (401-475), the upper-intermediate group (476-550), and the advanced group (above 550). A total of 158 subjects in the sample belonged to the low group, 313 subjects to the lower-intermediate group, 225 subjects to the upper-intermediate group, and 68 subjects to the advanced group.

Three instruments were used in this study to address the research hypotheses: the TOEFL, a cloze passage, and a language learning strategy questionnaire. Data were collected over a span of roughly one and a half months in the fall semester of 1999. They were analyzed according to different statistical procedures, including the one- and two-way analysis of variance (ANOVA), t-test, correlational analysis, Cronbach's alpha, and descriptive statistics.

3. Results and Conclusions

The results of this study allow us to draw far-reaching conclusions about various aspects of strategy use, strategic competence, test validation, and language learning perspectives.

3.1. Language Learning Strategies

The results of this study reveal two fundamental aspects of strategy use by L2 learners: the significance of strategy use and variation in strategy use.

Iranian EFL learners make medium use of language learning strategies. This is in accord with the general tenor of previous strategy research (Green, 1991; Klassen, 1994; Oxford and Ehrman, 1995; Green and Oxford, 1995; Bedell and Oxford, 1996; Bremner, 1998). Compatible with a number of other findings (Green and Oxford, 1995; Yang, 1992; Boraie et al., 1994), the highest use of metacognitive strategies in this study is indicative of learners' attempts to regulate their language learning process by means of centering, planning, and evaluating learning. These strategies come into play at a rate higher than other strategy categories in view of the necessity of regulating the learning process in a formal classroom EFL learning context in contrast to an informal out-of-classroom ESL context. Nevertheless, metacognitive strategies contribute indirectly to language learning by providing the prerequisite for the operation of direct strategies, especially cognitive strategies, in language learning. That is why, despite the highest use of metacognitive strategies, it is cognitive strategies that significantly affect Iranian EFL learners' attainment of language proficiency. To conclude, metacognitive strategies come to the fore in terms of frequency of strategy use; by contrast, cognitive strategies, especially facilitated by the use of the metacognitive strategies of centering and planning learning, allow learners to understand and produce English and hence improve their level of language proficiency.

The high rates of correlation between the categories of language learning strategies lend support to conclusions about the type of connections between these categories in an EFL context. First, strategy categories make a rather coherent construct due to their significant correlations with each other. Therefore, strategy categories are not a set of purely distinct, mutually exclusive concepts. Rather, strong intercorrelations among strategy categories are indicative of an interaction among strategies (Oxford, 1990) and a considerable overlap in their contribution to EFL learning. They make us cautious

about considering any amount of such contribution as specific to a single strategy category. Second, metacognitive strategies constitute a salient strategy category because of their comparatively higher correlation with all direct and indirect categories, except for compensation strategies. It can be contended that, due to their involvement in centering, planning, and evaluating learning, metacognitive strategies function as a sort of overarching category or macro-category, central to the operation of other strategy categories.

All for the more or less systematic pattern in the use and effect of language learning strategies, they exhibit much variation by proficiency. The upward trend of total strategy use undergoes a remarkable downward movement at the advanced level of proficiency, becoming largely equal to the frequency observed at the low level. This convergent trend, however, does not mean that low-proficiency and advanced learners behave similarly in the use of strategies. Despite this convergent trend in the frequency of total strategy use, learners at the bottom and top of the proficiency hierarchy behave differently in terms of individual strategy use. In conclusion, the variation observed at the advanced level stems from advanced EFL learners' preference for less frequent but more effective use of strategies.

3.2. Strategic Competence

The average use of strategy categories and their correlation with each other and with total strategies and language proficiency (measured by the TOEFL) give rise to a number of conclusions concerning the nature of the components of strategic competence in L2 competence. First, in view of significant intercorrelations among strategy categories, strategic competence is a coherent construct. Nevertheless, the sharp decline in correlation coefficients when it comes to compensation strategies indicates that this category functions somewhat differently in its interaction with total strategies and other

strategy categories. As suggested by a few strategy researchers, the compensation category is different from other strategy categories because of its primary function as language use strategies rather than language learning strategies. That may be the reason why it has the lowest rate of correlation with metacognitive strategies as a category primarily contributing to language learning. Second, metacognitive strategies are the categories with the strongest correlation with total strategies and many of other strategy categories. In consequence of it, they appear to be central to the concept of strategic competence. Further, their widespread function in all phases of the foreign language learning process (i.e. centering, planning, and evaluating learning) suggests that they not only contribute to the operation of other strategy categories as the components of strategic competence but also function at a higher level and in a more general domain. Third, although strategy categories and total strategies are actively used in the process of learning at all proficiency levels, their higher use is not related to an increase in proficiency. To put it another way, mere dependence on strategic competence does not appear to culminate in the better attainment of language proficiency. Being an exception, the cognitive category is the only category significantly correlated with language proficiency. Finally, significant intercorrelations among strategy categories as the components of strategic competence, in conjunction with the intercorrelations among the sections of the TOEFL as the components of language proficiency, justify their distinct roles as the separate components of communicative competence (Canale and Swain, 1980) or communicative language ability (Bachman, 1990).

3.3. Test Validation

The investigation of language learning strategies in this study has broadened the scope of knowledge concerning the construct and criterion-related validity of the TOEFL and the cloze as two measures of language proficiency. As to construct validity, this investigation lays the foundation for two tentative conclusions. First, language

learning strategies are a source of test validity rather than test bias. These strategies cannot be characterized as factors leading up to test bias by reason of constituting the bedrock on which learning proceeds; i.e. they are inextricably linked with learning, while factors such as age are specific to learners. As a result of these considerations, the correlation of the TOEFL and the cloze with certain aspects of language learning strategies can be viewed as natural, not biased, relationship. Second, the findings of this study suggest that it is possible to bridge the gap between the process-oriented view of learning and the slice-of-life or product view of testing in the process of test validation. In other words, the results of strategy use allow us to approach the construct validity of the proficiency tests of the TOEFL and the cloze from a process-oriented point of view and hence to gauge one aspect of their construct representation (Embretson, 1983). The results of this study indicate that the TOEFL and the cloze represent only a limited range of the strategy-based process of language learning or strategic competence. Both tests are significantly sensitive to only the cognitive component of the construct of strategic competence, while learners' report on strategy use is indicative of the importance of social, metacognitive, compensatory and, to a far less extent, affective components of strategic competence. As to the criterion-related validity of the TOEFL and the cloze, the results of this study are remarkably revealing. The TOEFL and the cloze have been widely compared in terms of test scores (Darnell, 1970; Oller and Inal, 1971; Bachman, 1985) because of two much attention to the product approach to test validation. The results of these comparisons have shown that the two tests are significantly correlated with each other. In addition, as the two tests tap the same building blocks of strategic competence, their criterion-related validity rests not only on test scores (product) but also on strategy use (process) in the process of language learning and prior to test performance.

3.4. Language Learning Perspectives

The results of this study can be used to approach various controversial concepts of language learning from a strategy-based perspective: transfer, UG, and fossilization.

3.4.1. Language Transfer

The learners' use of the transfer-related strategy can function as a point of departure to evaluate different approaches to transfer (Gass, 1996). The first approach (e.g. Lado, 1957) is founded on the imposition of L1 forms on L2 sentences, not taking account of variation in transfer according to learner characteristics such as gender and proficiency. The results of this study show that learners are cautious about L1 transfer in a high degree. It means the imposition of L1 on L2 is affected by the learners' understanding of L1-L2 similarities and differences and consequently their application of the strategy of transfer in the process of learning. The second approach to transfer (e.g. Dulay and Burt, 1974a, 1974b) plays down the concept of transfer and variation among language learners. Instead, it accentuates the universal innate process for learners from divergent L1 backgrounds. This approach exhibits a similar lack of interest in the role of the transfer-related strategy and proficiency in shaping transfer. The results of this study, however, bear witness to the fact that learners with lower proficiency are more vulnerable to the imposition of L1 forms. The third approach, the markedness differential hypothesis (Eckman, 1977, 1996), rests on the assumption that transfer can be predicted on the basis of L1-L2 differences in conjunction with markedness relationships within the areas of difference. This approach is still based on linguistic differences between L1 and L2, taking no heed of the contribution of language learning strategies in general and the transfer-related strategy in particular to the realization of such a prediction. The fourth approach (Kellerman, 1979, 1983) takes account of the salient role of the transfer strategy by construing language transfer as a mental activity. The results of this study provide

evidence of the sound foundation of Kellerman's approach. Kellerman suggests that the L2 learners' process of making a decision about the potential transferability of L1 forms, i.e. the use of the transfer strategy, constitutes the main variable constraining L1 transfer and transcending L1-L2 differences. This study has highlighted the fourth approach in two ways. First, it has confirmed that transfer is far from being purely linguistic by nature and free from learners' language learning strategies. As active participants in the process of L2 leaning, learners influence the linguistically inevitable instances of transfer. Second, transfer is not a static process arising from unchanging L1-L2 differences. Rather, its realization follows a dynamic process due to changes in the learners' use of language learning strategies, especially those related to transfer, across proficiency levels. The results of this study are not, however, in perfect accord with Kellerman's assumption that the constraints from the decision-making process transcend the influence of L1 forms. In lower-proficiency levels, the transfer strategy may not be used frequently enough to make learners cautious about L1-L2 differences and hence to nip the intrusion of L1 forms in the bud.

3.4.2. Universal Grammar

The evidence of strategy use and transfer in this study allows us to make critical assessment of the four possible positions for the role of UG in L2 learning (White, 1989; Kaplan, 1998): (a) UG operates in L2 learning in the same vein that it does in L1 acquisition, (b) UG operates in L2 learning with complications emanating from a set grammar, (C) UG does not operate in L2 learning, but knowledge of its principles and parameters is available through L1, and (d) UG does not operate in L2 learning.

The first position (e.g. Flynn, 1991, 1996; White et al., 1991, 1992) is based on the full availability of UG to L2 learners and the attainment of L2 competence through the same means used in L1 acquisition. As a result, there is no account of transfer and language

learning strategies as a guiding force in L2 learning. The results of this study run counter to the premises of this position. Learners' drawing on the transfer strategy in a high degree indicates that they pay attention to the transfer process. They also bring more perception to the significance of the process as they proceed with L2 learning. Furthermore, learners' medium to high use of language learning strategies indicates that strategy use is a fundamental aspect of L2 learning. The great majority of these strategies are unique to L2 learning. The second position postulates that UG operates in L2 learning. However, as L1 grammar is part of the initial state of L2 learning, parameters will not be reset necessarily immediately in view of L1 transfer. This position fails to recognize the significance of language learning strategies as constituents of strategic competence in L2 learning, while the results of this study reflect the importance of these strategies. The third position, the fundamental difference hypothesis (Bley-Vroman, 1989), claims that the paramount force behind L2 learning is a general problem-solving mechanism rather than UG or a language-specific learning mechanism. The results of this study are incompatible with this position. A great number of language learning strategies do not fall into the general learning mechanism. Rather, they are not only language-specific, but also unique to L2 learning and not analogous to those operative in L1 acquisition. The fourth position (e.g. Clahsen and Muysken, 1986, 1989) assumes that UG does not operate in L2 learning and that general learning strategies are instead at work. The results of this study attest to the susceptibility of this position to the drawbacks attributed to the third position. In addition, as Kaplan (1998) has put it, this position does not address the question of what these general learning strategies might involve. In contrast, the content of language learning strategies have been specified in various models (e.g. O'Malley and Chamot, 1990; Oxford, 1990), and there is an array of studies, including the present one, providing insights into their function and

contribution to language learning.

3.4.3. Fossilization

Various accounts have been offered to grapple with the problem of fossilization in L2 learning. The results of this study can be a source of insight into the causes of fossilization in an EFL learning context. The pattern arising from the use of these two strategies sheds light on the nature of fossilization among Iranian EFL learners in three respects. First, fossilization is prevalent at the advanced level. Second, the overgeneralization of L2 rules, rather than the negative transfer of L1 or simplification, constitutes the major cause for the production of fossilized features. Third, a decrease in noticing and learning from one's errors contributes to the persistence of fossilized features.

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