

Language Learners' Motivational Profiles and Their Motivated Learning Behavior

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The aim of the present study is to define and describe second language (L2) learners' motivational profiles by means of a statistical procedure that is relatively rarely used in L2 studies: cluster analysis. To achieve this aim, 5 broad dimensions of students' motivational and attitudinal dispositions toward 5 different L2s were measured and analyzed, using survey data collected from 8,593 13- and 14-year-old Hungarian pupils on 2 occasions. Statistical calculations yielded 4 distinct motivational groups, and we interpret this classification within Dörnyei's L2 Motivational Self System. In the second part of the study we examine the combined effects and interferences of the different motivational profiles learners hold with regard to 2 different target languages, English and German.

Individual-difference (ID) research in second language (L2) studies has typically aimed at identifying dimensions of enduring language learner characteristics relevant to the mastery of an L2 that are assumed to apply to everybody and on which people differ by degree (Dörnyei, 2005). Most research effort in

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This article was completed as part of the OTKA T047111 project.

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the past has been expended on exploring the L2 impact of isolated ID variables such as language aptitude, L2 motivation, or learning styles. To achieve this, researchers have usually administered self-report questionnaires to language learners and then processed the data by means of complex statistical procedures such as correlation and factor analyses, analysis of variance, and structural equation modeling. Although studies conducted in this vein have helped us to understand the nature of various cognitive and affective factors, past research has been less informative about how the different factors are combined in learners to achieve specific *learner types*. We know from personality psychology that certain basic personality types or profiles do exist: The best evidence for this is the validity of the Myers-Briggs Type Indicator (MBTI), which is the most widely employed personality test in the world, designed to categorize people into distinct personality types. Peter Skehan (1991) has argued that we are likely to find different learner types in the L2 context as well, made up of various abilities and personality characteristics that contribute to the successful mastery of an L2.

This study is based on the application of a multivariate statistical procedure, *cluster analysis*, which is particularly useful in distinguishing various learner profiles. Even though this analytical technique can potentially offer both theoretical and practical insights into a wide range of issues within L2 acquisition, it has been used surprisingly rarely in past research: Even a thorough literature review will not detect more than a handful of relevant recent studies (cf. Kojic-Sabo & Lightbown, 1999; Skehan, 1986; Yamamori, Isoda, Hiromori, & Oxford, 2003), and as Alexander and Murphy (1999) demonstrate, the situation is no different in the broader field of educational psychology. The objective of cluster analysis is to identify within a given sample certain subgroups—or clusters—of participants who share similar combinations of characteristics. The rationale for using the procedure in L2 studies is the observation that in spite of the large number of factors that shape L2 learning success, within a community of L2 learners there appear to be a smaller number

of distinct subcommunities who share similar cognitive and motivational patterns. As mentioned above, indirect confirmation for this in personality psychology has been provided by the MBTI, which divides people into a relatively rough grouping of as few as 16 basic personality types that appears to work remarkably well (cf. Leaver, Ehrman, & Shekhtman, 2005). This would suggest that it is a realistic expectation to uncover a few archetypal patterns in L2-related ID factors as well, and cluster analysis offers a theoretically valid and practically sound technique for achieving this: It enables researchers to reassert the relative value of various ID variables within complex configurations in specific learner contexts, thereby allowing for the study of social models of learning and instruction (Alexander & Murphy, 1999).

We must also point out, however, that similarly to factor analysis, cluster analysis is an *exploratory* technique whereby the computer uncovers various grouping patterns based on the mathematical configurations found in the learner data. Of course, the computer cannot interpret the content of the different variables, and therefore in order to use the technique meaningfully, researchers need to be careful to keep the analysis on sound theoretical footing and to substantiate the emerging learner profiles by means of various validating procedures. Alexander and Murphy (1999) mention one procedure that is particularly appropriate for substantiating results in educational contexts that involves using an external criterion variable to function as an independent indicator of cluster group differences. Broadly speaking, if the identified learner subcommunities perform significantly differently on the given criterion measure, this confirms the validity of the particular grouping solution. The focus in our study has been on profiling the *motivational disposition* of teenage L2 learners in Hungary, and in doing so we applied a theoretical construct that had been developed on the basis of a consistent line of research; furthermore, we also identified two important L2 criterion measures—the learners' *intended effort* to learn the L2 and their *choice of the*

L2(s) to study—for validating the obtained motivational cluster profiles. In accordance with Skehan's (1991) prediction that there are certain configurations of learner traits that are more than the mere sum of the cumulative contributions of the number of ID constituents, we will show that exploring salient patterns in the motivational disposition of L2 learners is a fruitful research direction that can shed meaningful light on the reality of L2 learning.

The Second Language Motivation Construct Applied in Our Study

It is universally accepted that motivation plays a vital role in academic learning in general, and this is particularly true of the sustained process of mastering an L2. Because of the complex nature of "language," L2 motivation has been conceptualized as a multifaceted construct that comprises a number of more general, trait-like and more situation-specific, state-like components (for reviews, see Clément & Gardner, 2001; Dörnyei, 2001; Gardner, 1985; MacIntyre, 2002; Noels, 2001; Ushioda, 2003). In a recent overview of the field, Dörnyei (2005) proposed a new approach to the understanding of L2 motivation, conceived within an L2 motivational self system, which attempts to integrate a number of influential theoretical L2 approaches with findings in "self" research in psychology. The central theme of this new conception is the equation of the motivational dimension that has traditionally been interpreted as "integrativeness/integrative motivation" with the "ideal L2 self." The latter refers to the L2-specific facet of one's "ideal self," which is the representation of all the attributes that a person would like to possess (e.g., hopes, aspirations, desires): If one's ideal self is associated with the mastery of an L2, that is, if the person that we would like to become is proficient in the L2, he/she can be described—using Gardner's (1985) terminology—as having an "integrative" disposition.

Following the work of Higgins (1987, 1998), Dörnyei (2005) has proposed the existence of another possible self dimension as

well, the “ought-to L2 self,” which concerns the more extrinsic (i.e., less internalized) types of instrumental motives: This self-guide refers to the attributes that one believes one *ought* to possess (i.e., various duties, obligations, or responsibilities) and that therefore may bear little resemblance to one’s own desires or wishes. Although ideal and ought-to selves are similar to each other in that they are both related to the attainment of a desired end state, Higgins (1998) emphasizes that the predilections associated with the two types of future selves are motivationally distinct from each other: Ideal self-guides have a *promotion* focus, concerned with hopes, aspirations, advancements, growth, and accomplishments, whereas ought self-guides have a *prevention* focus, regulating the absence or presence of negative outcomes, concerned with safety, responsibilities, and obligations. Thus, from a “self” perspective, L2 motivation can be seen as the desire to reduce the perceived discrepancies between the learner’s actual self and his or her ideal and ought-to L2 selves.

Dörnyei’s L2 Motivational Self System also contains a third major dimension of the L2 motivation complex labeled “L2 learning experience,” which concerns executive motives related to the immediate learning environment and experience. Because of the methodological characteristics of our research (outlined below), this dimension has not been addressed in this study. The current investigation is a follow-up to Dörnyei and Csizér’s (2002) and Csizér and Dörnyei’s (2005) analysis of the data obtained from a large-scale ($N > 8,500$) repeated stratified national survey of 13- and 14-year-old schoolchildren in Hungary. In this survey we assessed attitudes toward five target languages—English, German, French, Italian, and Russian—and in order to obtain comparable measures from the large number of different locations from all over the country, we needed to focus on motivational variables that were generalizable across various learning situations. Thus, the study reported in this article does not involve situation-specific motives that are rooted in the L2 learners’ immediate learning environment; instead we will be

targeting more stable and generalized motives that stem from a succession of the students' past experiences in the social world.

Our previous research has established that Hungarian L2 learners' generalized motives can be described well in terms of seven components (for a detailed discussion of how these dimensions were identified, see Dörnyei & Csizér, 2002): The relevant Cronbach's alpha coefficients, along with the number of items making up the scale, will be provided for each scale and language (for the sake of brevity, only the statistics for 1999 are listed; for statistics concerning the previous occasion, that is, data for 1993, see Dörnyei & Csizér, 2002).

- *Integrativeness*, which, similarly to Gardner's (1985) category, reflects a general positive outlook on the L2 and its culture, to the extent that learners scoring high on this factor would like to communicate with and might even want to become similar to the L2 speakers (three items; English = .72; German = .78; French = .77; Italian = .79; Russian = .70).
- *Instrumentality*, which refers to the perceived pragmatic benefits of L2 proficiency, corresponding to Gardner's (1985) category (four items; English = .80; German = .78; French = .76; Italian = .78; Russian = .78).
- *Attitudes toward L2 speakers*, which concerns attitudes toward having direct contact with L2 speakers and traveling to their country (three items; English/US = .71; English/UK = .74; German = .77; French = .77; Italian = .77; Russian = .75).
- *Cultural interest* (or "indirect contact"), which reflects the appreciation of cultural products associated with the particular L2 and conveyed by the media (e.g., films, television programs, magazines, and popular music) (four items; English/US = .67; English/UK = .76; German = .71; French = .75; Italian = .77; Russian = .77).

- *Vitality of L2 community*, which, following the initial conceptualization in Giles and Byrne's (1982) "intergroup model," concerns the perceived importance and wealth of the L2 communities in question (two items; English/US = .62; English/UK = .66; German = .62; French = .65; Italian = .63; Russian = .55).
- *Milieu*, which relates to the general perception of the importance of foreign languages in the learners' immediate environment (e.g., in the school context and in friends' and parents' views) (four items; Cronbach's alpha = .61).
- *Linguistic self-confidence*, which reflects a confident, anxiety-free belief that the mastery of an L2 is well within the learner's means (three items; Cronbach's alpha = .48).

We have found (Csizér and Dörnyei, 2005) that the two criterion measures included in our survey—the learners' intended learning effort and language choice preference—were directly affected by *Integrativeness* (or as we relabeled it, the *Ideal L2 self*), which was in turn determined by two antecedent variables, *Instrumentality* and *Attitudes toward L2 speakers*. The contribution of all the other variables to the criterion measures was mediated by these factors. As discussed briefly earlier, in our current research we will shift the focus from the actual motivational variables to the learners who possess them and will first examine (a) whether we can find distinct learner types in terms of their motivational profiles, and if so, (b) how these distinct patterns affect motivated learning behaviors. We will then analyze whether a learner's motivational profile associated with a particular L2 is influenced by the same learner's disposition toward other possible target languages, that is, whether dispositions toward different L2s interfere with each other and affect the learner's ultimate motivation. As far as we know, these research topics are novel in the L2 field, since we

are not aware of any past research that has examined motivational types and the possible impact of L2 interference on L2 motivation.

Method

Participants

The participants in our survey were 4,765 pupils (2,377 males; 2,305 females; 83 with missing gender data) in 1993 and 3,828 pupils (1,847 males; 1,907 females; 74 with missing gender data) in 1999. They were all ages 13 or 14 and attended the final (8th) grade of the primary school system (see Table 1). We selected this population in 1993 because at that time this was the most mature age group in the Hungarian educational system that studied within a more or less homogenous curricular and organizational framework (i.e., the national primary school system): After the age of 14, pupils were offered a range of different secondary educational paths, some of which concluded when the students reached 16, the upper age limit of compulsory education. Therefore, by sampling students from this cohort, we did not need to be concerned with the modifying influences of various specialized secondary school types. At the same time, these learners were in the final year of their primary school studies and were just about to make the decision about which type of secondary education to choose for their further studies and which foreign language to study during the subsequent years. This lent particular relevance and validity to our question concerning language choice.

In selecting the locations of the survey, we followed a stratified sampling approach, trying to sample students evenly from each main region and type of settlement, while also including a balanced mixture of places frequented and places not frequented by tourists. In order to ensure the compatibility of the samples in the two surveys, almost all the 1999 locations coincided with the

Table 1

The sample investigated in the survey

	Schools		Classes		Pupils ^a					
					Total		Boys		Girls	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Whole country	77	82	212	188	4,765	3,828	2,377	1,847	2,305	1,907
Capital (Budapest)	15	13	38	32	792	685	406	346	372	325
City	14	17	48	44	1,165	943	584	438	550	499
Town	32	33	94	77	2,112	1,581	1,033	753	1,051	796
Village	16	19	32	35	696	619	354	310	332	287

^aGender data were missing from some completed questionnaires.

1993 ones (the decrease of the size of the sample in 1999 is largely due to the decline in the birth rate that Hungary had been experiencing). Thus, our study is an example of a *repeated cross-sectional design*, consisting of two surveys, one conducted at the beginning of 1993, and the other taking place during the last few months of the decade. Because the target population in both phases was exactly the same (and the sampling of the participating schools was also almost identical), the project can be considered *longitudinal* in nature (cf. Keeves, 1994; Menard, 1991), thereby allowing us to directly compare the results and analyze the changes that took place during the six-and-a-half-year interval between the two phases.

Instrument

The questionnaire was specifically designed for the purpose of the surveys. It consisted of 37 items, using 5-point rating scales, assessing various student attitudes toward five target languages (English, German, French, Italian, and Russian) and toward six L2 communities (the United States, the United Kingdom, Germany, France, Italy, and Russia), and also asking about various aspects of the students' language learning environment and background. In order to ensure that the instrument had appropriate psychometric properties, the items we used were adopted from established motivation questionnaires (some of which had been specifically developed to be used in Hungary), with sufficient validity and reliability coefficients (e.g., Clément, Dörnyei, & Noels, 1994; Dörnyei, 1990; Gardner, 1985). Because 21 of the 37 items focused on more than one L2 or L2 community (in a grid format), even this relatively short instrument yielded a total of 139 variables. In order to make the comparison of the obtained data possible, the same instrument was used in both phases of the project.

The main variable groups in the questionnaire were as follows (with the total number of items given in parentheses):

Items concerning the five target languages (5-point rating scales):

- *Orientations*, that is, the students' various reasons for learning a given language (5 items).
- *Attitudes toward the L2* (2 items).
- *Intended effort*, that is, the amount of effort the student was willing to put into learning the given language (1 item).
- *Parents' language proficiency* (2 items).

Items concerning the six target language communities (5-point rating scales):

- *Attitudes toward the L2 community*, that is, the extent to which students felt positively toward the particular country and its citizens (2 items), and the international importance they attached to this community (2 items). Britain and the United States were mentioned separately to explore differences in the evaluations of the two communities, in spite of their common language (referred to in this study, where relevant, as English/UK and English/US).
- *Contact with the L2 and its speakers*, which assessed both the quantity (2 items) and the quality (5 items) of the contact (e.g., watching L2 TV programs, meeting tourists).

Non-language-specific Likert scales (5-point scales):

- *Attitudes toward L2 learning at school* (1 item).
- *Contact with foreign languages through watching satellite TV* (1 item).
- *Fear of assimilation*, that is, the extent to which students believed that learning and using the foreign language might lead to the loss of the native language and culture (1 item).
- *Self-confidence in L2 learning and use* (3 items).

- *Language learning milieu*, that is, the extent of the parents' support of (1 item) and the friends' attitudes toward (1 item) L2 learning.

Background questions (open-ended and multiple-choice items):

- *Language choice*: Students were asked to name three languages they were intending to learn in the next school year (1 item).
- *Personal variables*, such as the student's sex and language learning background (7 items).

As described in the introduction, the learner responses have been used to compute seven broad motivational dimensions, five of them specific to the various target languages/language communities examined: *Integrativeness*, *Instrumentality*, *Vitality of the community*, *Attitudes toward L2 speakers*, and *Cultural interest*. Two dimensions, *Self-confidence* and *Milieu*, were assessed in a non-L2-specific manner and will not be included in the current analysis because our investigation specifically focuses on motivational profiles specific to certain L2s and their interferences. This exclusion is justifiable on the basis of the results of Csizér and Dörnyei (2005), which showed that the impact of *Self-confidence* and *Milieu* on the criterion measures was almost entirely subsumed or mediated by the other five motivational dimensions. With regard to the psychometric properties of the instrument, the mean Cronbach's alpha internal consistency reliability coefficient of the five scales for the six L2 communities in the two survey phases (i.e., 56 coefficients) was .70, which is acceptable for such short scales.

Data Collection

Data collection was conducted in a similar way in 1993 and 1999. On both occasions, we first approached the selected schools

through an official letter from Eötvös University, Budapest (which hosted the project), providing information about the purpose of the survey and details of the actual administration of the questionnaires. Once permission was granted by the principal of a particular school, we contacted the form masters of the selected classes individually, asking for their cooperation. The questionnaires (in Hungarian) were filled in during class time; a representative of the university was always present at the administration, providing the introduction and overseeing the procedure. Answering the questions took the students approximately 20 min on average.

Data Analysis

As mentioned earlier, the aim of cluster analysis is to identify homogenous subgroups within a sample—in our case to define learner groups with distinct motivational profiles. As Kojic-Sabo and Lightbown (1999) have pointed out in discussing the use of cluster analysis in L2 research, if every participant in a sample could be characterized by a unique pattern, each one would form a separate cluster, and there would be as many clusters as students. On the other hand, if all students responded to the questionnaire in exactly the same way, only one cluster would emerge from the analysis. In actual analyses we get a meaningful result somewhere between these two extremes.

There are two main types of cluster analysis, *hierarchical* and *nonhierarchical clustering*. In hierarchical clustering the first step involves the definition of each sample member as an individual cluster. Subsequent steps merge the closest clusters until one single cluster containing all sample members is arrived at. The procedure might be illustrated by a “dendogram,” which shows each step of the process. As a result, the systematic structure of the data is provided by showing what subgroups could be defined. Nonhierarchical clustering, on the other hand, follows a different path. During the process, sample members are put into a predefined number of clusters. As a first step,

the statistical program takes the first n members of the sample (where n equals the number of clusters, which is defined prior to the analysis), and sample members closest to these predefined centers are assigned to these initial clusters. Then, on the basis of the position of the cluster members, new centers are identified, and sample members are regrouped according to these new centers. The procedure is repeated until the centers become stable, that is, they show no change after further regrouping.

Both hierarchical and nonhierarchical clustering have their advantages and disadvantages. On the one hand, hierarchical clustering is difficult to apply if the sample size is too large. On the other hand, the results of nonhierarchical clustering are highly dependent on the initial cluster centers. To avoid these limitations, clustering is usually done in two stages: First, hierarchical clustering is carried out on a smaller subsample of the sample; in our case a 3% random subsample was selected for this purpose. Based on this first step, the number of clusters and their positions (i.e., the initial cluster centers) are defined, and subsequently nonhierarchical clustering is performed on the whole sample by inputting the cluster centers received previously; the procedure of nonhierarchical clustering is iterated until stable cluster centers are obtained. We followed this combined method.

Results and Discussion

Definition of Motivational Groups/Profiles

Based on the procedure described above, the first step of the data analysis was to subject the language- and country-related multi-item scales to hierarchical clustering. The procedure produced dendograms, that is, visual representations of the steps in the solutions that showed the clusters being combined and the values of the distance coefficients at each step. Based on these dendograms, it was decided to follow a four-cluster solution in

the subsequent nonhierarchical clustering. This decision-making process is not unlike the one involved in factor analysis when researchers need to decide the final number of factors in the factor solutions: Although there are no absolute criteria, a combination of theoretical and practical considerations can offer relatively good guidelines. In our case we followed a straightforward and commonsense grouping approach that resulted in similar groups for all the target languages. The four groups, as will be shown below, showed good discriminant validity with regard to the two criterion variables against which they were measured. Tables 2a through 2f describe the final solutions for each language by indicating the means of the clustering variables in the different cluster groups. (For a visual representation of the clusters, see Figure 1, which presents results for English/US in 1999.)

As can be seen in Tables 2a–2f, the cluster groups for the different target languages are largely similar, with only French and Italian displaying some differences from the common trend. The actual variable mean scores show some variation across languages, but this does not thwart the group analysis, as each language has been explored individually.

Group 1 consists of pupils scoring lower than average on all the motivational scales concerning the particular language/country; therefore, this group has been labeled the *least motivated students*. Group 4, on the other hand, is the inverse of Group 1, as it contains students who scored higher than average on each and every scale; accordingly, this group has been labeled the *most motivated students*. Because motivational variables and dimensions are usually intercorrelated, it was to be expected to have groups characterized by these extreme patterns. The motivational profiles of the two in-between groups displayed an intriguing configuration. Instead of a homogeneous distribution of the variables with only their degree of endorsement differing between the two groups, a more unusual pattern emerged: For some variables, Group 3 scores exceeded those of Group 2, whereas for others, it was the other way around. That is, the

Table 2a

Analysis of variance: Motivational scales (5-point) in each cluster group—English / US

	Integrativeness		Instrumentality		Attitudes toward L2 speakers		Vitality		Cultural interest	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1	2.64	2.44	3.60	3.74	3.16	3.16	4.25	4.32	3.49	3.45
Group 2	3.34	3.56	4.34	4.66	4.56	4.57	4.84	4.90	4.65	4.59
Group 3	4.24	4.23	4.70	4.79	3.80	3.49	4.76	4.71	4.07	3.63
Group 4	4.69	4.78	4.87	4.95	4.82	4.78	4.93	4.95	4.79	4.72
<i>F</i>	3640.9	3877.2	1059.2	897.96	2076.1	1643.5	344.2	311.90	1108.8	1050.4
<i>P</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a	1	1	1	1	1	1	1	1	1	1
Least significant difference	2	3	2	3	3	2	3	3	3	3
	3	4	3	4	2	4	2	2	2	2
	4		4		4		4	4	4	4

^aNumbers refer to the groups. Numbers in different rows indicate significant differences.

Table 2b

Analysis of variance: Motivational scales (5-point) in each cluster group—English/UK

	Integrativeness		Instrumentality		Attitudes toward L2 speakers		Vitality		Cultural interest	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1	2.95	3.12	3.78	4.10	2.92	2.47	3.52	3.35	2.79	2.12
Group 2	3.41	3.15	4.47	4.44	4.06	3.73	4.31	4.26	4.04	3.66
Group 3	4.50	4.50	4.76	4.87	3.97	3.86	4.06	4.09	3.33	2.91
Group 4	4.68	4.65	4.88	4.94	4.73	4.69	4.61	4.64	4.46	4.29
<i>F</i>	2988.4	1819.7	988.02	547.56	1901.2	2124.1	727.3	662.6	1980.6	2144.1
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a	1	1,2	1	1	1	1	1	1	1	1
Least significant difference	2	3	2	2	2	2	3	3	3	3
	3	4	3	3	3	3	2	2	2	2
	4		4	4	4	4	4	4	4	4

^aNumbers refer to the groups; different rows indicate significant differences.

Table 2c

Analysis of variance: Motivational scales (5-point) in each cluster group—German

	Integrativeness		Instrumentality		Attitudes toward L2 speakers		Vitality		Cultural interest	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1	2.35	2.17	3.64	3.68	2.61	2.29	3.67	3.73	2.83	2.45
Group 2	2.95	2.78	4.22	4.14	3.99	3.69	4.26	4.24	3.89	3.76
Group 3	3.97	3.94	4.54	4.63	3.68	3.87	4.00	4.14	3.24	3.03
Group 4	4.42	4.40	4.74	4.77	4.65	4.65	4.46	4.57	4.29	4.34
<i>F</i>	3682.2	2852.3	899.4	765.6	2699.1	2292.7	406.53	313.56	1475.9	1784.8
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a	1	1	1	1	1	1	1	1	1	1
Least significant difference	2	3	2	3	3	2	3	3	3	3
	3	4	3	4	2	3	2	2	2	2
	4		4		4	4	4	4	4	4

^aNumbers refer to the groups; different rows indicate significant differences.

Table 2d

Analysis of variance: Motivational scales (5-point) in each cluster group—French

	Integrativeness		Instrumentality		Attitudes toward L2 speakers		Vitality		Cultural interest	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1	2.28	2.05	2.83	2.66	2.83	2.50	3.46	3.37	2.45	2.01
Group 2	2.91	2.71	3.20	3.07	3.94	3.85	3.89	3.94	3.92	3.61
Group 3	3.51	3.60	3.74	3.76	3.96	3.99	3.94	4.02	2.81	2.55
Group 4	4.27	4.31	4.16	4.07	4.66	4.67	4.27	4.35	4.09	4.05
<i>F</i>	2686.1	2542.6	1269.6	973.26	2035.1	2015.4	415.50	368.10	2283.6	1962.7
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a	1	1	1	1	1	1	1	1	1	1
Least significant difference	2	2	2	2	2,3	2	2	2	3	3
	3	3	3	3	4	3	3	3	2	2
	4	4	4	4		4	4	4	4	4

^aNumbers refer to the groups; different rows indicate significant differences.

Table 2e

Analysis of variance: Motivational scales (5-point) in each cluster group—Italian

	Integrativeness		Instrumentality		Attitudes toward L2 speakers		Vitality		Cultural interest	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1	2.14	1.88	2.35	2.21	2.76	2.59	2.86	2.98	2.25	2.08
Group 2	2.61	2.63	2.58	2.71	3.93	3.96	3.35	3.66	3.74	3.65
Group 3	3.52	3.47	3.42	3.33	4.04	4.00	3.51	3.54	2.98	2.50
Group 4	4.27	4.35	3.87	3.89	4.69	4.73	3.89	4.02	4.23	4.02
<i>F</i>	3022.8	3136.3	1588.1	1398.2	2060.9	1997.6	547.51	448.9	2196.8	1774.7
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a	1	1	1	1	1	1	1	1	1	1
Least significant difference	2	3	2	3	2	2,3	2	3	3	3
	3	4	3	4	3	4	3	2	2	2
	4		4		4		4	4	4	4

^aNumbers refer to the groups; different rows indicate significant differences.

Table 2f

Analysis of variance: Motivational scales (5-point) in each cluster group—Russian

	Integrativeness		Instrumentality		Attitudes toward L2 speakers		Vitality		Cultural interest	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1	1.36	1.34	1.60	1.57	1.46	1.51	2.17	1.97	1.25	1.27
Group 2	1.81	1.59	2.11	2.06	2.86	1.89	3.01	3.38	2.06	1.38
Group 3	2.21	2.11	3.13	2.44	2.07	2.93	2.89	3.12	1.40	2.37
Group 4	3.11	3.28	3.69	3.54	3.68	3.68	3.43	3.68	2.45	2.81
<i>F</i>	1903.6	1596.8	3389.7	1343.1	3275.1	2040.2	702.10	1293.4	875.91	911.47
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a	1	1	1	1	1	1	1	1	1	1
Least	2	2	2	2	3	2	3	3	3	2
significant	3	3	3	3	2	3	2	2	2	3
difference	4	4	4	4	4	4	4	4	4	4

^aNumbers refer to the groups; different rows indicate significant differences.

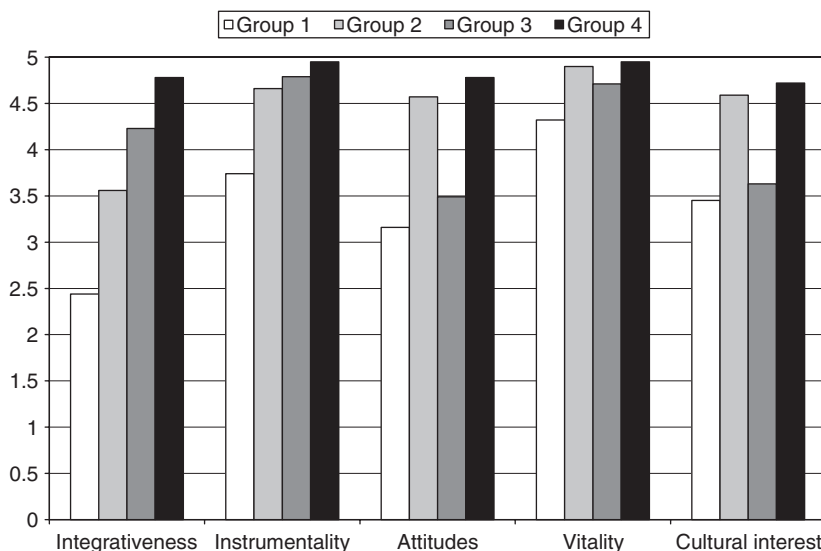


Figure 1. Visual representation of the motivational variables in the four cluster groups for English/US (1999).

two groups differed not only in terms of their motivational intensity but also in terms of the structure of their motivational profile. Before analyzing this qualitative difference and discussing any L2-specific variations, let us examine the validity of the grouping by substantiating the results against the criterion variables.

Group Performance on the Criterion Measures

As described earlier, one established way of substantiating cluster-analytical results in educational contexts is to use external criterion variables as independent indicators of cluster group differences. Tables 3 and 4 present the mean scores of the two criterion measures used in this study—the learners' *Intended effort* and *Language choice*—across the four cluster groups. As can be seen in the tables, there is a very consistent relationship between group membership and performance level on the criterion measures: The higher the group number, the higher the

Table 3

Analysis of variance: Intended effort to learn the various target languages in each cluster group

	<i>Intended effort (1–5 scale)</i>												
	English/US		English/UK		German		French		Italian		Russian		
	1999	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1 (Least motivated students)	2.83	2.63	3.03	3.17	2.50	2.30	2.24	2.01	2.07	1.79	1.32	1.30	1.30
Group 2	3.59	3.77	3.71	3.42	3.26	3.05	2.87	2.70	2.60	2.54	1.79	1.57	1.57
Group 3	4.26	4.27	4.44	4.42	3.93	3.91	3.38	3.48	3.38	3.28	2.18	2.05	2.05
Group 4 (Most motivated students)	4.67	4.72	4.70	4.68	4.39	4.36	4.19	4.20	4.15	4.25	3.07	3.13	3.13
<i>F</i>	803.6	856.4	791.6	634.1	895.0	887.0	1016	977.3	1072	12951	851.9	667.6	667.6
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^a Least significant difference, 1993	1	2	3	4	1	2	3	4	1	2	3	4	1
Post hoc comparison: ^a Least significant difference, 1999	1	2	3	4	1	2	3	4	1	2	3	4	1

^aNumbers refer to the groups; different rows indicate significant differences.

Table 4

Analysis of variance: L2 choice preferences in each cluster group

		<i>L2 choice preferences (0–3 scale)</i>											
		English/US ^a		English/UK ^a		German		French		Italian		Russian	
		1993	1999	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1 (Least motivated students)		1.52	1.56	1.62	1.92	0.91	0.95	0.38	0.40	0.12	0.17	.05	.02
Group 2		1.95	2.15	2.03	1.95	1.38	1.28	0.63	0.65	0.28	0.30	.07	.03
Group 3		2.44	2.38	2.54	2.51	1.95	1.95	0.74	0.93	0.45	0.56	.17	.09
Group 4 (Most motivated students)		2.63	2.60	2.63	2.54	2.23	2.15	1.28	1.32	0.99	1.09	.33	.34
<i>F</i>		289.5	159.4	285.3	112.2	420.0	306.4	297.2	226.0	296.3	281.0	78.84	108.7
<i>p</i>		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Post hoc comparison: ^b Least significant difference, 1993		1		1		1		1		1		1,2	
		2		2		2		2		2		2	3
		3		3		3		3		3		3	4
		4		4		4		4		4		4	
Post hoc comparison: ^b Least significant difference, 1999		1		1,2		1		1		1		1,2	
		2		3,4		2		2		2		2	3
		3				3		3		3		3	4
		4				4		4		4		4	

^aStudents could only choose “English,” without any British or American specification; however, because some of the attitude measures distinguished between the United Kingdom and the United States, two different cluster groupings were developed, and these are separated in this table.

^bNumbers refer to the groups; different rows indicate significant differences.

performance, with the differences reaching statistical significance in all but one case. Since motivation is by definition the antecedent of motivated behavior, and our two criterion measures concern two key aspects of motivated human behavior, its *direction* and its *magnitude*, this consistent relationship between the four motivational profiles and the two criterion measures in all the various L2/L2 community conditions provides a strong case for the validity of the clustering process.

The Difference Between Groups 2 and 3

The group scores in Tables 3 and 4 unambiguously indicate that Group 3 had a higher level of overall motivation than Group 2. The same conclusion can also be drawn from the fact that the *Integrativeness* scores of Group 3 were significantly higher than those of Group 2 in every condition (please recall that Csizér and Dörnyei [2005] found that *Integrativeness* mediated all the other motivational components and was therefore equated with the *Ideal L2 self*). However, in spite of the overall superior motivational level of Group 3, we find that Group 2 students exceed those in Group 3 on a number of motivational dimensions. How can we interpret this seemingly contradictory situation?

Let us start our analysis by taking a closer look at Table 2a, which describes the results for English/US, first, since English is the most popular L2 in Hungary and this popularity is typically fueled by American rather than British associations (Dörnyei & Csizér, 2002). As can be seen in the table, apart from *Integrativeness*, Group 3 exceeds Group 2 in *Instrumentality*, whereas Group 2 shows superiority in terms of *Attitudes toward L2 speakers*, *Cultural interest*, and *Vitality*. In describing the L2 Motivational Self System, Dörnyei (2005) has argued that the ideal L2 self is composed of two complementary aspects: In our idealized image of ourselves we want to appear *personally agreeable* (associated with positive attitudes toward the L2 community and culture) and also *professionally successful* (associated

with instrumental motives). This dichotomy seems to correspond to the split between Groups 2 and 3 very well: Group 2 members are superior on the affective side (they have more positive attitudes toward the L2 community and culture), whereas Group 3 members are superior on the pragmatic side (placing more emphasis of the incentives of L2 proficiency). What is important from our point of view is that neither group has developed a fully fledged salient L2 language self (which characterizes Group 4 members), and therefore analyzing their differences can help us to understand how the self system works.

Learners in Group 3 have a powerful sense of the professional relevance of L2 proficiency, but this is not accompanied by a similarly positive regard toward the L2 culture and community. This suggests that they have not internalized their professional interest to the extent that it has developed into an ideal language self. Indeed, the motivational profile of this group appears to be determined by the ought-to language self, which is the counterpart of the ideal self in Dörnyei's (2005) system described earlier. This explains why Group 3 learners are strong on instrumental motives but much weaker on other attitudinal aspects and why their overall level of motivation does not reach that of members of Group 4.

Learners in Group 2 appear to be the reverse of Group 3 members: Although they have positive attitudes toward everything that is associated with English, they do not see English as related to their future professional life (witnessed by the low instrumental score). They simply do not think that they will need the L2, which is a common feature of many language learners. Thus, although they are positively disposed toward the target language, it simply does not reach the necessary level of relevance for them to develop into an ideal L2 self. Why these learners display a lower overall level of motivation than those in Group 3 can also be explained with the motivational self paradigm: Although members of neither group have a salient ideal L2 self, those in Group 3 are at least motivated by an ought-to L2 self.

Thus, for English (US), the primary foreign language in Hungary, the cluster analysis appears to provide validation of Dörnyei's (2005) L2 Motivational Self System. If we look at the other languages (Tables 2b–2f), we see a largely similar pattern to the above, but for some variables in which the English data revealed a superiority of Group 2, Group 3 scores actually exceed those of Group 2. Out of the six relevant scores for which the English data showed the inverse pattern for Groups 2 and 3 (three variables in 1993 and 1999 each), this deviation occurs for each language less than twice on average. For the languages that play a less important role in the Hungarian context—French, Italian, and Russian—the unstable pattern can be linked to the weak and somewhat changing position of the languages (cf. Dörnyei & Csizér, 2002). However, for one variable (*Attitudes toward L2 speakers*, 1999), even English (UK) and German deviate from the pattern obtained with English (US). We believe that this is related to the significant tendency, discussed by Dörnyei and Csizér, during the 1990s for interethnic attitudes among Hungarians to become more negative in general. This, we believe, is due partly to some sort of a “disillusionment” process that occurred when people realized that their heightened expectations had not been fully met by “joining the free world” and partly to the increased level of contact with foreign visitors, among which German-speaking tourists constituted by far the largest group (for an in-depth analysis of the issue of contact, see Dörnyei & Csizér, 2005).

The Size and Gender Composition of the Various Motivational Groups

Having established the validity of the clustering by means of both evaluating the cluster groups against external criterion measures and discussing the cluster characteristics within a theoretical framework, it is interesting to look at the size and gender variations across the four cluster groups. Table 5 presents the size of the cluster groups in terms of their percentages

Table 5

Percentage of students belonging to each cluster for the five languages

	English/US ^a		English/UK ^a		German		French		Italian		Russian	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1 (Least motivated students)	6.5	8.6	10.7	10.6	14.6	17.9	19.3	21.9	16.9	23.9	30.9	29.0
Group 2	21.0	23.4	19.8	16.1	23.0	23.6	22.7	24.9	23.1	24.2	24.7	26.2
Group 3	16.9	15.6	27.3	25.6	23.2	24.6	25.0	25.8	28.0	24.5	23.1	29.2
Group 4 (Most motivated students)	55.7	52.4	42.2	47.7	39.2	33.9	33.0	27.5	32.0	27.4	21.3	15.6

^aStudents could only choose "English," without any British or American specification; however, because some of the attitude measures distinguished between the United Kingdom and the United States, two different cluster groupings were developed, and these are separated in this table.

of the total sample. As could be expected, the percentages show considerable variation, but the emerging pattern is in accordance with the popularity rank order of the five languages determined by Dörnyei and Csizér (2002), according to which English was by far the most popular language in the sample, followed by German, French, Italian, and finally Russian. Thus, we would expect English, the most popular language, to be associated with the largest *most motivated students* group and Russian, the least popular language, with the largest *least motivated students* group. As the table shows, this is indeed the case, and all the other results spread logically and evenly between these two extremes.

Table 6 indicates the gender dominance in the different motivational clusters. The pattern confirms in a visually clear manner Dörnyei and Csizér's (2002) finding wherein girls displayed superior language attitudes to boys across the board. All but one of the most motivated clusters are dominated by girls, and most of the least motivated clusters are dominated by boys. These findings are in accordance with results typically reported in the literature from a wide variety of learning contexts, indicating on the one hand that girls are more successful in virtually every aspect of language learning, and on the other hand that foreign language learning is increasingly seen by boys as a "girly" subject in many countries. Although some hypotheses have been proposed about the reasons for this general pattern, to the best of our knowledge no comprehensive explanation has been provided to date about the marked gender variation.

Target Language Interference in Language Choice and Effort

The fact that our investigation has focused on the learners as the focal unit allows us to examine the interference of their various dispositions toward the various target languages. For example, it is reasonable to assume that a strong attraction to a particular language is likely to exist at the expense of other possible target languages, but hardly any L2 motivation studies

Table 6

Cluster membership and gender: Cross-table analysis with the overrepresented^a gender for each cluster

	Gender											
	English/US		English/UK		German		French		Italian		Russian	
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999
Group 1 (Least motivated students)	boys	boys	boys	boys	—	boys	boys	boys	boys	boys	boys	—
Group 2	boys	boys	boys	boys	—	boys	boys	boys	boys	—	—	boys
Group 3	boys	boys	boys	boys	boys	boys	boys	girls	—	—	—	girls
Group 4 (Most motivated students)	girls	girls	girls	girls	girls	girls	girls	girls	girls	girls	girls	—

Note: — indicates no difference between boys and girls.

^aThe standard adjusted residual is higher than +2.

have addressed such attitudinal interferences. Because cluster analysis was carried out separately for each language, each student had a separate motivational group membership index with regard to each of the target languages; that is, a learner could, for example, belong at the same time to the highly motivated cluster in English and to the not-at-all-motivated one in Italian. Looking at the combinations of the various memberships can, then, answer the question as to whether it is better to be motivated to learn only a single language, or whether an overall interest in foreign languages—as indicated by belonging to the highly motivated groups across the board—provides a stronger commitment. A further question is how English, the indisputable world language, affects preferences for other, less vital languages.

As a first step, we have divided the learners into five groups, depending on how many *most motivated group* memberships they achieved across the languages (i.e., how many times in Tables 2a–2f they qualified in Group 4). In this analysis we have omitted Russian, because the learners' attitudes toward it were so negative that we could not expect the preference figures to provide a reliable contribution to the regrouping of students according to the number of *most motivated cluster* memberships, and we used only one index for English, that associated with the United States, as this was the dominant perception in the sample. Thus, we obtained five groups (one group for each number of memberships from 0 to 4, with the latter group made up of learners who had the highest level motivational profile in all the languages: English, German, French, and Italian) and then conducted an analysis of variance to examine how the scores on the two criterion measures varied across the five groups. As can be seen in Table 7, with regard to *Intended effort* the picture is straightforward: Breadth of L2 motivation (as indicated by the number of top group memberships) is in a direct positive relationship with the intended level of effort to learn all the L2s in question. That is, the more often a participant belonged to the most motivated group in the various languages, the higher amount of effort the person wanted to invest in any of these

Post hoc comparison: ^a	0	0	0	0	0	0	0	0	0
Least significant difference, 1993	1	1	1	2	2	3	3,4	4	4
Post hoc comparison: ^a	0	0	0	0	0	0	0	0	0
Least significant difference, 1999	1	1	1	2	2	3	3,4	4	4

^aNumbers refer to the groups; different rows indicate significant differences.

languages. Because we suggested earlier that membership in a most motivated group is an indication of the salience of one's ideal L2 self, this finding means that a highly developed ideal language self is associated with a *general* interest in languages—a finding that is in accordance with Gardner's (1985) original conceptualization of integrativeness, which also contains an "interest in foreign languages" component.

The interesting question is whether the results for *Language choice* display the same pattern as those for *Intended effort*. Although the two variables are obviously linked—that is, the extent of one's willingness to choose an L2 and the level of effort one intends to expend on learning it are interrelated—there is one big difference between the two measures. While the responses for *Intended effort* for different L2s are unrelated to each other (i.e., one can assign the highest score to all the L2s), with regard to *Language choice* one is forced to state preferences, both in real life (because our capacity for L2 learning is limited) and also in the actual survey (because students were asked to choose and rank-order three languages). Thus, the choice of one language inevitably affects that of another. The pattern in Table 8 reflects this difference in that instead of the straightforward positive relationship that characterized *Intended effort*, we find a more complex picture. At this point we must note that a typical Hungarian learner would master only one L2 (at best), with only the best ones having a serious go at two L2s; studying three L2s seriously is very rare, and four is almost unheard of. Therefore, for the sake of clarity in this analysis we will ignore Italian, the popularity of which is behind that of the other three international languages (English, German, and French) and which was included in the research paradigm primarily as a control.

The results for French in Table 8 are the closest to the straightforward pattern obtained for *Intended effort*. This makes sense: Because most Hungarian learners want to master English and German first, only the best and most motivated learners will attempt French. Therefore, here the number of

Table 8

Analysis of variance: L2 choice preferences in cluster groups defined by the number of “most motivated cluster” memberships

Number of most motivated cluster (Group 4) memberships	<i>Language choice preferences (0–3 scale)</i>											
	Size of group (%)		English		German		French		Italian			
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999		
0	22.4	26.9	2.24	2.32	1.88	1.81	.67	.73	.39	.43		
1	28.6	30.1	2.43	2.41	1.77	1.66	.79	.83	.52	.54		
2	24.2	24.2	2.40	2.38	1.75	1.61	.84	.90	.57	.63		
3	16.3	12.7	2.41	2.34	1.67	1.54	1.00	1.01	.63	.69		
4	8.5	6.1	2.47	2.44	1.82	1.83	.95	.93	.51	.53		
<i>F</i>			9.07	1.80	4.79	7.82	20.05	10.05	11.36	10.66		
<i>p</i>			.000	.125	.001	.000	.000	.000	.000	.000		
Post hoc comparison: ^a Least significant difference, 1993			0	2,3,1,4	3,2	2,1,4	0	1,2	0	1,4,2		
				4,0	4,3					2,3		

Table 8 (continued)

Number of most motivated cluster (Group 4) memberships	<i>Language choice preferences (0–3 scale)</i>												
	Size of group (%)		English		German		French		Italian				
	1993	1999	1993	1999	1993	1999	1993	1999	1993	1999			
Post hoc			–		3,2		0		0,4				
comparison: ^a Least					2,1		1,2,4		4,1				
significant					0,4		4,3		2,3				
difference, 1999													

^aNumbers refer to the groups; different rows indicate significant differences.

most motivated learner group memberships is relevant and correlates with the desire to learn French. With English and German we find a strikingly different pattern. For English it almost does not matter what one's motivational profile is like because the data reveal a very high general level of endorsement: Even the smallest coefficient (for Group 0 in 1993) is 2.24 out of a maximum of 3, which actually exceeds the largest coefficient found for German in any of the cells (1.87). It is no wonder, therefore, that in 1999 there were no significant between-group differences concerning the English language choice results, $F(4,3823) = 1.8$, $p = .125$, which reflects well the perceived "world language" status of English: As described in Dörnyei and Csizér (2002), people increasingly study English not necessarily because they are motivated to do so but because it is seen as part of general education, similarly to reading, writing, and arithmetic.

With German the surprising finding is that both in 1993 and 1999 the top-scoring groups for *Language choice* were Groups 0 and 4 jointly. That is, one was most likely to choose German either if one had a very broad or a very limited interest in foreign languages. How can this be? We believe that this finding is a result of substantial interference from World English. If a learner was *not* interested in language learning at all, then he or she was quite likely to give a high mark in the questionnaire for German, the traditional lingua franca in Hungary (and in Central Europe in general)—this was merely a default rating, without implying any real meaningful motivation. If the person had *some* interest in L2s, he or she was likely to mark mainly English, which was perceived to be the dominant world language—hence the lower score for German in the interim groups. However, if the person was *really* interested in language learning, he/she was likely to want to learn both English and German, as these were generally accepted as the main world and regional languages, respectively—hence the high score for German. In order to test this hypothesis, we have conducted a more in-depth analysis, this time focusing only on the German/English interference.

Target Language Interference in Language Choice and Effort: Focus on English and German

In order to achieve a detailed understanding of the combined effect and interference of English and German, we computed 16 new learner groups based on the combinations of the four learner profiles for English and German described in Tables 2a and 2c. We then compared the two criterion measures in the 16 groups separately: Table 9 presents the results from 1999

Table 9

Intended effort and L2 choice preferences within the combined cluster groups of English and German (1999)

Original cluster groups ^a			<i>Intended effort</i> ^b		<i>L2 choice preferences</i> ^c			
			English	German	English	German		
1	English = 1	German = 1	2.57	>	2.32	1.57	<i>ns</i>	1.49
2	English = 1	German = 2	2.65	<	2.90	1.66	<	1.98
3	English = 1	German = 3	2.58	<	3.38	1.50	<	2.53
4	English = 1	German = 4	2.81	<	3.93	1.41	<	2.52
5	English = 2	German = 1	3.65	>	2.32	2.42	>	1.02
6	English = 2	German = 2	3.79	>	3.08	2.25	>	1.36
7	English = 2	German = 3	3.78	<i>ns</i>	3.80	2.11	<i>ns</i>	2.09
8	English = 2	German = 4	3.79	<	4.26	1.95	<	2.28
9	English = 3	German = 1	4.19	>	2.44	2.58	>	1.02
10	English = 3	German = 2	4.25	>	3.01	2.35	>	1.34
11	English = 3	German = 3	4.34	>	3.94	2.47	>	2.05
12	English = 3	German = 4	4.26	<i>ns</i>	4.36	2.04	<	2.45
13	English = 4	German = 1	4.67	>	2.21	2.65	>	0.62
14	English = 4	German = 2	4.73	>	3.09	2.71	>	1.05
15	English = 4	German = 3	4.70	>	3.99	2.67	>	1.80
16	English = 4	German = 4	4.75	>	4.41	2.49	>	2.04

Note. < and > indicate significant differences, whereas *ns* denotes nonsignificant results.

^a1 = Group 1 (least motivated students); 2 = Group 2; 3 = Group 3; 4 = Group 4 (most motivated students).

^b5-point scale.

^c4-point scale.

(because the results from 1993 and 1999 were very similar, for the sake of clarity we will focus on the latest results only). As can be seen, the trends for *Intended effort* and *Language choice* are almost exactly the same: Students prefer German to English only (a) if they are motivated to learn German and they are *not* motivated to learn English (Groups 2–4), or (b) if they are *highly* motivated to learn German and only marginally to learn English (Groups 8–12). This clearly shows that the motivation to learn German is dependent on the motivation to learn English, whereas the latter is not affected by the former.

The above analysis focused on the *direction* of motivation (i.e., the L2 preference). We also wanted to check whether the *intensity* (i.e., magnitude) of the motivated behavior showed any systematic variation across the 16 groups. As expected, an analysis of variance with grouping as the independent variable produced highly significant results in all the four language-criterion combinations. With regard to the *Intended effort* to learn English, we find an almost straightforward positive linear relationship (similar to the one in Table 3): As shown by Table 10 and illustrated by Figure 2, the higher the group level of English, the higher the effort scores, and the level of German group membership does not seem to make any difference. Thus, in this regard English is not affected by German.

With regard to *Language choice*, the picture is somewhat different (see Table 11). The rhythmically sloping pattern of the graph for this variable in Figure 2 shows some German interference: The “bumps” in the graph coincide with the lowest German group membership level (i.e., Level 1) and the “dips” with the highest German group membership level (i.e., Level 4). Thus, even though students in general tend to express a preference for English over German, whether or not they like German modifies their overall eagerness to choose English.

Let us now look at the German results. Our earlier analyses have already indicated a strong interference of World English when it comes to learning other languages, and indeed the *Language choice* scores for German (Table 12) confirm this.

Table 10

Analysis of variance post hoc comparisons (least significant difference) of Intended effort to learn English in the combined cluster groups of English and German (1999)

Mean		Group membership ^a																
		1	3	2	4	5	7	6	8	9	10	12	11	13	15	14	16	
2.58	Group	1	-															
2.58	membership	3	-															
2.65		2		-														
2.81		4			-													
3.65		5	*	*	*	*	-											
3.78		7	*	*	*	*		-										
3.79		6	*	*	*	*			-									
3.79		8	*	*	*	*				-								
4.19		9	*	*	*	*	*	*	*	*	-							
4.25		10	*	*	*	*	*	*	*	*		-						
4.26		12	*	*	*	*	*	*	*	*			-					
4.34		11	*	*	*	*	*	*	*	*				-				
4.67		13	*	*	*	*	*	*	*	*	*	*	*		-			
4.70		15	*	*	*	*	*	*	*	*	*	*	*	*		-		
4.73		14	*	*	*	*	*	*	*	*	*	*	*	*	*		-	
4.75		16	*	*	*	*	*	*	*	*	*	*	*	*	*	*		-

^a1 = Group 1 (least motivated students); 2 = Group 2; 3 = Group 3; 4 = Group 4 (most motivated students).

*Significant difference at a level greater than .05.

The graph for *Language choice* in Figure 3 shows some prominent fluctuation, with the highest scores coinciding with the lowest English level and the lowest scores with the highest English level. With regard to *Intended effort* to learn German, a slightly different picture emerges (Table 13). As stated earlier, the *Intended effort* scores for different languages are not interdependent in the same way as the language choice scores, and therefore high World English group membership does not automatically reduce the German scores. Indeed, the tendency we can observe in the German *Intended effort* graph in Figure 3 is in

Table 11

Analysis of variance post hoc comparisons (least significant difference) of the English Language choice preference in the combined cluster groups (1999)

Mean	Group membership ^a	Group membership ^a															
		4	3	1	2	8	12	7	6	10	5	11	16	9	13	15	14
1.14	Group	4	–														
1.50	membership	3	–														
1.57		1		–													
1.66		2			–												
1.95		8	*	*	*	*	–										
2.04		12	*	*	*	*		–									
2.11		7	*	*	*	*	*		–								
2.25		6	*	*	*	*	*	*		–							
2.35		10	*	*	*	*	*	*	*		–						
2.42		5	*	*	*	*	*	*	*			–					
2.47		11	*	*	*	*	*	*	*	*			–				
2.49		16	*	*	*	*	*	*	*	*	*			–			
2.58		9	*	*	*	*	*	*	*	*	*	*			–		
2.65		13	*	*	*	*	*	*	*	*	*	*	*			–	
2.67		15	*	*	*	*	*	*	*	*	*	*	*	*			–
2.72		14	*	*	*	*	*	*	*	*	*	*	*	*	*		–

^a1 = Group 1 (least motivated students); 2 = Group 2; 3 = Group 3; 4 = Group 4 (most motivated students).

*Significant difference at a level greater than .05.

accordance with the earlier finding that a salient ideal self is associated with a high overall level of motivation to learn foreign languages in general. As the graph for *Intended effort* in Figure 3 shows, the commitment to learn English appears to be *adding* to some extent to the magnitude of *Intended effort* to learn German.

Conclusion

We believe that the wide range of interesting results generated by this study provides confirmation that the approach to

Table 12

Analysis of variance post hoc comparisons (least significant difference) of the German Language choice preference in the combined cluster groups (1999)

Mean	Group membership	Group membership ^a																
		13	5	9	14	10	6	1	15	2	16	11	7	8	12	4	3	
0.62	Group	13	–															
1.02	membership	5	*	–														
1.02		9	*		–													
1.05		14	*			–												
1.34		10	*	*	*	*	–											
1.36		6	*	*	*	*		–										
1.49		1	*	*	*	*			–									
1.80		15	*	*	*	*				–								
1.98		2	*	*	*	*	*	*	*		–							
2.04		16	*	*	*	*	*	*	*			–						
2.05		11	*	*	*	*	*	*	*				–					
2.09		7	*	*	*	*	*	*	*					–				
2.28		8	*	*	*	*	*	*	*	*	*	*	*	*	–			
2.45		12	*	*	*	*	*	*	*	*	*	*	*	*		–		
2.52		4	*	*	*	*	*	*	*	*	*	*	*	*			–	
2.53		3	*	*	*	*	*	*	*	*	*	*	*	*				–

^a1 = Group 1 (least motivated students); 2 = Group 2; 3 = Group 3; 4 = Group 4 (most motivated students).

*Significant difference at a level greater than .05.

focus on motivational learner types and profiles is a fruitful one and that cluster analysis is an effective statistical procedure to apply in this context. We have uncovered four broad motivational profiles that characterized learners regardless of the specific target language or the time of the survey. The first group consisted of the *least motivated learners*, who were basically not interested in foreign languages, cultures, and language learning. The other extreme was Group 4, the *most motivated learners*, who showed a generally high disposition across all the motivational dimensions. We argued that these latter learners have

Table 13

Analysis of variance post hoc comparisons (least significant difference) of Intended effort to learn German in the combined cluster groups of English and German (1999)

Mean	Group membership ^a	Group membership ^a																
		13	1	5	9	2	10	6	14	3	7	4	11	15	8	12	16	
2.21	Group	13	–															
3.32	membership	1	–															
2.32		5		–														
2.44		9	*		–													
2.90		2	*	*	*	*	–											
3.01		10	*	*	*	*		–										
3.08		6	*	*	*	*			–									
3.09		14	*	*	*	*				–								
3.38		3	*	*	*	*	*	*	*		–							
3.80		7	*	*	*	*	*	*	*	*		–						
3.93		4	*	*	*	*	*	*	*	*			–					
3.94		11	*	*	*	*	*	*	*	*				–				
3.99		15	*	*	*	*	*	*	*	*	*				–			
4.26		8	*	*	*	*	*	*	*	*	*	*				–		
4.36		12	*	*	*	*	*	*	*	*	*	*	*				–	
4.42		16	*	*	*	*	*	*	*	*	*	*	*	*	*	*		–

^a1 = Group 1 (least motivated students); 2 = Group 2; 3 = Group 3; 4 = Group 4 (most motivated students).

*Significant difference at a level greater than .05.

successfully developed a salient ideal L2 self, which was also associated with an interest in foreign languages in general. The two interim groups showed an intriguing profile difference: Whereas Group 2 featured more positive attitudes toward the L2 culture and community, Group 3 members were superior on instrumental aspects. This pattern was interpreted within Dörnyei's (2005) L2 Motivational Self System: We argued that the reason why the learners in these groups had not developed a strong ideal L2 self was (a) in the case of Group 2, a lack of a professional future relevance of the L2, and (b) in the case of

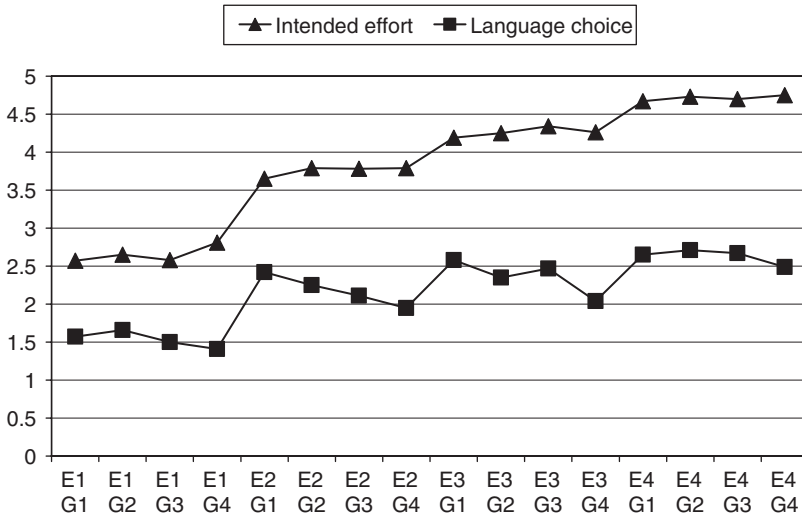


Figure 2. Visual representation of *Intended effort* and *Language choice* for English in the 16 combinations of the English and German cluster groups (1999). E = English cluster group; G = German cluster group (as presented in Tables 3 and 4).

Group 3, their motivation's being determined by the ought-to L2 self, which is a less internalized counterpart of the ideal L2 self in Dörnyei's system.

Because a learner's motivational profile varies according to the specific target language in question, the second part of the study examined the combined effects and interferences of these different profiles. First, it was interesting to see that only about one fifth of the students in our sample did not qualify for the *most motivated learner* group in any of the languages. This indicates that most of the Hungarian schoolchildren investigated had developed an ideal L2 self with regard to at least one L2. This is a promising result, showing real language learning potential. With regard to the interplay of the various learner profiles, the results revealed an interesting and slightly contradictory situation: Although it is beneficial for a student to have a wide interest in foreign languages in general, as this seems to result in a more established and salient ideal language self and,

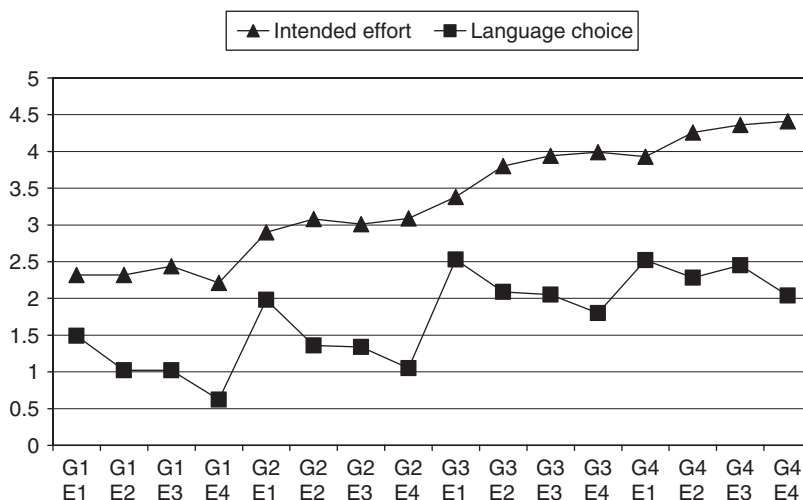


Figure 3. Visual representation of *Intended effort* and *Language choice* for German in the 16 combinations of the English and German cluster groups (1999). E = English cluster group; G = German cluster group (as presented in Tables 3 and 4).

subsequently, increased intended language learning effort, being motivated to learn more than one L2 at the same time also causes interferences in that positive attitudes toward one language can exist at the expense of another. Thus, there is a “competition” among target languages for learners’ limited language learning capacity, and in this competition the clear winner appears to be World English, even though we have found some negative German interference even related to the English scores.

Finally, we need to remember the limitations of this study. Although the sample was extensive and the results appeared to be stable over time, the learners examined consisted of only young Hungarian teenagers who studied foreign languages as a school subject. Furthermore, because of the large-scale survey methodology, we needed to limit our focus on motivational variables that were generalizable across various learning situations; thus, the study reported in this article did not involve situation-specific

motives that are rooted in the L2 learners' immediate learning environment, but only more stable and generalized motives. This is why only two main components of Dörnyei's (2005) L2 Motivational Self System were identified: the ideal L2 self and the ought-to L2 self; the third component, the L2 learning experience, was not addressed in this study.

Revised version accepted 27 April 2005

References

- Alexander, P. A., & Murphy, P. K. (1999). Learner profiles: Valuing individual differences within classroom communities. In P. L. Ackerman, P. C. Kyllonen, & R. D. Roberts (Eds.), *Learning and individual differences: Process, trait, and content determinants* (pp. 412–431). Washington, DC: American Psychological Association.
- Clément, R., Dörnyei, Z., & Noels, K. A. (1994). Motivation, self-confidence, and group cohesion in the foreign language classroom. *Language Learning, 44*, 417–448.
- Clément, R., & Gardner, R. C. (2001). Second language mastery. In H. Giles & W. P. Robinson (Eds.), *The new handbook of language and social psychology* (2nd ed., pp. 489–504). London: Wiley.
- Csizér, K., & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *Modern Language Journal, 89*, 19–36.
- Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning, 40*, 45–78.
- Dörnyei, Z. (2001). *Teaching and researching motivation*. London: Longman.
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Erlbaum.
- Dörnyei, Z., & Csizér, K. (2002). Motivational dynamics in second language acquisition: Results of a longitudinal nationwide survey. *Applied Linguistics, 23*, 421–462.
- Dörnyei, Z., & Csizér, K. (2005). The effects of intercultural contact and tourism on language attitudes and language learning motivation. *Journal of Language and Social Psychology, 24*(4), 1–31.
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Arnold.

- Giles, H., & Byrne, J. L. (1982). An intergroup approach to second language acquisition. *Journal of Multilingual and Multicultural Development*, 3, 17–40.
- Higgins, E. T. (1987). Self-discrepancy: A theory of relating self and affect. *Psychological Review*, 94, 319–340.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1–46.
- Keeves, J. P. (1994). Longitudinal research methods. In T. Husén & T. N. Postlethwaite (Eds.), *The international encyclopedia of education* (2nd ed., pp. 3512–3524). Oxford: Pergamon.
- Kojic-Sabo, I., & Lightbown, P. M. (1999). Students' approaches to vocabulary learning and their relationship to success. *Modern Language Journal*, 83, 176–192.
- Leaver, B. L., Ehrman, M. E., & Shekhtman, B. (2005). *Achieving success in second language acquisition*. Cambridge: Cambridge University Press.
- MacIntyre, P. D. (2002). Motivation, anxiety and emotion in second language acquisition. In P. Robinson (Ed.), *Individual differences in second language acquisition* (pp. 45–68). Amsterdam: Benjamins.
- Menard, S. (1991). *Longitudinal research*. Newbury Park, CA: Sage.
- Noels, K. A. (2001). New orientations in language learning motivation: Toward a contextual model of intrinsic, extrinsic, and integrative orientations and motivation. In Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 43–68). Honolulu: University of Hawai'i Press.
- Skehan, P. (1986). Cluster analysis and the identification of learner types. In V. Cook (Ed.), *Experimental approaches to second language acquisition* (pp. 81–94). Oxford: Pergamon.
- Skehan, P. (1991). Individual differences in second language learning. *Studies in Second Language Acquisition*, 13, 275–298.
- Ushioda, E. (2003). Motivation as a socially mediated process. In D. Little, J. Ridley, & E. Ushioda (Eds.), *Learner autonomy in the foreign language classroom: Teacher, learner, curriculum, assessment* (pp. 90–102). Dublin, UK: Authentik.
- Yamamori, K., Isoda, T., Hiromori, T., & Oxford, R. (2003). Using cluster analysis to uncover L2 learner differences in strategy use, will to learn, and achievement over time. *International Review of Applied Linguistics*, 41, 381–409.