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CHAPTER 2

FOREIGN LANGUAGE MOTIVATION: INTERNAL STRUCTURE AND EXTERNAL CONNECTIONS

ABSTRACT

Thousands of adults enroll annually in private EFL courses in Egypt. What spurs these learners to exert the effort required and pay the fees in a country where access to public education is free at all levels? Our understanding of such issues is limited by the fact that most research on motivation has been conducted in second rather than foreign language learning contexts and in North American or European cultural settings. In the study reported here, a questionnaire was developed, based on current work on motivation in second and foreign language contexts and more general models from cognitive and educational psychology, and was administered to a sample of 1,554 adult learners at the Center for Adult and Continuing Education (CACE) at the American University in Cairo, with 1,464 questionnaires used for the analyses. Factor analysis and multidimensional scaling were used to identify the components of EFL motivation for this population. Results suggest that there are three basic dimensions to motivation for learning foreign languages, which we label Affect, Goal Orientation, and Expectancy. In general terms, these are probably universal and neurobiologically based, although the analysis suggests a specific Egyptian orientation with respect to the precise definition and content of each dimension. Learner profiles with respect to these dimensions of motivation were related to age, gender, and proficiency. Motivation is also related to learning strategies and preferences for certain kinds of classes and learning tasks. Those who scored high on the affective dimension of motivation preferred communicatively oriented language classes, while those high in anxiety tended not to like group work or other aspects of currently popular communicative language pedagogy. Students with a traditional approach to learning (e.g., choosing memorization strategies over inferring from context) also preferred classes in which the teacher maintains control.

INTRODUCTION

The research reported here was stimulated by both practical and theoretical considerations in the field of foreign language learning and teaching. The topic of motivation is of practical interest to language program designers and administrators, who want to attract students to programs that will motivate them to learn by being congruent with their needs and interests, to teachers, who would like to use pedagogical techniques that reinforce and develop student motivation, and to learners themselves, who must sometimes struggle to maintain their internal motivation in order to persist in the inherently difficult task of learning a foreign language. Our initial interest in investigating EFL motivation was prompted by the following question: What spurs thousands of Egyptians to exert the effort required and pay the fees for private instruction in English? The specific context within which we asked this question was the program of EFL classes in the Center for Adult and Continuing Education (CACE) at the American University in Cairo, which enrolls over 10,000 adults annually and which is only one of many programs offering classes in English in Egypt. Although we do not claim that our results generalize beyond the context of adult Egyptian learners, personally financed language classes are common in many European and Asian nations, and future research may identify commonalities with the Egyptian case.

English is stressed in Egyptian education at all levels. It is taught as a foreign language in government schools starting at grade six and as a second language starting in kindergarten in private “language schools,” which are attended by large numbers of learners. English is the medium of instruction in most tertiary education, including colleges of medicine, engineering, science, and agriculture. However, in spite of the fact that English is an integral component of the Egyptian school curriculum and that, across the board, access to public education in Egypt is free, thousands of adults enroll annually in EFL evening classes. This indicates a high level of motivation among Egyptian adults attached to achieving proficiency in English.

Earlier research (Kassabgy, 1976) established that Egyptian adult EFL learners demonstrated positive attitudes toward English, along with instrumental motivation to learn the foreign language with the major objective of emigrating to the West. These results were a direct reflection of the socio-economic conditions of Egypt at that time. Today, two decades later, in spite of the fact that the emigration motive is far less pertinent, increasing numbers of adults still enroll in EFL programs. We look to motivational factors that will explain this phenomenon, but the motives of Egyptian adult EFL learners have become more complex. EFL motivation cannot be viewed simply as the instrumental drive to emigrate in order to lead a better life abroad, and the ability to communicate fluently in English brings with it promises of a better life within Egypt. English ability is associated with educational achievement, which in turn determines social status. Prestigious professions require a certain level of proficiency in English, and career advancement in Egypt in many fields is affected by the ability to communicate fluently in English.

Discussions among teachers and administrators had identified several possible types of motivation among this learner population. It was felt that for some learners, especially housewives, learning English provides a chance to get out of the house and meet other people. Secondary and university students, it was felt, are primarily motivated by instrumental reasons, to get a job or to work for a joint venture company. Some learners seem to have a fantasy motive, a conviction that life will be better (in unspecified ways) if they learn English. Social pressures (from parents, peers, or supervisors) are probably factors for some learners. However, no recent studies exist that deal with this population. A second reason for investigating motivation in this context was that in this program and in many others, a high drop-out rate had been observed, and no reasons had been found to explain why close to 50% of all students fail to complete the courses in which they enroll. Could this be understood, we wondered, from an examination of motivational factors? Do learners with some motivational profiles succeed better than others at language learning and persist longer in the endeavor (Dörnyei, 1990a; Gardner and Smythe, 1975; Ramage, 1990)? Might some initially motivated learners encounter a lack of fit between their self-perceived interests, needs, goals, and expectations and what they encounter in classes? If so, this would have implications for classroom methodology and teacher training.

The present research does not attempt to answer all of the above questions. Because our research design is cross-sectional rather than longitudinal, we have not attempted to investigate the dynamic interplay between motivational factors and what goes on in the foreign language classroom day by day, and because the analyses reported here are based on quantitative rather than qualitative data, we focus on trends across learners rather than the complex interaction of social, cultural, and psychological factors within individual learners. But even to begin investigating these practically oriented questions runs up immediately against some crucial theoretical issues. What do we mean by motivation? How do we recognize it and measure it? Is it a unitary concept, or does it have several or many facets? Can motivation for language learning be thought of in the same way in second language learning environments and in foreign language learning contexts where students have little or no exposure to the target language outside of class? Is motivation universal or cross-culturally variable? Can models developed in the US and Canada be applied in Egypt, where Western cultural values are generally felt to be alien?

MODELS OF MOTIVATION

Keller (1983) identified ability and motivation as the major sources of variation in educational success. Ability refers to what a person can do; motivation, to what a person will do. Johnson (1979) referred to motivation as the “tendency to expend effort to achieve goals” (p. 283). One implication of these views is that, whatever its sources might be, motivation is motivation, something that exists (in varying strength) or does not exist (Bardwell and Braaksmá, 1983) and which can be measured by observing behavior. Maehr and Archer (1987) identified some of the key behavioral aspects of motivation: direction (decisions to attend to some things and not to others), persistence (concentrating attention or action on an activity for an extended duration),

continued motivation (returning to an activity without being obliged to), and activity level (intensity of effort).

Many researchers treat motivation as a single construct. Research done under the influence of goal-setting theory emphasizes that a single factor, acceptance of difficult but achievable goals, has a powerful influence on behavior (Locke and Latham, 1984). Need-achievement theorists have usually assessed motivation in educational settings from the perspective of a single construct (Atkinson, 1974, Nicholls, 1984), as have attribution theorists (Weiner, 1985). Others combine multiple measures of motivation together in order to arrive at a single score or theoretical concept. In the field of foreign and second language learning, this approach is evident in the work of Krashen (1981, 1985), who collapses several kinds of motivation into the more general construct of an affective filter, and in Schumann's acculturation model (Schumann, 1986, pp. 379–392), where different types of motivation are combined with such varied social and psychological factors as group size and culture shock to arrive at a superordinate construct called acculturation, which according to the model predicts the degree to which learners will or will not acquire a second language.

Other theorists and researchers have found that it is important to look at motivation not as a single construct or as a list of different types of motivation combined in “soup-pot” fashion, but as a multifactor trait. Bardwell and Braaksma (1983) observe that investigating the style of that trait or interrelationships among the various factors will allow researchers and practitioners to observe finer differences in the ways people approach problems and is especially important in education, since different learner needs and motivation styles are probably at least as relevant for pedagogy as students' differing learning styles. At the same time, since there is a potentially unlimited number of reasons one might study a foreign language and factors that might influence motivation, some reductionism is inevitable. Among the major theories that consider more than a single motivational construct, some are dichotomous (two-factor) models, while others view motivation from a multifactorial perspective. For reasons of space, we will review briefly only a few examples of each type.

The best known constructs concerning motivation for second language learning are those of integrative and instrumental motivation, based primarily on the important work of Gardner (1985b, 1989). An instrumental orientation results from recognition of the practical advantages of learning and is identified when learners say that they want to learn the target language to pass examinations or for economic or social advancement. An integrative orientation is identified when learners state that they want to learn a foreign language because they are attracted to the target language culture or group or the language itself. The integrative orientation implies an interest in interacting with target language speakers, and may but does not necessarily include willingness or desire to actually integrate into the target language group. The integrative motive (not quite the same as the integrative orientation; see Chapter 6 in this volume and Gardner and MacIntyre, 1991, for discussion) is identified when learners also indicate a readiness to act toward those goals. Although these two motivational factors are sometimes seen as being in opposition to each other (i.e., classifying learners as integratively or instrumentally motivated), this is not necessarily the case, since one can

find learners who are both instrumentally and integratively motivated to learn a foreign language and those with neither type of motivation, as well as learners who score high on one type of motivation and low on the other.

Gardner's model of the ways in which motivation for foreign language learning operates in educational settings has been summarized (Au, 1988; Gardner, 1988) in terms of five hypotheses:

- The integrative motive hypothesis: Integrative motivation is positively associated with second language achievement.
- The cultural belief hypothesis: Cultural beliefs influence the development of the integrative motive and the degree to which integrativeness and achievement are related.
- The active learner hypothesis: Integratively motivated learners are successful because they are active learners.
- The causality hypothesis: Integrative motivation is a cause; second language achievement, the effect.
- The two process hypothesis: Aptitude and integrative motivation are independent factors in second language learning.

Research based on this model has been very useful, but a number of criticisms have been raised against the particular view of motivation incorporated in it, as well as some of the hypotheses advanced by Gardner. While Gardner has consistently emphasized the support that integrative motivation offers for language learning, this does not seem to be the case in all language learning settings. When integrative motive has been measurable, virtually every possible relationship has been found between this type of motive and language proficiency: positive, negative, nil, and ambiguous (Au, 1988). With respect to the active learner hypothesis, if integratively motivated learners are successful because they are active learners, then the same might be theorized of successful instrumentally oriented learners. It is also unclear from many studies whether motivation is the cause or the result of successful learning. These and other criticisms of this model have been summarized by Au (1988), Crookes and Schmidt (1991), Oller (1981) and Oller and Perkins (1980).

Although developed within the Canadian second language context, this model has been extended to other second language contexts (Kraemer, 1993) and has been very influential in the foreign language literature as well. However, it cannot be assumed that the same model is appropriate to foreign language contexts such as Egypt, where learners are limited to interacting in the target language within the confines of the classroom. In addition, many Egyptian learners find the cultural values of the target language community (the United States and/or Britain) to be alien. The model also leaves out many possible influences on motivation (Crookes and Schmidt; 1991; Dörnyei, 1990a; Oxford and Shearin, 1994; Skehan, 1989). After considering learners he has known over the years in Egypt and the Ivory Coast and reflecting on his own study of Egyptian hieroglyphs (a dead language that offers no opportunities for

integration and few if any instrumental advantages), Bagnole (1993) noted that there must be more to motivation than instrumental and integrative goals.

Another dichotomous model of motivation may shed light on Bagnole's experiences with hieroglyphs. The contrast between intrinsic and extrinsic motivation is well known in psychology (deCharms, 1968; Deci, Vallerand, Pelletier, and Ryan, 1991; Deci and Ryan, 1985; Lepper and Greene, 1978). Extrinsic motivation is motivation to do something because of an external reward that may be obtained, while intrinsic motivation is demonstrated when we do something because we get rewards enough from the activity itself. The extrinsic-intrinsic distinction is somewhat similar to the instrumental-integrative distinction, but it is not identical, and both instrumental and integrative motivation are properly seen as subtypes of extrinsic motivation, since both are concerned with goals or outcomes. We can easily imagine a situation in which a learner wants to master a language in order to interact with native speakers of that language but nevertheless does not actually enjoy studying the language, an activity for which he or she has only an extrinsic, goal-oriented motivation ([+integrative] [-intrinsic]). We can equally imagine learners with instrumental motivation, for example, to satisfy a language requirement, who do enjoy studying and learning the language ([-integrative] [+intrinsic]), as well as learners with no clear reasons for studying a language who find language learning interesting and pleasurable nevertheless ([-instrumental] [-integrative] [+intrinsic]). It is also possible for a learner to be intrinsically motivated in an activity for its own sake ([+intrinsic]) while simultaneously appreciating its practical rewards ([+extrinsic]). The worst possible situation is one in which a learner has neither type of motivation for foreign language learning, neither enjoying the activity for its own sake nor thinking that it will bring any useful results ([-integrative] [-instrumental] [-intrinsic] [-extrinsic]).

Positing a construct of intrinsic motivation leads to more questions. What makes an activity intrinsically motivating? Why are some activities intensely enjoyable, while others make us bored or anxious? One answer to these questions has been given by the psychologist Mihaly Csikszentmihalyi (Csikszentmihalyi and Nakamura, 1989; Wong and Csikszentmihalyi, 1991). Csikszentmihalyi has examined the ebb and flow of psychological states (motivation, concentration, involvement) in daily experience and has proposed a theory in which the challenge of an activity (as perceived by the person doing it) and the level of skill brought by the person to the activity (also subjectively evaluated) are the crucial determinants of psychological states.

Csikszentmihalyi's theory predicts that motivation, affect, arousal, and concentration will all be highest when challenge and skill are perceived to be about equal and when both are high. When the challenge of a task is high and skills are low, the resulting psychological state is anxiety. When challenge is low and skills are high, the outcome is boredom, and when both challenge and skill are low, the outcome is the negative state of apathy. The model has received support from case studies as well as a number of studies with large sample sizes involving people of various cultures, ages, and social classes, in both the United States and Europe. The relationships among the variables of challenge, skill, and motivation (as well as affective, arousal, and concentration

variables) have been claimed to be universal (Csikszentmihalyi and Nakamura, 1989). This model of motivation is an attractive one, because it suggests a psychological analog to Krashen's "i+1" principle for the learning of grammar (Krashen, 1985). Krashen has argued that second language acquisition depends upon input to the learner containing grammatical structures that are just beyond the learner's current competence. Csikszentmihalyi's theory predicts that challenging activities that are just beyond a learner's current level of skill will be intrinsically motivating.

Others have proposed multifactor models of motivation, usually derived by factor analysis from responses to a wide-ranging motivational questionnaire. One such model is that of Dörnyei (1990a), based on research carried out in Hungary, described by Dörnyei as a typical European foreign language learning environment. Dörnyei posited a motivational construct consisting of (1) an instrumental motivational subsystem; (2) an integrative motivational subsystem, a multifaceted cluster with four dimensions (general interest in foreign languages, a desire to broaden one's view and avoid provincialism, a desire for new stimuli and challenges, and a travel orientation); (3) need for achievement; and (4) attributions about past failures. Schumann (1994a, 1994b) has suggested that Dörnyei's multifactor model is complementary to a model in which stimulus situations are evaluated in the brain according to five criteria: novelty, pleasantness, goal or need significance, coping mechanisms, and self and social image. In Schumann's view, constructs at the psychological level such as integrative and instrumental motivation and Dörnyei's more detailed model are, at the neurobiological level, the products of the brain's appraisal system aggregated across individuals. Because each individual's experience is different, each individual's stimulus appraisal system will be different and cannot be identified or responded to pedagogically.

Another study that used a broad conception of motivation, based on the work of Boekaerts (1987, 1989), was a research project carried out among Finnish sixth and eighth grade children studying English conducted by Julkunen (1989). Julkunen investigated both trait (relatively stable) and state (fluctuating) motivation in connection with student competence and attributional processes. Factor analysis of an extensive background questionnaire indicated that students' general foreign language motivation could be described in terms of eight factors: (1) a communicative motive, including aspects of integrative, instrumental, and cognitive motivation but emphasizing the function of language as a means of communication; (2) classroom level intrinsic motivation, including liking for challenging tasks; (3) teacher/method motivation, including liking and disliking of certain teaching methods; (4) integrative motivation, reflected in positive attitudes toward English and American culture; (5) a helplessness factor; (6) an anxiety factor; (7) criteria for success/failure, i.e., an attributional factor; and (8) latent interest in learning English.

Finally, in an expansion of Gardner's earlier socio-educational model, Tremblay and Gardner (1995) have proposed the incorporation of measures of effort, attention, persistence, self-efficacy, confidence, valence, causal attributions, and goal-setting in studies of motivation for language learning and have applied the model successfully to an investigation of learning a first language (French) in a bilingual community (Ontario).

CULTURAL INFLUENCES ON MOTIVATION

There is little doubt that cultural influences have some effect on motivation and reason to suspect that this influence may be large (Markus and Kitayama, 1991). We know from research in social psychology that the answers that informants give on questionnaires will be affected not only by their “true” attitudes, attributions, and expressions of interests, but also by their conceptions of an ideal self, which are partly individualistic but also heavily influenced by cultural values (Todd, 1995). A more serious problem arises if particular theories of motivation turn out to be ethnocentric. This charge has been leveled most frequently at theories of achievement motivation (Castanell, 1984; Maehr and Nicholls, 1980) and attribution theory (Duda and Allison, 1989; Kashima and Triandis, 1986; Murphy-Berman and Sharma, 1987). Komin (1990) comments that since people’s values and belief systems are culturally conditioned, authors of theories of motivation are no exception. “Thus, American theories reflect American culture, and Italian theories reflect Italian culture, etc.” (p. 702). Weiner (1991) emphasized that theories of motivation typically reflect culturally based metaphors, for example, person as machine (in Freudian and drive theory), person as a rational decision maker (in some value/expectancy theories), or person as scientist (in attribution theories).

Csikszentmihalyi’s prediction that challenge and skill are the primary determinants of motivation and other psychological states was investigated with respect to Thai learners of English by Schmidt and Savage (1992), whose results did not support the theory. In that study, there was evidence that some learners were intrinsically motivated, but there were no significant correlations, either positive or negative, between learners’ ratings of the level of challenge in a particular activity or their skill in doing it and on-line measures of motivation, affect, or psychological activation. Schmidt and Savage concluded that the balance between the challenge of an activity and one’s ability level may be one factor contributing to motivation, but it is not of overwhelming importance for Thai learners. Instead of arising from a single variable that outweighs all others, whether or not an activity is considered enjoyable and intrinsically motivating by Thais seems to depend on a large number of factors, including an ego orientation, the importance of smooth interpersonal relationships and harmony, a competence orientation characterized by a perception of education as a means to climb the social ladder, an interdependence orientation, and a fun-pleasure orientation (Komin, 1990). Based on these findings, it seems that Csikszentmihalyi’s reductionist model of intrinsic motivation is too simplistic, because intrinsic motivation and its associated psychological states arise from many interacting factors rather than one or two, and ethnocentric, because of the assumption that the psychological sources of intrinsic motivation are universal rather than culture-specific.

MOTIVATION AND COGNITIVE PROCESSES

Other than Gardner’s hypothesis that integratively motivated learners succeed because they are active learners (Gardner, 1985b, 1988) and Schumann’s theoretical connections between motivation, interaction, and the provision of comprehensible input (Schumann, 1986), it is rather remarkable that theories of foreign language learning have been generally silent about how motivation works, in terms of the

mechanisms of acquisition. It is equally remarkable that there has been so little research exploring the links between motivation and cognitive processes.

Much more remains to be done in this area, drawing on work on motivation and cognitive processing in educational contexts other than language learning. A theoretical model relating motivational factors, cognitive factors, and learning outcomes for academic subjects has been developed by Pintrich (1988, 1989) and could be explored in connection with foreign language learning. Pintrich has specified those aspects of cognition that are important for educational success:

- Cognitive strategies involve the psychological mechanism of attention focusing, the necessary and sufficient condition for encoding into memory (Carr and Curran, 1994; Logan, 1988); Schmidt, 1993, 1995; Tomlin and Villa, 1994). Basic cognitive strategies include rehearsal (such as saying material aloud when reading, copying material into a notebook, or underlining), elaboration (paraphrasing, summarizing, note-taking), and organizational strategies (e.g., selecting the main idea from a text).
- Metacognitive strategies concern the control and regulation of cognition. Basic strategies include planning (for example, setting goals for studying), monitoring (for example, self-testing to ensure comprehension), and self-regulation (for example, re-reading or reviewing material).
- Resource management strategies include time management, space management, and strategies that call on the support of others. For example, good learners know when they don't know something, and will ask teachers for help or consult textbooks or dictionaries.

Pintrich (1989) has carried out research identifying relationships among motivational factors, cognitive strategies, and educational success in American university courses. Schiefele (1991) explored the relationships between one motivational factor, interest, and the use of learning strategies in first language reading, finding that interest correlated positively with the use of elaboration and information-seeking strategies and negatively with rehearsal, but did not affect organization or time management strategies. But none of this research has yet concerned foreign language learning. Within the foreign language field, there has been research concerning the links between cognitive strategies, usually called learning strategies, and learning outcomes (O'Malley and Chamot, 1990), but little research so far linking aspects of motivation with the use of such learning strategies. (For exceptions, see Oxford and Nyikos, 1989, in which motivation was the strongest influence on strategy use; Ehrman and Oxford, 1995, in which strategy use was correlated significantly and sometimes strongly with motivational factors; and Chapter 5 in this volume.)

MOTIVATION AND INSTRUCTIONAL DESIGN

Keller (1983) has referred to motivation as the "neglected heart of instructional design" (p. 390). Crookes and Schmidt (1991) identified some of the ways in which motivational factors can be related to classroom techniques, as well as to curriculum and

syllabus design. Interest can be enhanced by using varied materials, by starting lessons with questions that put the learner into a problem-solving mode, by relating instructional material to topics already of interest to learners, and by the use of paradoxes and puzzles. In general, interest is fostered by personalizing material and by focusing on the concrete rather than the abstract. Relevance can be enhanced by analyzing and addressing learner needs and goals in language study, as well as by addressing such basic human needs as the need for achievement, for affiliation, and for power. Self-confidence and expectations of success can be enhanced by increasing students' experience with success, by making clear the requirements of a language course, by setting learning goals that are challenging but realistic, and by maximizing student control over outcomes, so that students see success as the product of their own efforts. Feedback can be an important factor (either positive or negative) that affects student motivation. Corrective feedback (error correction) that simply tells a student that he or she has made an error can be very discouraging, which is one reason many teachers are reluctant to correct student errors at all. It can be argued that the best feedback is that which is provided when it is most useful for the student, usually just before the same task is presented again. A well timed reminder of points to be watchful of and errors to be avoided can help students to carry out a particular learning task more successfully. In other words, feedback that promotes success is motivating; feedback that merely signals failure is demotivating. Additional strategies for enhancing motivation in foreign language classes have been proposed by Dörnyei (1994a) Oxford and Shearin (1994) and Fotos (1994), but as Gardner and Tremblay (1994a) have pointed out, none of these suggestions has been accompanied by empirical findings showing that they are effective.

There has been almost no research investigating relationships between the motivational styles of language learners and the types of classrooms and learning tasks that are consonant with those styles. Ames (1984, 1992) observed that although cooperative learning structures have been widely touted in the educational literature as good for promoting achievement and self-esteem for all learners, the situation is somewhat more complex. Competitive, cooperative, and individualistic goal structures elicit different types of motivation, and students who have been socialized into different motivational styles may prefer different learning structures. There probably are other links between motivation and pedagogical aspects of language teaching that are also worth exploring. Burnaby and Sun (1989) discussed the views of Chinese teachers toward communicative language teaching in the context of the wider curriculum, traditional teaching methods, class sizes, and schedules, as well as the communicative needs of learners, arguing that there is considerable support for the teachers' view that communicative methods are not relevant for most students' needs. They do not discuss the views of learners (as opposed to teachers) toward appropriate methodologies or make an explicit link to motivation, but it is likely that learners with different perceived needs and goals will be differentially receptive to certain methods and activities. Brindley (1989) pointed out that learners often have rather fixed ideas about what it means to be a learner and to learn a language, and Nunan (1989b) found that teachers and learners in migrant education programs in Australia had quite different attitudes toward specific classroom activities and tasks. While teachers accepted the value of communicatively oriented activities, the learners surveyed placed greater value on

traditional learning activities. Teachers gave higher ratings to such activities as using pictures, films, and videos, student self-discovery of errors, and pair work, while students gave higher ratings to vocabulary development, pronunciation practice, and external error correction. Whether learner expectations are met with respect to classroom methods and activities may have a wash-back effect on motivation as well. Learners who are motivated to learn English only to pass a state exam might well prefer a traditional, teacher-centered, grammar-focused class and may feel they are not learning in communicatively oriented classes. Learners who are integratively motivated may be more receptive to communicative approaches and may suffer a severe drop in interest in language courses if the focus is primarily on grammar (Schmidt and Frota, 1986).

There has been some investigation of learner attitudes toward such instructional factors in second and foreign language contexts (Kern, 1995), independent of any connection to motivation, but the only study we are aware of that explicitly links motivation and instructional tasks is Julkunen's (1989) study of Finnish learners of English. In that study, students performed three closed tasks (tasks for which there was only one correct answer) and three open tasks (tasks for which various answers were possible) related to English vocabulary in three different learning situations created by instructions and seating arrangements: individualistic, cooperative, and competitive. Students' pre-task and post-task appraisals of these tasks were recorded through an on-line motivation questionnaire. Results showed that students were more liable to perceive themselves as failures in open tasks than in closed tasks, perhaps because it was more difficult for students to assess results in terms of success and failure in open tasks. High achievers evaluated all three learning situations (individualistic, competitive, and cooperative) positively, particularly in the closed tasks. The cooperative learning situation emerged as the best learning situation for all students in terms of its effects on motivation.

RESEARCH GOALS

This study attempts to achieve the following goals:

- To identify the components of foreign language learning motivation for a population of adult EFL learners in Egypt;
- To identify the components of learner preferences for specific classroom practices and activities for the same population of EFL learners;
- To identify the components of learning strategies that are reportedly used by the same population;
- To identify relationships between the components of motivation and preferred classroom learning activities; and
- To identify relationships between the components of motivation and learning strategies.

Because of the wide variety of factors that might be expected to influence motivation for foreign language learning, this study explores the concept of foreign language motivation within a broad conception of motivation that avoids premature reductionism or assumes that all aspects of motivation are universal. The model of motivation used was a composite of several current models, especially those of Pintrich (1989), deCharms (1968), Keller (1983), Maehr and Archer (1987), and Dörnyei (1990a). These models fall generally within the broad category of value-expectancy theories of motivation. Such models assume that motivation is a multiplicative function of values and expectations. People will approach activities that they consider valuable and relevant to their personal goals and that they expect to succeed at.

The components of motivation investigated in this study included:

- Intrinsic goal orientation toward English
- Extrinsic goal orientation toward English
- Personal psychological goals of achievement and affiliation
- Expectation of success
- Attribution of success and failure
- Attitudes toward Americans and British speakers of English
- Attitudes toward American and British culture
- Anxiety

METHOD

INFORMANTS

The informants for this study were 1,554 adult learners of EFL at the American University in Cairo, Center for Adult and Continuing Education, downtown and

Heliopolis campuses, who completed a 100-item questionnaire. Questionnaires from subjects who failed to complete at least 80% of the items were discarded, resulting in a total of 1,502 questionnaires used for initial analysis. Another 38 questionnaires were discarded due to unavailability of background information, resulting in a total of 1,464 questionnaires used in the final analysis.

Table 1 displays the descriptive statistics on background variables for the 1,464 informants whose questionnaires were used for analysis. As can be seen in Table 1, 54% of the sample were males and 46% were females. Informants ranged in age from 15 to 70, but 58% were young adults (23–35), and another 24% were of university age. Informants were fairly evenly distributed across six different proficiency levels, from basic to advanced. More than half had completed university education, and a wide range of occupations was represented. The single largest occupational category was “unemployed” (20%). This partly reflects economic conditions in the country, but may be misleading because the number includes an unknown number of recently graduated students waiting to hear about positions.

Table 1: Descriptive statistics for 1,464 informants

Sex:		
Males		792
Females		672
Total		1,464
Age:		
15–18 (secondary school age)		69
19–22 (university age)		347
23–35 (young adults)		840
35+ (mature adults)		192
Total	(16 missing cases)	1,448
Proficiency level:		
Basic		208
Elementary		359
Lower intermediate		302

continued...

Table 1: Descriptive statistics for 1,464 informants (cont.)

Intermediate		230
Upper intermediate		205
Advanced		160
Total		1,464
Highest level of education completed:		
Pre-secondary		49
Secondary		188
Vocational training		405
BA./B.Sc.		766
MA./Ph.D.		26
Post graduate diploma		29
Total	(1 missing case)	1,463
Occupation:		
Unemployed		292
Accountant/auditor		233
Students		185
Secretary/clerk/receptionist		170
Professionals, lawyers		167
Teachers, professors, researchers		105
Technical workers, systems analysts		101
Managers, senior administrators		56
Sales & marketing		55
Service industry workers		39
Police, security officers		26
Housewives		16
Journalism/mass media		9
Musician/artist		7
Total	(3 missing cases)	1,461

Number of English courses previously taken		
None		428
1–2		527
3–10		473
11–19		35
Total	(1 missing case)	1,463

INSTRUMENT

Since the available subject access time was limited to a single class session, it was necessary to choose between probing a few concepts thoroughly and sampling a wider variety of concepts more tentatively. The latter was considered more appropriate for exploratory analysis. A 100-item questionnaire was constructed, on which students indicated their agreement or disagreement with various statements on six-point Likert scales. Six-point scales were used to eliminate neutral responses.

The questionnaire was administered in Arabic. A preliminary version of the questionnaire items was initially formulated in English, based on existing questionnaires in use, concepts of motivation found in the psychological literature, and discussions with teachers, administrators, and students. These questions were then professionally translated into Arabic, first literally and then more figuratively, in order to ensure that all questions were phrased in a way that was natural and appropriate. The Arabic version of the questionnaire was then back-translated to English. The Arabic version of the questionnaire is found in Appendix A. For the English back-translation, see Appendix B.

The first 50 items of the questionnaire concern motivation; the next set of 22 items concerns preferences for classroom instructional activities; and the final 25 items concern learning strategies. Three additional items were deleted from the analysis (see “analysis”).

In Part A: Motivation, the first five items deal with intrinsic motivation, three of which are positively worded (e.g., *I enjoy learning English very much*), two of which are negatively worded (e.g., *I don't enjoy learning English, but I know that learning English is important for me*) and were reverse-coded for the analysis. Items #6 through 20 deal with extrinsic motivation and represent a variety of reasons for learning English (e.g., *Being able to speak English will add to my social status; I want to learn English because it is useful when traveling in many countries; I need to be able to read textbooks in English*). Items #21–24 concern personal psychological needs, both achievement-oriented (e.g., *I really want to learn more English in this class than I have done in the past*) and affiliation-oriented (e.g., *One of the most important things in this class is getting along with other students*). Items #26–34 concern expectations (e.g., *This English class will definitely help me improve my English*) and a number of locus of control statements (e.g., *If I do well in this course, it will be because I try hard; If I don't do well in this class, it will be because the class is too difficult*).

These items raise some interesting questions regarding their expression in Arabic, since Arabic culture and American-European culture (within which attribution theories have been formulated) stress very different views about personal volition. In most contexts in Arabic, positive statements about the future are obligatorily followed by the expression *insha'allah* ("God willing"), and whether to include this and other similar phrases in surveys has been of concern to social scientists. Tessler, Palmer, Farah, and Ibrahim (1987) reported that responses differ systematically depending on whether God is mentioned, so it is important to be consistent within a questionnaire. We chose to omit such explicit references, but noted that some informants qualified their positive responses to items asserting personal control over success and failure with marginal notes referring to God's will.

Questionnaire items #35–38 concern stereotypical attitudes toward Americans and British, which were elicited directly from a sample of students. Items #39–44 concern anxiety, including general class anxiety, speaking anxiety, test anxiety, and fear of the opinions of the teacher and other students. Items #45–50 concern motivational strength (e.g., *My attendance in this class will be good; I can honestly say that I really put my best effort into trying to learn English*).

Part B of the questionnaire contains 22 items dealing with preferences for instructional activities and other characteristics of the EFL class, including the use of Arabic and English in class, skill emphasis, a concern for communicative proficiency versus preparation for exams, teacher-fronted versus student-centered orientations, preferences for individualistic or cooperative and active or passive learning situations, attitudes toward challenging tasks, and preferences concerning feedback.

Part C of the questionnaire concerns cognitive strategies. Based primarily on the work of Pintrich (1989), the 25 items cover rehearsal and rote learning strategies (#1–4); elaboration (#5–7); organizational strategies (#8–9); inferencing strategies (#10–13); metacognitive strategies such as planning, monitoring, and regulating (#14–19); and resource management (#20–25).

PROCEDURES

To counterbalance any tiredness effects, three orderings of the questionnaire items were compiled and were randomly assigned to subjects for completion. Students completed the questionnaires in a single class period during the first week of the term.

ANALYSIS

After administration of the questionnaire and before analyzing the data, the questionnaire was validated by running a Pearson correlation matrix of the components of the motivation subscales and the items themselves. As a result the following three negatively worded items were deleted:

The English tend to be snobbish and unfriendly people.
Americans are not conservative.

American culture is not a very good influence in Egypt.

The internal consistency reliability of the components of motivation, attitudes toward instructional activities, and learning strategies were assessed by means of Cronbach's alpha coefficient. These are indicated on the English back-translation of the questionnaire in Appendix B. The data relating to EFL motivation, preferences for classroom activities, and learning strategies were then subjected to two different data reduction techniques. In the first of these, the data were factor analyzed (principal component analysis, SYSTAT 4.0) to extract underlying factors. The second analysis consisted of multidimensional scaling (MDS) of the same data. ANOVAs were used to assess the effects of age, gender, and proficiency on the dimensions of motivation that emerged from the MDS analysis, and Pearson product-moment correlations were used to examine relationships among motivational factors, instructional preferences, and preferred learning strategies.

RESULTS

Means and standard deviations for each of the questionnaire items are indicated on the back-translated English version of the questionnaire in Appendix B. Table 2 lists the most agreed with and least agreed with statements from Part A (motivation) of the questionnaire. From Table 2, it can be seen that the informants in this sample of Egyptian adult EFL learners expressed strong agreement with statements that they expect to do well in the course, that learning English is important, useful, and enjoyable, and that they expect to attend regularly and will probably take another course. These informants, in general, responded that they were not taking the class to please others (spouse, supervisor, other), to emigrate, or to pass examinations. They disagreed quite strongly with statements concerning anxiety. Although some items have high standard deviations, most informants in this sample said that they are not afraid of the opinions of teachers or fellow students and do not feel embarrassed or uncomfortable when speaking English.

These data are interesting, and we suspect that EFL teachers with considerable international experience (or experience in working with different cultural groups in second language settings) may see in this something of the motivational style of Egyptian learners, who are generally confident and committed to learning English. This might be contrasted with the different styles of other cultural groups, for example, Japanese learners of English, who are often excellent language learners but who frequently express a lack of confidence in their abilities, either because they truly do lack confidence or because it is socially appropriate to say that they do. However, since this is not a comparative study and because we are concerned more with the internal structure of motivation, these areas of agreement among our informants are of less central interest than areas of variation within their responses. These were analyzed through factor analysis and multidimensional scaling.

Table 2: Most and least agreed with statements from the motivation questionnaire

Item	Mean	SD
Highest agreement		
This English class will definitely help me improve my English.	5.604	0.706
I really want to learn more English in this class than I have in the past.	5.588	0.741
I enjoy learning English very much.	5.580	0.763
English is important to me because it will broaden my view.	5.568	0.813
I plan to continue studying English for as long as possible.	5.444	0.868
I'm learning English to become more educated.	5.428	0.947
My relationship with the teacher in this class is important to me.	5.378	0.906
I want to learn English because it is useful when traveling in many countries.	5.336	1.026
My attendance in this class will be good.	5.317	0.835
After this class I will probably take another course.	5.301	1.037
Least agreement		
If I don't do well in this class, it will be because the class is too difficult.	2.846	1.309
The main reason I am taking this class is that my parents/my spouse/my supervisors want me to improve my English.	2.693	1.826
I feel uncomfortable if I have to speak in my English class.	2.634	1.541
I want to learn English because I would like to emigrate.	2.552	1.738
It embarrasses me to volunteer answers in my English class.	2.541	1.480
I don't like to speak often in English class because I am afraid that my teacher will think I am not a good student.	2.455	1.493
I am afraid other students will laugh at me when I speak English.	2.223	1.403

The main reason I need to learn English is to pass examinations.	2.044	1.334
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RESULTS OF THE FACTOR ANALYSES

The data from Parts A (motivation), B (preferences for instructional activities), and C (learning strategies) of the questionnaire were factor analyzed separately, using principal component analysis (SYSTAT 4.0) to extract underlying factors. The number of factors to be extracted was based on the following criteria:

- Minimum eigenvalues of 1.0
- Each factor to account for at least 3% of total variance
- Each factor to contain individual items with a minimum loading of .45

MOTIVATIONAL FACTORS

After varimax rotation, a nine-factor solution was chosen, which accounted for 48.3% of the total variance in the motivation subtest (see Table 3).

Table 3: Factor analysis for Part A: Motivation

	Label	Eigenvalue	Variance	Cumulative variance
Factor 1	Determination	10.44	12.9	12.9
Factor 2	Anxiety	3.52	6.2	19.1
Factor 3	Instrumental motivation	2.08	6.0	25.2
Factor 4	Sociability	1.21	5.3	30.5
Factor 5	Attitudes to culture	1.63	4.1	34.6
Factor 6	Foreign residence	1.17	3.7	38.3
Factor 7	Intrinsic motivation	1.44	3.6	41.9
Factor 8	Beliefs about failure	1.39	3.4	45.3
Factor 9	Enjoyment	1.28	3.0	48.3

Fourteen items load on Factor 1:

	Loading
I plan to continue studying English for as long as possible.	.71
My attendance in this class will be good.	.71
If I do well in this course, it will be because I try hard.	.64
This English class will definitely help me improve my English.	.63
After I finish this class, I will probably take another English course.	.62
I really want to learn more English in this class than I have in the past.	.61
I often think about how to learn English better.	.58
I expect to do well in this class because I am good at learning English.	.54
If I don't do well in this class, it will be because I don't try hard enough.	.52
I can honestly say that I really put my best effort into trying to learn English.	.52
My relationship with the teacher in this class is important to me.	.49
I am learning English to become more educated.	.49
English is important to me because it will broaden my view.	.49
If the fees for this class were increased, I would still enroll because studying English is important to me.	.47

The items loading highest on the first factor can be divided into three categories: those asserting high motivational strength and determination to learn English well (seven items: *plan to continue*; *attendance will be good*; *will probably take another course*; *want to learn more than in the past*; *think about how to learn English better*; *I can honestly say that I really put my best effort into trying to learn English*; *would still enroll if fees increased*); items concerning expectations of success (four items: *class will definitely help improve English*; *if I do well in this course, it will be because I try hard*; *expect to do well in this class because good at learning English*; *if I don't do well in this class it will be because I don't try hard enough*); plus three more heterogeneous items (*relationship with teacher is important*; *I am learning English to become more educated*; *English is important to me because it will broaden my view*). It is interesting to note that the four items from the expectancy/control subsection of the motivational questionnaire that load on Factor 1 all attribute success or failure to ability or effort, rather than external causes (the teacher, task difficulty). This factor might be labeled "expectation of success," but it seems to us even stronger than that, and we have called it "determination."

Factor 2 is readily interpretable, since it consists of all the items from the anxiety subscale of the motivational questionnaire:

	Loading
I feel uncomfortable if I have to speak in my English class.	.81
It embarrasses me to volunteer answers in my English class.	.80
I don't like to speak often in English class because I am afraid that my	.80

teacher will think I am not a good student.	
I'm afraid other students will laugh at me when I speak English.	.61
I think I can learn English well, but I don't perform well on tests and examinations.	.46
I often have difficulty concentrating in English class.	.46

It is interesting that difficulty in concentrating in class loads on this factor, suggesting that concentration is not a purely cognitive variable. Many psychologists relate anxiety to the intrusion of unwelcome thoughts and difficulty in concentrating.

Factor 3 consists of four questionnaire items, all from the extrinsic motivation subscale of the questionnaire, all with a strong instrumental orientation:

	Loading
Being able to speak English will add to my social status.	.75
If I learn English better, I will be able to get a better job.	.71
Increasing my English proficiency will have financial benefits for me.	.61
If I can speak English, I will have a marvelous life.	.48

Factor 4 consists of three questionnaire items, all addressing personal needs for affiliation. We have labeled the dimension "sociability." The items loading on this factor concern the classroom as a social environment and a concern with getting along with both students (as potential friends) and the teacher.

	Loading
One reason I learn English is that I can meet new people and make friends in class.	.67
My relationship with the teacher in this class is important to me.	.60
One of the most important things in this class is getting along with other students.	.52

Factor 5 consists of four items concerning target language speakers and American and British culture. We label this factor "attitudes toward foreign culture." This factor might also be considered to represent an integrative orientation.

	Loading
The English are conservative people who cherish customs and traditions.	.71
Americans are very friendly people.	.64
Most of my favorite actors and musicians are either British or American.	.61
British culture has contributed a lot to the world.	.46

Factor 6 consists of only two items, and we have labeled it “foreign residence.”

	Loading
I am learning English because I want to spend time in an English-speaking country.	.72
I want to learn English because I would like to emigrate.	.61

Factor 7 consists of three questionnaire items from the intrinsic motivation subscale:

	Loading
Learning English is a hobby for me.	.65
I don't enjoy learning English, but I know that learning English is important for me. (reverse-coded)	.57
I wish I could learn English in an easier way, without going to class. (reverse-coded)	.47

The two items that load on Factor 8 concern beliefs about failure, specifically the attribution of failure to external causes:

	Loading
If I don't learn well in this class, it will be mainly because of the teacher.	.71
If I don't do well in this class, it will be because the class is too difficult.	.71

Factor 9 is labeled “enjoyment” after the single item loading on it, although conceptually there is little to distinguish it from the items loading on Factor 7 (intrinsic motivation):

	Loading
I enjoy learning English very much.	.51

FACTOR ANALYSIS OF INSTRUCTIONAL PREFERENCES

For the factor analysis of our informants' preferences for classroom activities and methodological approaches, a six-factor solution was chosen based on the same criteria mentioned above with respect to the factor analysis of the motivation questionnaire. This solution accounts for 50.3% of the total variance, as indicated in Table 4.

Table 4: Factor analysis for Part B: Preferences for instructional activities

	Label	Eigenvalue	Variance	Cumulative variance
Factor 1	Balanced approach	3.57	12.7	12.7
Factor 2	Group & pair work	1.26	8.6	21.3
Factor 3	Silent learner	2.72	8.5	29.6
Factor 4	Challenge/ curiosity	1.41	8.2	38
Factor 5	Direct method	1.02	6.9	45
Factor 6	Feedback	1.1	5.4	50.3

Six questionnaire items load on Factor 1:

	Loading
It is important for the teacher to maintain discipline in English class.	.71
Students in English class should let the teacher know why they are studying English so that the lessons can be made relevant to their goals.	.67
Student should ask questions whenever they have not understood a point in class.	.65
Reading and writing should be emphasized in English class.	.64
Listening and speaking should be emphasized in English class.	.47
Activities in this class should be designed to help the students improve their abilities to communicate in English.	.46

The items loading on this factor concern two different aspects of the language classroom, the contrast between teacher-fronted and student-centered classrooms, and the skill areas to be emphasized. It seems that subjects scoring high on this factor prefer a balanced approach with respect to both of these aspects. The teacher is to be in control to the extent of maintaining classroom discipline, but students should ask questions when they do not understand a point made in class and should make their reasons for learning English known so that lessons can be made relevant to their goals. All four skill areas (listening, speaking, reading, writing) should be emphasized (questionnaire items concerning pronunciation and grammar did not load on this factor), and the goal of the class should be to improve the learners' communicative ability. We label this factor "the balanced approach."

Factor 2 contains three items concerning individualistic and cooperative learning situations, specifically, attitudes toward group and pair work:

	Loading
I like English learning activities in which students work together in pairs or small groups.	.79
I prefer to work by myself in English class, not with other students.	-.75
Group activities and pair work in English class are a waste of time.	-.68

A positive score on this factor means that an individual likes cooperative learning structures. A negative score on the factor means that an individual does not like group activities or pair work, thinks they are a waste of time, and would rather work alone.

Factor 3 contains four items that seem somewhat similar to those of Factor 2 in their anti-communicative bias, though in this case, the issue is not individualism versus cooperation but talking or remaining silent. We label this factor “the silent learner,” to reflect the items that load on it:

	Loading
In English class, the teacher should do most of the talking and students should only answer.	.67
Pronunciation should not be an important focus of the English class.	.60
Communication activities are a waste of time in this class, because I only need to learn what is necessary to pass English examinations.	.57
I prefer to sit and listen, and don’t like being forced to speak in English class.	.57

Factor 4 is labeled “challenge and curiosity” after the first two items that load on it:

	Loading
In a class like this, I prefer activities and materials that really challenge me so that I can learn more.	.81
In an English class, I prefer activities and materials that arouse my curiosity even if they are difficult to learn.	.79
I prefer an English class with lots of activities that allow active participation.	.46

Factor 5 consists of only two items:

	Loading
During English class, I would like to have only English spoken.	.76
English class is most useful when the emphasis is put on grammar.	-.58

The two items loading on Factor 5 are negatively correlated with each other. Those who score high on the factor think that only the target language should be used and do not think that grammatical explanations should be emphasized. Those who score low on this factor do want grammar emphasized and do not think the target language needs to be used all the time. These are the most basic points of contrast between traditional grammar-translation approaches to foreign language teaching and various “direct” methods (including the natural approach in the US and communicative language teaching internationally), so we have labeled this factor “direct method.”

Factor 6 is labeled “feedback.” Only two items load on it:

	Loading
It is important that the teacher give immediate feedback in class so that students know whether their responses are right or wrong.	.80
The teacher should not criticize students who make mistakes in class.	.53

FACTOR ANALYSIS OF LEARNING STRATEGIES

For the factor analysis of our subjects’ statements concerning the cognitive strategies that are most typical of their learning behavior, a five-factor solution was chosen based on the same criteria mentioned above with respect to the factor analyses of the motivation and classroom preferences questionnaires. This solution accounts for 47.30% of the total variance, as shown in Table 5.

Table 5: Factor analysis for Part C: Learning strategies

	Label	Eigenvalue	Variance	Cumulative variance
Factor 1	Active involvement	6.82	17.08	17.08
Factor 2	Organizing learning	1.52	11.49	28.58
Factor 3	Resource mgmnt	1.25	7.56	36.14
Factor 4	Coping strategies	1.17	6.09	42.23
Factor 5	Time mgmnt	1.07	5.07	47.3

Factor 1 is labeled “active involvement.” The eight questionnaire items that load on this factor represent a variety of learning strategies, including rehearsal, inferencing, self-monitoring, and calling upon others for help:

Loading

When I read something in English, I usually read it more than once.	.70
I say or write new expressions in English repeatedly in order to practice them.	.66
I always go back over a test to make sure I understand everything.	.64
I always try to evaluate my progress in learning English.	.62
When studying for a test, I try to determine which concepts I don't understand well.	.61
I learn from my mistakes in using English by trying to understand the reasons for them.	.61
Whenever I have a question, I ask my teacher about it or try to find the answer in another way.	.60
I actively look for people with whom I can speak English.	.50

Factor 2 is labeled “organizing learning.” It consists of five items representing the learning strategies of elaboration and organization and a generally analytic style of learning:

	Loading
I always try to notice the similarities and differences between English and Arabic.	.70
When I learn a new grammar rule, I think about its relationship to rules I have learned already.	.69
When I study for my English course, I pick out the most important points and make charts, diagrams, and tables for myself.	.55
I make summaries of what I have learned in my English class.	.55
I try to find the meaning of a word by dividing it into parts that I understand.	.46

Factor 3 is labeled “resource management.” It consists of two items dealing with arranging a time and place to study English:

	Loading
I have a regular place set aside for studying.	.75
I arrange my schedule to make sure that I keep up with my English class.	.70

Factor 4 is labeled “coping strategies.” It consists of three items: memorization (rehearsal), guessing from context, and inferencing.

	Loading
When learning new English words, I say them over and over to memorize them.	.63
When I do not understand a word in something I am reading, I try to guess its meaning from context.	.56

I try to look for patterns in English without waiting for the teacher to explain the rules to me. .53

Factor 5 is labeled “time management.” It consists of two items, both reflecting time pressures and the need to be efficient:

	Loading
I often find that I don’t spend much time studying English because of other activities.	.63
When studying for a test, first I think about what the most important points are, instead of just reading everything over.	.45

MULTIDIMENSIONAL SCALING

Factor analysis is by far the preferred method of analysis in studies of language learning motivation (O’Byrne, 1995). Although the factor analyses presented so far have a certain amount of face validity and are comparable in many respects to other studies of foreign language learning motivation, there are several reasons these results are not as satisfactory as might be hoped. The combined variance accounted for by the three factor analyses is no greater than 50% for any of the three analyses. This means that an unspecified number of factors other than the nine we identified for the motivational questionnaire also accounted for about 50% of the variance. One reason for this might be that our scales were not interval (evenly spaced), which is an assumption of factor analysis, but not of multidimensional scaling (Hatch and Lazaraton, 1991). We therefore proceeded to carry out multidimensional scaling on the same data.

This statistical tool, which has rarely been used in any area of second and foreign language studies, is related to factor analysis in that it is also a data reduction model, a set of mathematical techniques that enables researchers to uncover the hidden structure of a data set (Kruskal and Wish, 1978). It differs from factor analysis in that it can usually fit an appropriate model into fewer dimensions, and unlike factor analysis, which is linear, MDS is a spatial model. A set of data is represented by a set of points in a spatial configuration or map. Each axis of the map represents a dimension. Whereas in factor analysis only a small set of items typically loads on a particular factor, in MDS each item is located somewhere along the continuum indicated by each dimension (much as a collection of people could be placed into a three-dimensional space defined by dimensions of age, height, and weight). By finding key differences between items at opposite ends of each dimension, the theoretical meaning of the analysis can be determined.

MULTIDIMENSIONAL SCALING OF THE MOTIVATION QUESTIONNAIRE

Multidimensional scaling of the 50 items of the motivation questionnaire indicated that 85% of the variance could be accounted for with a three-dimensional model (stress of final configuration = 0.147). Spatially, certain clusters of items occupy a distinctive space in the model. For example, those questionnaire items related to anxiety fell into a cluster defined by low values on the first dimension, moderately high on the second

dimension, and low on the third dimension (the analysis of such clusters is similar to factor analysis).

Tables 6, 7, and 8 show the distribution of all questionnaire items along the three dimensions.

Table 6: Motivation Dimension 1 (Affect)

I don't enjoy learning English, but I know that learning English is important for me. (reverse-coded)	1.64
I wish I could learn English in an easier way, without going to class. (reversed)	1.60
I enjoy learning English very much.	1.01
Learning English is a hobby for me.	.88
I expect to do well in this class because I am good at learning English.	.87
Learning English is a challenge that I enjoy.	.81
The English are conservative people who cherish customs and traditions.	.71
My attendance in this class will be good.	.68
I really want to learn more English in this class than I have done in the past.	.66
I plan to continue studying English for as long as possible.	.65
English is important to me because it will broaden my view.	.63
British culture has contributed a lot to the world.	.56
After I finish this class, I will probably take another English course.	.47
I can honestly say that I really put my best effort into trying to learn English.	.46
Americans are very friendly people.	.43
Most of my favorite actors and musicians are either British or American.	.37
If the fees for this class were increased, I would still enroll because studying English is important to me.	.37
My relationship with the teacher in this class is important to me.	.33
Everybody in Egypt should be able to speak English.	.32
I want to learn English because it is useful when traveling in many countries.	.30
This English class will definitely help me improve my English.	.30
It is important to me to do better than the other students in my class.	.29
If I do well in this course, it will be because I try hard.	.28

I am learning English to become more educated.	.24
I need to be able to read textbooks in English.	.23
If I don't do well in this class, it will be because I don't try hard enough.	.23
I often think about how I can learn English better.	.12
If I can speak English, I will have a marvelous life.	.01
One of the most important things in this class is getting along with the other students.	-.06
This class is important to me because if I learn English well, I will be able to help my children learn English.	-.15
If I learn a lot in this class, it will be because of the teacher.	-.05
Being able to speak English will add to my social status.	-.07
I am learning English because I want to spend a period of time in an English-speaking country.	-.14
If I learn English better, I will be able to get a better job.	-.19
Increasing my English proficiency will have financial benefits for me.	-.20
I want to learn English because I would like to emigrate.	-.25
If I don't do well in this class, it will be because I don't have much ability for learning English.	-.52
One reason I learn English is that I can meet new people and make friends in my English class.	-.57
I want to do well in this class because it is important to show my ability to my family/friends/supervisors/others.	-.65
If I don't learn well in this class, it will be mainly because of the teacher.	-.71
If I do well in this class, it will be because this is an easy class.	-.84
The main reason I am taking this class is that my parents/my spouse/my supervisors want me to improve my English.	-1.00
The main reason I need to learn English is to pass examinations.	-1.04

continued...

Table 6: Motivation Dimension 1 (Affect) (cont.)

If I don't do well in this class, it will be because the class is too difficult.	-1.08
I think I can learn English well, but I don't perform well on tests and examinations.	-1.18
I often have difficulty concentrating in English class.	-1.23

I don't like to speak often in English class because I am afraid my teacher will think I am not a good student.	-1.29
I am afraid other students will laugh at me when I speak English.	-1.38
I feel uncomfortable if I have to speak in my English class.	-1.41
It embarrasses me to volunteer answers in my English class.	-1.43

Table 7: Motivation Dimension 2 (Goal Orientation)

After I finish this class, I will probably take another English course.	.85
I often think about how I can learn English better.	.75
If the fees for this class were increased, I would still enroll because studying English is important to me.	.73
If I learn a lot in this class, it will be because of the teacher.	.56
If I don't do well in this class, it will be because I don't try hard enough.	.53
I plan to continue studying English for as long as possible.	.48
It embarrasses me to volunteer answers in my English class.	.46
I often have difficulty concentrating in English class.	.45
My attendance in this class will be good.	.44
I can honestly say that I really put my best effort into trying to learn English.	.40
I don't like to speak often in English class because I am afraid that my teacher will think I am not a good student.	.39
This class is important to me because if I learn English well, I will be able to help my children learn English.	.36
I wish I could learn English in an easier way, without going to class. (reversed)	.36
This English class will definitely help me improve my English.	.33
I feel uncomfortable if I have to speak in my English class.	.31
I don't do well in this class, it will be because I don't have much ability for learning English.	.29
If I do well in this course, it will be because I try hard.	.28
I am learning English to become more educated.	.26
My relationship with the teacher in this class is important to me.	.25
I really want to learn more English in this class than I have done in the past.	.21
One of the most important things in this class is getting along with other students.	.17
I am afraid other students will laugh at me when I speak English.	.13
I enjoy learning English very much.	.13
I think I can learn English well, but I don't perform well on tests and examinations.	.10
English is important to me because it will broaden my view.	.06
It is important to me to do better than the other students in my class.	.04

Learning English is a hobby for me.	-.01
Learning English is a challenge that I enjoy.	-.03
I don't enjoy learning English, but I know that learning English is important for me. (reverse-coded)	-.03
If I don't do well in this class, it will be because the class is too difficult.	-.04
If I can speak English, I will have a marvelous life.	-.07
If I do well in this class, it will be because this is an easy class.	-.10
Being able to speak English will add to my social status.	-.11
Everybody in Egypt should be able to speak English.	-.12
I want to do well in this class because it is important to show my ability to my family/friends/supervisors/others.	-.15
I expect to do well in this class because I am good at learning English.	-.22
The main reason I am taking this class is that my parents/my spouse/my supervisors want me to improve my English.	-.30
I want to learn English because it is useful when traveling in many countries.	-.31
If I learn English better, I will be able to get a better job.	-.35
Americans are very friendly people.	-.36
If I don't learn well in this class, it will be mainly because of the teacher.	-.38
The main reason I need to learn English is to pass examinations.	-.41
One reason I learn English is that I can meet new people and make friends in my English class.	-.53
I need to be able to read textbooks in English.	-.62
I am learning English because I want to spend a period of time in an English-speaking country.	-.63
Increasing my English proficiency will have financial benefits for me.	-.75
Most of my favorite actors and musicians are either British or American.	-.85
British culture has contributed a lot to the world.	-.91
I want to learn English because I would like to emigrate.	-1.00
The English are conservative people who cherish customs and traditions.	-1.07

Table 8: Motivation Dimension 3 (Expectancy)

Increasing my English proficiency will have financial benefits for me.	.74
If I learn English better, I will be able to get a better job.	.71
I need to be able to read textbooks in English.	.71
It is important to me to do better than the other students in my class.	.69
One of the most important things in this class is getting along with other students.	.52
I am learning English to become more educated.	.52
I want to do well in this class because it is important to show my ability to my family/friends/supervisors/others.	.49
I really want to learn more English in this class than I have done in the past.	.48
This class is important to me because if I learn English well, I will be able to help my children learn English.	.48
Being able to speak English will add to my social status.	.46
My relationship with the teacher in this class is important to me.	.43
I want to learn English because it is useful when traveling in many countries.	.39
The main reason I am taking this class is that my parents/my spouse/my supervisors want me to improve my English.	.38
One reason I learn English is that I can meet new people and make friends in my English class.	.34
I often think about how I can learn English better.	.33
Everybody in Egypt should be able to speak English.	.32
English is important to me because it will broaden my view.	.32
This English class will definitely help me improve my English.	.26
I often have difficulty concentrating in English class.	.16
I am learning English because I want to spend a period of time in an English-speaking country.	.15
If I can speak English, I will have a marvelous life.	.15
My attendance in this class will be good.	.13
After I finish this class, I will probably take another English course.	.13
If I do well in this course, it will be because I try hard.	.12
I plan to continue studying English for as long as possible.	.07
I expect to do well in this class because I am good at learning English.	.05
The main reason I need to learn English is to pass examinations.	.02
I can honestly say that I really put my best effort into trying to learn English.	-.02
I enjoy learning English very much.	-.06
I want to learn English because I would like to emigrate.	-.09
Learning English is a challenge that I enjoy.	-.11
I don't like to speak often in English class because I am afraid that my teacher will think I am not a good student.	-.14

If I learn a lot in this class, it will be because of the teacher.	-0.15
I think I can learn English well, but I don't perform well on tests and examinations.	-0.17
I feel uncomfortable if I have to speak in my English class.	-0.26
It embarrasses me to volunteer answers in my English class.	-0.27
I am afraid other students will laugh at me when I speak English.	-0.28
If I do well in this class, it will be because this is an easy class.	-0.31
British culture has contributed a lot to the world.	-0.36
Most of my favorite actors and musicians are either British or American.	-0.38
Americans are very friendly people.	-0.39
If the fees for this class were increased, I would still enroll because studying English is important to me.	-0.40
I wish I could learn English in an easier way, without going to class. (reversed)	-0.43
The English are conservative people who cherish customs and traditions.	-0.71
Learning English is a hobby for me.	-0.72
If I don't do well in this class, it will be because the class is too difficult.	-0.77
I don't enjoy learning English, but I know that learning English is important for me. (reverse-coded)	-0.77
If I don't do well in this class, it will be because I don't try hard enough.	-0.80
If I don't do well in this class, it will be because I don't have much ability for learning English.	-0.85
If I don't learn well in this class, it will be mainly because of the teacher.	-1.13

We have labeled Dimension 1 "affect." Alternatively, it could be labeled "enjoyment" or "intrinsic motivation." The distribution of items along this dimension supports Csikszentmihalyi's model of intrinsic motivation (Csikszentmihalyi and Nakamura, 1989; Wong and Csikszentmihalyi, 1991). At one end of the continuum, we find what Csikszentmihalyi calls "flow," the self-motivating feeling of enjoyment (*I enjoy learning English very much*) that one experiences in association with both challenge (*learning English is a challenge that I enjoy*) and skill (*I expect to do well in this class because I'm good at learning English*). At the other end of the continuum represented by Dimension 1 are found items relating to high challenge (*I want to do well in this class because it is important to show my ability to my family/friends/supervisors/others*) coupled with low skill (*I think I can learn English well, but I don't perform well on tests and examinations*), which in Csikszentmihalyi's theory results in anxiety (*it embarrasses me to volunteer answers in my English class; I feel uncomfortable if I have to speak in my English class*), the opposite of flow. In this case, there may be extrinsic motivation (*the main reason I need to learn English is to pass exams*), but the enjoyment and cognitive efficiency are impaired (*I often have difficulty concentrating in English class*).

Motivation Dimension 2 is much harder to interpret. After much thought and discussion, we have labeled this dimension "goal orientation," but other labels might be "internal" versus "external" reference, a "learning" versus "performance" orientation, or "extrinsic motivation." The key to interpreting this dimension appears to be the

negative end of the continuum, where most questionnaire items concerning extrinsic motivation for learning English are found. There is a lot of variety in the items represented (*I want to learn English because I would like to emigrate; increasing my English proficiency will have financial benefits for me; I need to be able to read textbooks in English; if I learn English better, I will be able to get a better job*), and integratively oriented items also fall toward the same end of this dimension (*most of my favorite actors and musicians are either British or American; one reason I learn English is that I can meet new people and make friends in my English class*). But, all of these items represent “reasons” for studying English. At the other end of the continuum are items that might be characterized as learning English for no particular reason, i.e., sources of motivation unrelated to external reasons or rewards. The two items from the extrinsic motivation subscale that are at the positive end of Dimension 2 (*English is important to me because it will broaden my view; I am learning English to become more educated*) seem similar to other items at the positive end because they stress internal rather than external sources of reward. We also note that all items concerning anxiety are fairly high on this dimension. This suggests that those who are motivated by internal goals may be more anxious than those who have concrete, external goals.

Dimension 3 is labeled “expectancy.” Once again, a number of other labels might be appropriate, including “success orientation,” “determination,” “confidence,” “positive thinking,” or even “denial.” What is most striking to us about Dimension 3 is that many of the items that load at the positive end of the dimension are expressed in a very positive way (*increasing my English proficiency will have financial benefits for me; if I learn English better, I will be able to get a better job; this class is important to me because if I learn English well, I will be able to help my children learn English; being able to speak English will add to my social status*). Qualified statements of success (*if I do well in this course, it will be because...*) fall in the middle of the continuum. At the extreme negative end of the dimension are all four questionnaire items concerning attributions of failure (*if I don't do well in this class, it will be because...*). It seems as though it does not matter much which attribution statement is presented for response; if failure is mentioned, the item falls at the negative pole of this dimension.

MULTIDIMENSIONAL SCALING OF INSTRUCTIONAL PREFERENCES

Multidimensional scaling of the 22 items in Part B of the questionnaire (preferences for instructional activities) indicated that 88% of the variance could be accounted for with a two-dimensional model (stress of final configuration = 0.12). Tables 9 and 10 show the distribution of all questionnaire items along the two dimensions.

Table 9: Instructional Preferences Dimension 1 (Communicative Orientation)

I prefer an English class in which there are lots of activities that allow me to participate actively.	1.19
Activities in this class should be designed to help the students improve their abilities to communicate in English.	1.10
I like English learning activities in which students work together in pairs or small groups.	1.02
In English class, the teacher should do most of the talking and the students should only answer when they are called upon.	-.84
Listening and speaking should be emphasized in English class.	.78
It is important that the teacher give immediate feedback in class so that students know whether their responses are right or wrong.	.78
Student should ask questions whenever they have not understood a point in class.	.74
In an English class, I prefer activities and materials that arouse my curiosity even if they are difficult to learn.	.67
During English class, I would like to have only English spoken.	.66
In a class like this, I prefer activities and materials that really challenge me so that I can learn more.	.57
It is important for the teacher to maintain discipline in English class.	.46
Students in English class should let the teacher know why they are studying English so that the lessons can be made relevant to their goals.	.27
The teacher should make sure that everyone in this class learns English equally well.	.30
Reading and writing should be emphasized in English class.	.02
The teacher should not criticize students who make mistakes in class.	-.32
English class is most useful when the emphasis is put on grammar.	-.48
In my English class, the teacher should explain things in Arabic sometimes in order to help us learn.	-.68
I prefer to sit and listen, and don't like being forced to speak in English class.	-1.16
I prefer to work by myself in English class, not with other students.	-1.18
Communication activities are a waste of time in this class, because I only need to learn what is necessary to pass English examinations.	-1.28
Group activities and pair work in English class are a waste of time.	-1.29
Pronunciation should not be an important focus of the English class.	-1.36

Table 10: Instructional Preferences Dimension 2 (Teacher Control)

In my English class, the teacher should explain things in Arabic sometimes in order to help us learn.	.69
It is important for the teacher to maintain discipline in English class.	.52
The teacher should make sure that everyone in this class learns English equally well.	.51
Reading and writing should be emphasized in English class.	.47
Student should ask questions whenever they have not understood a point in class.	.44
I like English learning activities in which students work together in pairs or small groups.	.38
English class is most useful when the emphasis is put on grammar.	.36
I prefer to sit and listen, and don't like being forced to speak in English class.	.33
It is important that the teacher give immediate feedback in class so that students know whether their responses are right or wrong.	.23
In English class, the teacher should do most of the talking and the students should only answer when they are called upon.	.17
Communication activities are a waste of time in this class, because I only need to learn what is necessary to pass English examinations.	.11
Students in English class should let the teacher know why they are studying English so that the lessons can be made relevant to their goals.	.11
Listening and speaking should be emphasized in English class.	.06
Activities in this class should be designed to help the students improve their abilities to communicate in English.	-.05
Pronunciation should not be an important focus of the English class.	-.07
I prefer an English class in which there are lots of activities that allow me to participate actively.	-.23
In a class like this, I prefer activities and materials that really challenge me so that I can learn more.	-.24
I prefer to work by myself in English class, not with other students.	-.40
In an English class, I prefer activities and materials that arouse my curiosity even if they are difficult to learn.	-.47
Group activities and pair work in English class are a waste of time.	-.50
The teacher should not criticize students who make mistakes in class.	-1.09
During English class, I would like to have only English spoken.	-1.31

Dimension 1 represents a communicative orientation. Items that concern active participation and activities designed to help students improve their ability to communicate, such as small group and pair work, are at the positive end of this dimension. Statements that dismiss communicative activities while welcoming a focus on grammar and explanations in Arabic are at the negative end of the dimension.

Dimension 2 is labeled “teacher control.” Most questionnaire items that even mention the teacher are at the positive end of this dimension: the teacher should maintain discipline, explain as necessary, and be responsible for student learning.

MULTIDIMENSIONAL SCALING OF LEARNING STRATEGIES

Multidimensional scaling of the 25 items in Part C of the questionnaire (learning strategies) indicated that 81% of the variance could be accounted for with a two-dimensional model (stress of final configuration = 0.19). Tables 11 and 12 show the distribution of all questionnaire items along the two dimensions.

Table 11: Strategy Dimension 1 (Traditional Orientation)

I always try to memorize grammar rules.	1.29
I always arrange time to prepare before every English class.	.86
I always try to notice the similarities and differences between English and Arabic.	.71
When learning new English words, I say them over and over to memorize them.	.68
I make summaries of what I have learned in my English class.	.68
I try to change the way I study in order to fit the teacher’s teaching style.	.66
When I study for my English course, I pick out the most important points and make charts, diagrams, and tables for myself.	.63
I say or write new expressions in English repeatedly to practice them.	.58
When I learn a new grammar rule, I think about its relationship to rules I have learned already.	.31
When I don’t do well on a test, I go back over it to make sure I understand everything.	.24
I arrange my schedule to make sure that I keep up with my English class.	.24
When I read something in English, I usually read it more than once.	.20
I have a regular place set aside for studying.	.08
I always try to evaluate my progress in learning English.	-.01
When studying for a test, I try to determine which concepts I don’t understand well.	-.02
When I learn a new word in English, I try to relate it to other English words I know.	-.09
I try to find the meaning of a word by dividing it into parts that I understand.	-.17

continued...

Table 11: Strategy Dimension 1 (Traditional Orientation) (cont.)

Whenever I have a question, I ask my teacher about it or try to find the answer in another way.	-.19
I learn from my mistakes in using English by trying to understand the reasons for them.	-.26
I actively look for people with whom I can speak English.	-.36
When preparing my English lessons, I read the material through first to get a general idea of what it is about and what the major points are.	-.47
I try to look for patterns in English without waiting for the teacher to explain the rules to me.	-.67
When studying for a test, I think about the most important points.	-.98
When I do not understand a word in something I am reading, I try to guess its meaning from context.	-1.39
I often find that I don't spend much time studying English because of other activities.	-2.56

Table 12: Strategy Dimension 2 (Internal versus External Resources)

When studying for a test, I think about the most important points.	1.65
I always try to notice the similarities and differences between English and Arabic.	1.07
I try to find the meaning of a word by dividing it into parts that I understand.	.73
I try to change the way I study in order to fit the teacher's teaching style.	.63
When I learn a new grammar rule, I think about its relationship to rules I have learned already.	.45
When I do not understand a word in something I am reading, I try to guess its meaning from context.	.31
When I learn a new word in English, I try to relate it to other English words I know.	.30
When I study for my English course, I pick out the most important points and make charts, diagrams, and tables for myself.	.25
I try to look for patterns in English without waiting for the teacher to explain the rules to me.	.13
I make summaries of what I have learned in my English class.	.11
I always try to memorize grammar rules.	.01
I always try to evaluate my progress in learning English.	.03
When studying for a test, I try to determine which concepts I don't understand well.	.00
I learn from my mistakes in using English by trying to understand the reasons for them.	-.05
When I read something in English, I usually read it more than once.	-.13

When preparing my English lessons, I read the material through first to get a general idea of what it is about and what the major points are.	-0.21
I say or write new expressions in English repeatedly to practice them.	-0.27
When I don't do well on a test, I go back over it to make sure I understand everything.	-0.30
When learning new English words, I say them over and over to memorize them.	-0.38
Whenever I have a question, I ask my teacher about it or try to find the answer in another way.	-0.46
I always arrange time to prepare before every English class.	-0.54
I often find that I don't spend much time studying English because of other activities.	-0.59
I arrange my schedule to make sure that I keep up with my English class.	-0.64
I actively look for people with whom I can speak English.	-0.72
I have a regular place set aside for studying.	-1.39

Dimension 1 has been labeled “traditional orientation.” At the positive end of this dimension we find a number of items that resemble “learning,” as contrasted with “acquisition” in Krashen’s sense (Krashen, 1981), e.g., *I always try to memorize grammar rules; I always try to notice the similarities and differences between English and Arabic; I make summaries of what I have learned in my English class.* Those at the negative end of this dimension represent a more relaxed style, less focused on study and conscious rule learning, e.g., *when I do not understand a word in something I am reading, I try to guess its meaning from context; when preparing my English lessons, I read the material through first to get a general idea of what it is about and what the major points are; I actively look for people with whom I can speak English.*

We have labeled Dimension 2 “internal versus external resources.” At the negative end are items concerned with place (*I have a regular place set aside for studying*), time (*I arrange my schedule to make sure I keep up with my English class; I always arrange time to prepare*), and people (*when I have a question, I ask my teacher; I actively look for people with whom I can speak English*). Items falling at the positive end of this dimension concern the learner’s own internal resources (e.g., *I think about the most important point; I try to notice similarities and differences; I try to find the meaning of a word by dividing it into parts that I understand*).

MOTIVATION, LEARNING STRATEGIES, AND INSTRUCTIONAL PREFERENCES

In order to identify relationships between motivation and the other two foci of this study, instructional preferences and learning strategies, Pearson correlation matrices were set up using both factors identified through the factor analysis and the dimensions identified through multidimensional scaling.

Using the results of factor analysis as input, the following significant correlations were found:

Motivation F1 (Determination)

Preferences F1 (Balanced approach)	.454
Preferences F4 (Challenge/curiosity)	.309
Strategies F1 (Active involvement)	.583
Strategies F2 (Organizing learning)	.376
Strategies F3 (Resource management)	.332
Strategies F4 (Coping strategies)	.388

Motivation F2 (Anxiety)

Preferences F3 (The silent learner)	.397
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Motivation F3 (Instrumental)

Strategies F1 (Active involvement)	.267
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Motivation F4 (Sociability)

Strategies F1 (Active involvement)	.280
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Motivation F4 (Sociability)

Strategies F2 (Organizing learning)	.290
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These results indicate that, for this sample of adult EFL students, determined learners who expect to succeed prefer a balanced approach in the foreign language classroom, appreciate challenging tasks and activities that arouse their curiosity, even if they are difficult, and are more likely to report that they use learning strategies of nearly all types than are less determined learners. Like determined learners, students who score high on instrumental motivation as well as those who rate high on the motivational factor of sociability are also active learners. Like determined learners, students high in sociability also organize their own learning. Students who score high on the anxiety factor, on the other hand, would rather not participate actively in class but prefer to be silent, and anxiety is not significantly associated with any set of learning strategies. Although an integrative orientation does emerge from these data and in spite of the fact that integrativeness has been associated with active learning in other studies (Gardner, 1985b, 1988), integrativeness in our data did not correlate significantly with any set of instructional preferences or learning strategies.

Using the results of the multidimensional scaling analysis as input, only two significant correlations were found:

Motivation D1 (Affect)

Preferences D1 (Communicative) .46

Strategies D1 (Traditional orientation)

Preferences D2 (Teacher control) .42

Students who scored high on affect, indicating enjoyment of the process of learning, indicated a preference for activities that allow them to participate actively and will help them to improve their ability to communicate, including group and pair work. Students who scored low in enjoyment and high in anxiety rejected group activities, pair work, and other communicative activities as a waste of time and prefer to be silent and work alone. Students with a traditional orientation to learning (memorizing grammar rules, making comparisons between English and Arabic) indicated a preference for classes in which the teacher maintains control and guides learning. Students with a less traditional, more relaxed attitude toward language learning were less concerned with what teachers do to structure their learning and the classroom environment.

MOTIVATION, AGE, GENDER, AND PROFICIENCY

Data were collected concerning a number of background variables for all informants. Preliminary analyses indicated that the three variables of age, gender, and English language proficiency (as indicated by class placement) were the most interesting in terms of their relationships to our informants' motivational profiles. Because of space limitations, only those three independent variables are being reported, and only with respect to the dimensions of motivation derived through multidimensional scaling as dependent variables.

Table 13 shows the means for each of the three dimensions of motivation for each background category. Table 14 shows the results of three three-way ANOVAs for each of the dimensions using the independent variables of age, proficiency and gender. Because three different ANOVAs were carried out, alpha was set at .017 for each measure in order to preserve an overall level of .05 for the analysis as a whole.

Table 13: Background variables and means on dimensions of motivation

	MEANS			
	N	D1 (Affect)	D2 (Goals)	D3 (Expectancy)
Age:				
15–18	69	30.030	6.287	11.273
19–22	347	28.959	7.298	9.443
23–35	840	30.860	6.328	9.685
35+	192	32.257	7.198	8.208
Proficiency:				
Basic	208	25.411	9.187	10.198
Elemen.	359	27.295	7.034	9.762
Low int.	302	30.134	6.346	10.249
Intermed.	230	33.500	5.944	9.422
Upper int.	205	33.474	6.023	8.798
Advanced	160	36.380	4.955	7.789
Gender:				
Males	792	31.034	5.370	9.888
Females	672	29.746	8.173	9.101

Table 14: Results of ANOVAs with repeated measures on each of the dimensions of motivation

	F-ratio	P
Dimension 1 (Affect)		
N = 1447, Multiple R = 0.292, R squared = 0.085, Error = 205.335		
Age	0.363	0.78
Proficiency	12.627	0.00*
Sex	1.268	0.25
Age*Proficiency	1.012	0.439

Age*Sex	1.396	0.242
Proficiency*Sex	1.713	0.128
Age*Proficiency*Sex	0.623	0.858
Dimension 2 (Goals)		
N = 1447, Multiple R = 0.363, R squared = 0.132, Error = 34.410		
Age	1.95	0.12
Proficiency	5.272	0.00*
Sex	37.742	0.00*
Age*Proficiency	1.557	0.079
Age*Sex	1.378	0.248
Proficiency*Sex	1.473	0.196
Age*Proficiency*Sex	1.553	0.080
Dimension 3 (Expectancy)		
N = 1447, Multiple R = 0.241, R squared = 0.058, Error = 37.491		
Age	7.623	0.00*
Proficiency	2.78	0.017*
Sex	5.544	0.019
Age*Proficiency	1.186	0.275
Age*Sex	1.638	0.179
Proficiency*Sex	1.38	0.229
Age*Proficiency*Sex	1.024	0.427

With respect to motivation Dimension 1, enjoyment of learning English, Table 14 indicates that a main effect was found only for language proficiency ($p = 0.00$). Advanced learners enjoy English class the most; basic level students enjoy learning English the least and are the most anxious. Both Scheffé and Tukey post-hoc tests showed that proficiency level 1 (basic) was significantly different on this measure from each of the other groups ($p = .01$). As can be seen in Table 13, differences on Dimension 1 with respect to age and gender are inconsistent, and as indicated in Table 14, no significant main effects were found for these variables. No significant interaction effects were found.

With respect to motivation Dimension 2, goal orientation, significant main effects were found for both proficiency and gender, but not for age. (Once again, no interaction effects were found.) Bearing in mind that the negative end of this

dimension indicates externally referenced goals (both instrumental and integrative) while the positive end refers to internal goals and rewards, the differences shown in Table 13 mean that males in this sample of EFL learners had more externally defined reasons for studying English, while females were more motivated by internal goals. As Table 13 also indicates, there is a steady progression with increasing proficiency toward more tangible reasons for studying English and away from purely internally driven motivational support.

There were significant main effects for age and proficiency on Dimension 3, expectancy. As can be seen in Table 13, scores on this dimension decrease with age and with increasing proficiency and are lower for females than for males. Because of the stringent requirement that $p < .017$, imposed because multiple ANOVAs were been carried out, the effect for gender must be judged statistically non-significant, but in an exploratory analysis this certainly constitutes a trend worthy of comment. A comparison of the means for Dimension 3 in Table 13 indicates that expectation of success declines with age, declines with increasing proficiency, and is somewhat lower for women than for men. Since these findings are counter-intuitive, we will return to the meaning of Dimension 3 in the following section.

DISCUSSION

THE INTERNAL STRUCTURE OF MOTIVATION

The structural components of foreign language motivation found in this study through factor analysis can be compared with those identified in two other recent studies of language learning motivation in foreign language contexts. Dörnyei (1990a) investigated the motivation for learning English of a group of adult learners in Hungary, and Julkunen (1989) investigated the motivational profiles of school children learning English in Finland.

	This study	Dörnyei (1990a)	Julkunen (1989)
Factor 1	Determination	Instrumentality	Communicative orientation
Factor 2	Anxiety	Need for achievement	Intrinsic orientation
Factor 3	Instrumental orientation	Interest in foreign cultures	Attitudes toward teacher/method
Factor 4	Sociability	Values associated w/language	Integrative motivation
Factor 5	Attitudes to foreign culture	Bad learning experiences	Helplessness
Factor 6	Foreign residence	Spend time abroad	Anxiety
Factor 7	Intrinsic	Language learning as	Criteria for success

	motivation	challenge	
Factor 8	Beliefs about failure		Latent interest in English
Factor 9	Enjoyment		

In comparing these three studies — looking not only at the labels assigned to each factor by each researcher but also at individual items loading on those factors — a number of similarities and differences can be noted, although it is necessary to be conservative because the questionnaires used were different. In the present study and in Dörnyei’s study, but not in Julkunen’s study, an instrumental orientation emerged as one factor of motivation. Julkunen’s questionnaire did include items indicative of an instrumental orientation toward English, but in the factor analysis these emerged as part of a heterogeneous cluster of items that Julkunen labeled as “communicative orientation.” It may be that the instrumental aspects of foreign language learning motivation are more salient for adults who have chosen to study English privately than for children who are taking English as a school subject who are not yet faced with career choices or the need to be concerned with making a living. This study and that of Dörnyei both identified a factor concerned with positive attitudes toward and interest in foreign cultures. In Julkunen’s study, similar items were part of what he labeled “integrative orientation,” which also included the desire to get to know English people and Americans and willingness to emigrate to England or America, which was a separate factor in the present study (“foreign residence”) and in Dörnyei’s (“spend time abroad”).

In both this study and that of Julkunen, an intrinsic orientation (enjoyment of the study of English for its own sake) was identified. Dörnyei did not assign this label to any factor, but his factor “language learning is a new challenge” can be considered a form of intrinsic motivation (Wong and Csikszentmihalyi, 1991). The present study and that of Julkunen also identified a factor of anxiety, also missing from Dörnyei’s results, although his factor labeled “bad learning experiences” (which includes negative evaluations of one’s aptitude for language learning) partially overlaps.

Of the three studies, Julkunen’s is the only one to identify a clear integrative orientation factor; both this study and that of Dörnyei instead found several factors that can be labeled integrative in at least a weak sense. Julkunen’s study is the only one to have identified a motivational factor of attitudes toward teacher and teaching method. In our case, this is because we analyzed preferences for instructional methods and classroom activities separately. Dörnyei did not include items relevant to this construct in his questionnaire.

The present study is the only one that identified a factor of sociability as part of foreign language learning motivation. The sociability factor may be unique to the Egyptian context, but it more likely reflects the fact that other researchers have not often included such items in their questionnaires. In another study of Hungarian learners, Clément, Dörnyei, and Noels (1994) found that in addition to attitude-based and self-

confidence-based components of motivation, a third, relatively independent subprocess of group cohesion emerged in the foreign language classroom.

Each of the three studies provides some evidence of the importance of attributions of success and failure in the structure of motivation for foreign language learning, but in different ways. Julkunen found that items related to internal criteria for success in tasks, answers to teacher's questions, success in exams, and grades formed a clearly differentiated factor in motivation for learning. Dörnyei's factor labeled "bad learning experiences" included items related to attributions of past failures, which he speculated are more important than the perception of failure itself, but his questionnaire contained no items concerning success or attributions about success. In the present study, attributions appear to be different depending on whether one is concerned with failure or success. Statements concerning external causes of failure emerged in our analysis as an independent factor. Statements concerning internal control of success emerged as part of our Factor 1. Although Dörnyei's analysis yielded a need-achievement factor (related to determination) and Julkunen's analysis yielded a factor of helplessness (the opposite of expectations for success), the present study is apparently the first to find a clear relationship between items concerning expectations for success based on the internal factors of ability and effort and determination to succeed, both of which contribute to our Factor 1. This makes good theoretical sense. Expectancy-value models of motivation assume that learners with generally high expectations of success for a specific task (e.g., a language course) will be more involved in the task and persist longer in the face of difficulty than will students with low expectations of success, who will give up more easily (Pintrich, 1988, p. 75).

Multidimensional scaling has not been used before in any studies of foreign language motivation of which we are aware, so no comparisons to other studies are possible. Multidimensional scaling analysis has both strengths and drawbacks. One strength is the ability of MDS to account for more of the observed variation. Our factor analysis of motivation, with nine factors, only accounted for 48% of total variance; multidimensional scaling of the same data produced a three-dimensional solution that accounted for 85% of the variance. The factor analysis of instructional preferences produced a six-factor solution accounting for 50% of the variance; MDS produced a two-dimensional solution accounting for 88% of the variance. The factor analysis of learning strategies accounted for 47% of the variance with five factors, while MDS accounted for 81% with two dimensions. The trade-off was that the dimensions thus identified were harder than factors to identify theoretically, and this was particularly true of the dimensions of motivation, the primary focus of this study.

If we have interpreted these dimensions of motivation correctly (as affect, goal orientation, and expectancy), this amounts to a significant modification of cognitive theories of motivation. We began with a value-expectancy model of motivation that asserts that people engage in activities that are relevant to their goals and at which they expect to succeed. The results of this study indicate that there is a third dimension to motivation: people engage in activities that they enjoy and that do not arouse anxiety. Although most theories of foreign language motivation have given little attention to intrinsic motivation and most investigations of language learning anxiety have treated

it as a separate variable from motivation (Horwitz, 1986; Horwitz, Horwitz, and Cope, 1986; MacIntyre and Gardner, 1991a, 1991b), Gottfried (1985) found that intrinsic motivation and anxiety were not independent factors.

Historically, the investigation of motivation in general psychology has moved from purely behavioristic models to cognitive models to models that include both cognition and affect. Our results seem to support this progression. They are also remarkably similar to the results obtained by Ushioda (1992), who investigated Irish learners' motivation for learning French using a qualitative, ethnographic approach and found that from the learners' perspective, the most frequently cited sources of motivation were language-related enjoyment, personal goals, and prior learning experiences. Our results are also similar to Schumann's (1994b) characterization of the factors that determine stimulus appraisals at the neurobiological level: novelty and pleasantness (affect), goal or need significance, and coping mechanisms (expectancy). (Schumann identified a fourth factor, self and social image, that did not emerge as a separate dimension in our analysis.)

Although this suggests a large universal component in motivation for foreign language learning, we also expect that there are culture-specific aspects to the precise definition and content of each dimension. On the dimension of affect, Schmidt and Savage (1992) found little support for Csikszentmihalyi's theory of intrinsic motivation in a study of Thai EFL learners, while this study of Egyptian EFL learners has found support for the theory. We suspect also that the dimension of expectancy may differ in interesting ways in different cultural groups. We have noted the counter-intuitive result that, for this sample of learners, ratings of questionnaire items dealing with expectancy declined with age and with increasing English proficiency. However, in our discussion of the meaning of motivation Dimension 3, we observed that an equally appropriate label for the dimension might be "positive thinking" or even "denial." We think these are probably appropriate labels for this dimension for this population. The original reason for including many of the items concerning expectancy in the questionnaire (e.g., *if I do well in this course it will be because of the teacher; if I don't do well in this class it will be because I don't try hard enough*) was to see if there was a factor of internal versus external attribution, a distinction highlighted in many models of motivation in education. It turned out that there was not, that many informants responded negatively to any mention of failure regardless of the attached attribution. If this denial interpretation is correct, then the negative correlation with age and proficiency represents not low expectations for success but simply more realism. Women, older learners, and more proficient learners do not simply deny all possibility of failure or difficulty. This might have pedagogical implications as well. Many researchers have suggested that one important motivational strategy for foreign language learning is to boost learners' expectations of success (Crookes and Schmidt, 1991; Dörnyei, 1994a; Oxford and Shearin, 1994). This might not be necessary for some learners.

EXTERNAL CONNECTIONS

Motivation, preferences for learning strategies, and preferences for instructional activities and classroom structures are related. Correlations among aspects of motivation identified through factor analysis and factors derived from the analysis of the other parts

of our questionnaire turned up numerous significant relationships. Learners high in determination, learners with strong instrumental motivation, and learners motivated by sociability all indicate by their ratings of learning strategies that they are active learners. Determined learners prefer classes in which there is a balance between different skill emphases and a balance between teacher control and student centeredness, together with activities that are challenging. Anxious students, on the other hand, would rather not participate actively in class and don't like activities that force them to, but prefer to be silent. The strongest relationship, supported both by the results based on factor analysis and by those based on multidimensional scaling, is that language learning enjoyment and its opposite, anxiety, are related to attitudes toward traditional class structures and contemporary, communicative ones. Students who score high on the affect dimension of motivation welcome communicative classes; students who score low on this dimension are resistant and tend to reject group and pair work and other aspects of the communicative classroom.

Scores on the dimensions of motivation are also related to age, gender, and language proficiency, with level of English proficiency being most important. More proficient learners of English enjoy language learning more, have more realistic expectations of success, and have a greater appreciation of the benefits of learning English (both instrumental and integrative) than do beginners. This suggests that a pedagogy informed by an appreciation of motivational factors and their interrelationships with the kinds of classes preferred by different types of learners need not reject contemporary communicative approaches, even though some (or even many) learners resist them. From our data it seems likely that this may indeed be a problem with respect to some learners, especially at the lower levels of proficiency, but as proficiency increases, so does enjoyment and with it an appreciation of methods designed to develop communicative proficiency. Our data are not adequate for determining whether it is increased proficiency itself that makes the communicative orientation more attractive or the cumulative effects of exposure to contemporary methods that has occurred along the way.

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APPENDIX A

APPENDIX B

QUESTIONNAIRE (BACK-TRANSLATION FROM ARABIC), WITH OVERALL MEANS AND STANDARD DEVIATIONS

6	5	4	3	2	1
strongly agree	agree	slightly agree	slightly disagree	disagree	strongly disagree

Part A: Motivation

	Mean	S. D.
50 items ($\alpha = .802$)		
Intrinsic motivation ($\alpha = .54$)		
1 I enjoy learning English very much.	5.580	0.763
2 Learning English is a hobby for me.	4.816	1.407
3 Learning English is a challenge that I enjoy.	5.197	1.111
4 I don't enjoy learning English, but I know that learning English is important for me. (reverse-coded)	4.403	1.700
5 I wish I could learn English in an easier way, without going to class. (reverse-coded)	4.227	1.703
Extrinsic motivation ($\alpha = .75$)		
6 English is important to me because it will broaden my view.	5.568	0.813
7 The main reason I am taking this class is that my parents/my spouse/my supervisors want me to improve my English.	2.693	1.826
8 I want to do well in this class because it is important to show my ability to my family/friends/supervisors /others.	3.707	1.909
9 Everybody in Egypt should be able to speak English.	4.961	1.249
10 Being able to speak English will add to my social status.	5.051	1.332
11 I am learning English because I want to spend a period of time in an English-speaking country.	4.091	1.627
12 I want to learn English because it is useful when traveling in many countries.	5.336	1.026
13 I want to learn English because I would like to emigrate.	2.552	1.738

14	One reason I learn English is that I can meet new people and make friends in my English class.	3.230	1.554
15	I am learning English to become more educated.	5.428	0.947
16	I need to be able to read textbooks in English.	4.903	1.383
17	The main reason I need to learn English is to pass examinations.	2.044	1.334
18	If I learn English better, I will be able to get a better job.	4.779	1.418
19	Increasing my English proficiency will have financial benefits for me.	4.162	1.573
20	If I can speak English, I will have a marvelous life.	4.726	1.312
Personal goals ($\alpha = .60$)			
21	I really want to learn more English in this class than I have done in the past.	5.588	0.741
22	It is important to me to do better than the other students in my class.	4.706	1.238
23	My relationship with the teacher in this class is important to me.	5.378	0.906
24	One of the most important things in this class is getting along with the other students.	4.850	1.106
25	This class is important to me because if I learn English well, I will be able to help my children learn English.	5.101	1.250
Expectancy/control components ($\alpha = .53$)			
26	This English class will definitely help me improve my English.	5.604	0.706
27	If I do well in this course, it will be because I try hard.	5.297	0.825
28	I expect to do well in this class because I am good at learning English.	4.806	0.948
29	If I don't do well in this class, it will be because I don't try hard enough.	4.372	1.392
30	If I don't do well in this class, it will be because I don't have much ability for learning English.	3.145	1.613
31	If I learn a lot in this class, it will be because of the teacher.	5.033	1.092
32	If I do well in this class, it will be because this is an easy class.	3.072	1.425
33	If I don't learn well in this class, it will be mainly because of the teacher.	3.223	1.564

34	If I don't do well in this class, it will be because the class is too difficult.	2.846	1.309
Attitudes ($\alpha = .54$)			
35	Americans are very friendly people.	4.188	1.314
36	The English are conservative people who cherish customs and traditions.	4.308	1.421
37	Most of my favorite actors and musicians are either British or American.	3.320	1.589
38	British culture has contributed a lot to the world.	4.287	1.189
Anxiety ($\alpha = .75$)			
39	I feel uncomfortable if I have to speak in my English class.	2.634	1.541
40	It embarrasses me to volunteer answers in my English class.	2.541	1.480
41	I don't like to speak often in English class because I am afraid that my teacher will think I am not a good student.	2.455	1.493
42	I am afraid other students will laugh at me when I speak English.	2.223	1.403
43	I think I can learn English well, but I don't perform well on tests and examinations.	3.320	1.499
44	I often have difficulty concentrating in English class.	3.271	1.411
Motivational strength ($\alpha = .63$)			
45	If the fees for this class were increased, I would still enroll because studying English is important to me.	4.636	1.528
46	My attendance in this class will be good.	5.317	0.835
47	I plan to continue studying English for as long as possible.	5.444	0.868
48	After I finish this class, I will probably take another English course.	5.301	1.037
49	I often think about how I can learn English better.	5.202	1.034
50	I can honestly say that I really put my best effort into trying to learn English.	5.077	1.050

Part B: Preferences for instructional activities

22 items ($\alpha = .589$)		Mean	S. D.
1	During English class, I would like to have only English spoken.	4.570	1.527
2	In my English class, the teacher should explain things	4.056	1.680

	in Arabic sometimes in order to help us learn.		
3	It is important for the teacher to maintain discipline in English class.	5.524	0.901
4	In English class, the teacher should do most of the talking and the students should only answer when they are called upon.	3.388	1.714
5	Students in English class should let the teacher know why they are studying English so that the lessons can be made relevant to their goals.	5.031	1.229
6	Student should ask questions whenever they have not understood a point in class.	5.718	0.698
7	I like English learning activities in which students work together in pairs or small groups.	5.010	1.088
8	I prefer to work by myself in English class, not with other students.	2.669	1.513
9	Group activities and pair work in English class are a waste of time.	2.383	1.439
10	The teacher should make sure that everyone in this class learns English equally well.	5.031	1.222
11	English class is most useful when the emphasis is put on grammar.	4.010	1.430
12	Pronunciation should not be an important focus of the English class.	2.201	1.555
13	Reading and writing should be emphasized in English class.	4.826	1.288
14	Listening and speaking should be emphasized in English class.	5.519	0.794
15	Activities in this class should be designed to help the students improve their abilities to communicate in English.	5.595	0.781

16	Communication activities are a waste of time in this class, because I only need to learn what is necessary to pass English examinations.	1.867	1.265
17	In a class like this, I prefer activities and materials that really challenge me so that I can learn more.	4.724	1.317
18	In an English class, I prefer activities and materials that arouse my curiosity even if they are difficult to learn.	4.436	1.370
19	I prefer an English class in which there are lots of activities that allow me to participate actively.	5.105	1.020

20	I prefer to sit and listen, and don't like being forced to speak in English class.	2.704	1.570
21	It is important that the teacher give immediate feedback in class so that students know whether their responses are right or wrong.	5.058	1.093
22	The teacher should not criticize students who make mistakes in class.	4.176	1.809

Part C: Learning strategies

25 items ($\alpha = .858$)		Mean	S. D.
1	When learning new English words, I say them over and over to memorize them.	5.194	0.975
2	I always try to memorize grammar rules.	4.459	1.356
3	I say or write new expressions in English repeatedly to practice them.	5.002	1.085
4	When I read something in English, I usually read it more than once.	4.922	1.302
5	When I learn a new word in English, I try to relate it to other English words I know.	4.893	1.123
6	I always try to notice the similarities and differences between English and Arabic.	3.994	1.509
7	When I learn a new grammar rule, I think about its relationship to rules I have learned already.	4.525	1.290
8	I make summaries of what I have learned in my English class.	4.327	1.461

9	When I study for my English course, I pick out the most important points and make charts, diagrams, and tables for myself.	4.031	1.424
10	When I do not understand a word in something I am reading, I try to guess its meaning from context.	5.024	1.067
11	I learn from my mistakes in using English by trying to understand the reasons for them.	5.183	0.853
12	I try to look for patterns in English without waiting for the teacher to explain the rules to me.	4.274	1.365
13	I try to find the meaning of a word by dividing it into	4.251	1.370

	parts that I understand.		
14	When preparing my English lessons, I read the material through first to get a general idea of what it is about and what the major points are.	4.870	1.064
15	When studying for a test, first I think about what the most important points are, instead of just reading everything over.	4.242	1.540
16	I always try to evaluate my progress in learning English.	5.189	0.904
17	When studying for a test, I try to determine which concepts I don't understand well.	5.021	0.969
18	I try to change the way I study in order to fit the teacher's teaching style.	4.518	1.352
19	When I don't do well on a test/exercise, I always go back over it to figure it out and make sure I understand everything.	5.233	0.980
20	I have a regular place set aside for studying.	4.501	1.485
21	I arrange my schedule to make sure that I keep up with my English class.	4.649	1.230
22	I often find that I don't spend much time studying English because of other activities.	4.169	1.343
23	I actively look for people with whom I can speak English.	4.885	1.134
24	Whenever I have a question, I ask my teacher about it or try to find the answer in another way.	5.108	0.894
25	I always arrange time to prepare before every English class.	4.315	1.353