

Integrative motivation and global language (English) acquisition in Poland

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Abstract

This study investigated the consistency of a measure of integrative motivation in the prediction of achievement in English as a foreign language in 18 samples of Polish school students. The results are shown to have implications for concerns expressed that integrative motivation might not be appropriate to the acquisition of English because it is a global language and moreover that other factors such as the gender of the student or the environment of the class might also influence its predictability. Results of a hierarchical linear modeling analysis indicated that for the older samples, integrative motivation was a consistent predictor of grades in English, unaffected by either the gender of the student or class environment acting as covariates. Comparable results were obtained for the younger samples except that student gender also contributed to the prediction of grades in English. Examination of the correlations of the elements of the integrative motivation score with English grades demonstrated that the aggregate score is the more consistent correlate from sample to sample than the elements themselves. Such results lead to the hypothesis that integrative motivation is a multi-dimensional construct and different aspects of the motivational complex come into play for each individual. That is, two individuals can hold the same level of integrative motivation and thus attain the same level of achievement but one might be higher in some elements and lower in others than another individual, resulting in consistent correlations of the aggregate but less so for the elements.

Keywords: socio-educational model of second language acquisition, integrative motivation, integrativeness, attitudes toward the learning situation, language anxiety

Considerable research has demonstrated that the successful acquisition of a second language is facilitated by two basic variables, language aptitude and motivation. Language aptitude has been variously conceptualized and measured (see for example, Carroll & Sapon, 1959; Pimsleur, 1966; Robinson, 2005), as has motivation (for example see discussions of conceptualizations proposed by many researchers presented by Gardner 1985, 2010). The intent here is not to discuss the various conceptualizations but to focus on one motivational perspective, that of integrative motivation.

In the socio-educational model of second language acquisition it is proposed that integrative motivation is multi-dimensional, involving affective, cognitive, and behavioral components comprising four broad categories of variables, motivation, integrativeness, attitudes toward the learning situation, and language anxiety (see Gardner, 2010). The Attitude Motivation Test Battery (AMTB) has been developed to measure relevant variables.

Many studies have been conducted using this battery. Initial studies focussed on the Canadian context with English speaking students learning French (Gardner, Smythe, Clément, & Gliksmann, 1976) and with French speaking students learning English (Clément, Gardner, & Smythe, 1977). As a consequence some researchers have proposed that the socio-educational model applies only to the Canadian context or at least bilingual contexts, or that it is not appropriate to the learning of English because it is a global language with no clearly identifiable language community. Other researchers have adapted some or all of the AMTB scales, and/or identified other related variables. Examples of related variables include willingness to communicate, intrinsic motivation, self-confidence with the language, L2 self, classroom environment (co-operative vs. competitive), interest, relevance, satisfaction, and so on (for an overall review of these and others, see for example, Dörnyei, 2001). As can be seen, each of these involves some aspect of motivation. Still, other variables that have been considered include gender, age, level of training, relevance of the other language (i.e., heritage, second, foreign), and so on, which may or may not implicate motivation. Still other researchers have contrasted integrative and instrumental orientations, implying that some motives may be more influential in language learning than others. The research is clear in indicating that all of these variables can be considered as correlates of achievement in the second language and thus can be expected to account for variations in success in learning the language.

The socio-educational model of second language acquisition offers a means for organizing potential motivational variables into one of four clusters and explaining their functions. The primary variable is motivation, which Gardner (1985, 2010) argues is itself multi-dimensional, involving affective,

cognitive, and behavioral components. Motivation implies effort, persistence, consistency, focus, interest, enthusiasm, goals, affect, and so on, but in the AMTB it is assessed in terms of three scales, Motivational Intensity, Attitudes toward Learning the Language, and Desire to Learn the Language.

The socio-educational model proposes that this motivation is dependent on two other classes of variables, integrativeness and attitudes toward the learning situation. The labelling of the integrativeness construct has been criticized by some (see, for example, Dörnyei, 2005), but it derives from Mowrer's (1950) theorizing that initial language learning was motivated by identification with the parents. The label, integrativeness, was used to indicate that there must be some conceptually similar affective basis for second language learning but that it would typically be less personal and more general, involving an openness toward the other language community or other language communities in general. The precise nature of this openness might well reflect cultural differences. Other researchers, for example, have identified constructs that are conceptually similar but reflecting characteristics of the host community (see, for example, International Posture in Japan (Yashima, 2002), and Social/Political Attitudes in Israel (Kraemer, 1993)). In the AMTB, integrativeness is measured by three scales, Integrative Orientation, Attitudes toward the Other Language Community, and an Interest in Foreign Languages.

The other class of variables that is hypothesized to have an influence on the student's level of motivation is Attitudes toward the Learning Situation. The classroom environment involves many features such as the curriculum, the social atmosphere in the classroom, the style, interest, enthusiasm, clarity, and so on, of the teacher, instructional materials, teaching methods, and the like. Each of these can have an influence on the student's attitudinal reaction to the learning situation which in turn will be correlated with the student's degree of integrativeness. In the AMTB, attitudes toward the learning situation is measured by two scales, Teacher Evaluation and Course Evaluation.

The fourth affective variable involved in the motivation to learn a second language is language anxiety. MacIntyre and Gardner (1991) have demonstrated that language anxiety is independent of general anxiety, and in the socio-educational model it is hypothesized that individual differences in language anxiety develop in the context of second language acquisition as a result of experiences in class and the degree of success in learning the material. Thus as time in training passes differences in language anxiety will result independently of general anxiety and although anxiety has motivational properties it will relate negatively to achievement as well as to attitudes toward the learning situation and possibly integrativeness. In the AMTB, language anxiety is assessed by two scales, Language Class Anxiety and Language Use

Anxiety, the latter relevant if there are contexts outside the language classroom where the language can be used.

Note that this characterization of integrative motivation in terms of the four major aggregate variables does not imply that there is a motive or a general factor of integrative motivation. As Gardner (2010, pp. 201-202) states:

In our research we talk about integrative motivation, not because it is something special but because it encompasses a number of attributes of the individual that appear to be associated with the successful acquisition of a second language. That is, there is no such motive. Instead, someone who displays a number of affective characteristics can be said to be integratively motivated. As documented in this book, these characteristics include an open and accepting orientation toward the other language community and other communities in general, favourable attitudes toward the language learning situation, and a heightened motivation to learn the language; integrativeness, attitudes toward the learning situation, and motivation, respectively. An individual who displays each of these characteristics can be said to be integratively motivated. There is nothing magical here. Integrative motivation facilitates second language acquisition because it supports the persistence so important to develop proficiency in a second language, it accounts for active searching to find opportunities to use and strengthen the language, it provides the affective backdrop to make other-language contacts enjoyable and satisfying, etc. Furthermore because of the actions of these attributes, a related feature of the integratively motivated individual will be an absence of anxiety concerning the other language. Obviously, many other attributes could be added, but to date our research indicates that this is the core of what distinguishes the individual who is motivated to learn another language from the one who is not. There might well be some other deep seated motivations that propel individuals to become proficient in a second language, but to date the research literature supports the generality of what we have defined as integrative motivation.

Thus, integrative motivation can be measured as the sum of Integrativeness plus Attitudes toward the Learning Situation plus Motivation minus Language Anxiety. Scores on this measure will correlate more consistently with measures of achievement than any of the elements themselves or any other single variable. The constituents of any one individual's integrative motivation might well differ but it is the total score that reflects each individual's level of motivation. Thus, one person might have a moderate score on integrative motivation because of moderate scores on all four elements while another might achieve the same level of integrative motivation score because they are particularly high on some elements but lower on others. This implies that the elements might well play different roles for different individuals. Single variable constructs require that the process must be uniform but complex

variables such as integrative motivation permit different subprocesses that account for the same degree of predictability.

The purpose of this article is twofold. The first is to assess the correlation of this integrative motivation score with grades in English in two samples of students in Poland and to determine the consistency of the correlations of the elements of integrative motivation and other measures from the AMTB with English grades in the two samples. The second is to assess the consistency of the regression of grades on integrative motivation in the various classes and the extent to which student gender and class environment act as covariates in this relationship. These two covariates were chosen because it is generally argued that gender and class environment are two variables that influence achievement in a second language.

Method

Participants

The data for this investigation were obtained from two age levels of students from two cities in Poland, namely, Warsaw and Puławy. Nine classes were tested at each grade level. There were 100 boys and 116 girls at the younger age level (mean age = 13.41, $SD = .502$) and 88 boys and 106 girls at the older level (mean age = 15.39, $SD = .549$). Grades in English obtained at the end of the academic year were made available for 185 and 157 students respectively at the age levels, and only the data for these students were analysed in this study.

Measures

The primary data for this study were based on the international form of the Attitude Motivation Test Battery. Gardner (2006, 2010) has published information concerning the reliability, validity, and factor structure of the AMTB scales obtained from two age-defined samples in each of six countries, including the two for this study. For the present investigation, item mean scores were computed for each of the 12 scales, and four aggregate mean scores were computed using 10 of the scale scores. The aggregate variables with their constituents were as follows:

1. Motivation: the mean aggregate of three scales, Motivational Intensity, Desire to Learn English, and Attitudes toward Learning English.
2. Integrativeness: the mean aggregate of three scales, Integrative Orientation, Attitudes toward English speaking people, and Interest in Foreign Languages.

3. Attitudes toward the Learning Situation: the mean aggregate of two scales, Evaluation of the English Teacher and Evaluation of the English Course.
4. Language Anxiety: the mean aggregate of two scales, English Class Anxiety and English Use Anxiety.

The measure of Integrative Motivation is defined as the sum of Integrativeness plus Attitudes toward the Learning Situation plus Motivation minus Language Anxiety. The AMTB also provides scores on two additional measures, Instrumental Orientation and Parental Encouragement to Learn English. These latter two variables are not included in the major analysis for this investigation because they are not generally considered elements of integrative motivation.

Results and Discussion

The results are presented in two sections. The first section considers the correlations of English grades with the various measures. In this regard, the correlation of the integrative motivation score with English grades was .47 in each age group, demonstrating what Cohen (1988) would characterize as a strong degree of association. The consistency of this correlation with grades in English contrasts with the correlations of each of the four major variables as well as gender, instrumental orientation and parental encouragement (see Table 1).

Table 1 Correlations of the variables with grades in English for the two age samples

Variables	Year 1	Year 3	<i>z</i>
Motivation	.453***	.404***	0.548
Integrativeness	.391***	.296***	0.985
Attitudes toward the Learning Situation	.344***	.122	2.156*
Language Anxiety	-.301***	-.495***	2.119*
Parental Encouragement	.121	.231**	-1.038
Instrumental Orientation	.358***	.145	2.088*
Gender	.321***	.108	2.048*

* $p < .05$

** $p < .01$

*** $p < .001$

Inspection of Table 1 will reveal that with the exception of the measure of Attitudes toward the Learning Situation for the Year 3 students each of the correlations involving the aggregate measures are significant ($p < .001$). For both groups of students, grades in English at the end of the academic year are positively correlated with motivation and integrativeness, and negatively correlated with language anxiety. For the younger students grades are also significantly correlated with attitudes toward the learning situation. Table 1 also shows that

Instrumental Orientation and Gender are significantly ($p < .001$) correlated with grades in English for the younger sample while Parental Encouragement is not. For the older students, Parental Encouragement is correlated significantly ($p < .01$) with grades but Instrumental Orientation and Gender are not.

Note too that the correlations differ between the two age groups and that for four of the variables the difference is significant. This might lead to the speculation that the variables are differently related to grades in English at the two age levels but given the small difference in age it would be difficult to identify a process that could explain the difference. In fact, as indicated above the correlation between English grades and the integrative motivation score is very consistent across the two grade levels. Thus, rather than speculate about possible age differences, it seems more likely that there are other variables that could explain such variations. Two possibilities might well be the nature of the class environment and the gender of the student.

The second section of the results uses hierarchical linear modeling to investigate the effect for each of these two variables in the prediction of English grades by integrative motivation. Raudenbush and Bryk (2001) make the point that when investigating the relationships among variables associated with students in classes, it is possible that the relationship could be influenced by the very nature of the class because it results in groups that are more uniform than random samples of students. They recommend that when investigating the regression of a variable on a set of predictors, the equation should take the class into account and that it be evaluated initially at the level of the class (Level 1) and whether these are influenced by characteristics of the class (Level 2). This is now done routinely in many areas of social science where it is meaningful to consider the research participants as being sampled by group.

This section uses hierarchical linear modeling in which students in classes is the Level 1 factor with grades as the outcome variable and integrative motivation and gender as predictors while class is the Level 2 factor with mean attitudes toward the class as the potential Level 2 moderator. The results for the Year 1 students are presented in Table 2.

Hierarchical linear modeling uses maximum likelihood to estimate the parameters for the regression of the outcome variable (grades in English) on the Level 1 predictors (integrative motivation and gender) for each class. The Level 1 fixed effects estimate the mean intercepts and slopes over the classes and tests these means against 0. Examination of Table 1 for the Year 1 students indicates that the mean intercept was $\beta_0 = 4.138$, $t(7) = 25.587$, $p < .001$, and that the mean slopes for integrative motivation was $\beta_1 = .551$, $t(7) = 6.616$, $p < .001$ while that for gender was $\beta_2 = .461$, $t(7) = 2.363$, $p = .05$. These results indicate that overall students obtained higher grades if they had higher

levels of integrative motivation and were girls. None of these estimates were moderated by class environment. Class means were not predicted by class environment, $\beta_3 = .276$, $t(7) = .409$, *ns*, integrative motivation $\beta_4 = -.441$, $t(7) = -1.266$, *ns*, or gender $\beta_5 = .908$, $t(7) = .936$, *ns*. In short, over all classes both integrative motivation and gender tended to predict grades in English at the end of the school year, and the results were not influenced by class environment as assessed by the mean attitudes toward the learning situation.

Table 2 Summary of the hierarchical linear modeling analysis for Year 1 students

Level 1 fixed effects	Coefficient	<i>t</i> test (<i>df</i> = 7)	<i>p</i>
For intercept			
Intercept	4.138	25.587	<.0001
Class environment	.276	.409	<i>ns</i>
For gender slope			
Intercept	.461	2.363	.05
Class environment	.908	.936	<i>ns</i>
For integrative motivation			
Intercept	.551	6.616	<.001
Class environment	-.441	-1.266	<i>ns</i>
Level 2 random effects	Variance	Chi-square (<i>df</i> = 6)	<i>p</i>
Intercept	.184		
Gender slope	.115	38.859	<.001
Integrative motivation slope	.003	10.678	<i>ns</i>
Residual	.757	4.794	<i>ns</i>

The Level 2 random effects assess the variability in the intercepts and slopes among the nine classes. As can be seen, although the class means vary among themselves, $\sigma^2 = .184$, $\chi^2(6) = 38.859$, $p < .001$, the slopes for both integrative motivation, $\sigma^2 = .003$, $\chi^2(6) = 4.794$, *ns*, and gender $\sigma^2 = .115$, $\chi^2(6) = 10.678$, *ns*, do not.

Comparable results were obtained with the students in Year 3, the one exception being the regression of grades on gender, which was not significant. Examination of the Level 1 fixed effects in Table 3 will reveal that the mean intercept varied significantly from 0 as did the mean slope for integrative motivation, but that gender was no longer a significant predictor of grades. Furthermore, the coefficients were not moderated by class environment. Similarly, though the variance in class grades was significantly different from 0, the variance of the slopes for both integrative motivation and gender were not.

Table 3 Summary of the hierarchical linear modeling analysis for Year 3 students

Level 1 fixed effects	Coefficient	<i>t</i> test (<i>df</i> = 7)	<i>p</i>
For intercept			
Intercept	4.609	26.684	<.0001
Class environment	-.128	-.334	<i>ns</i>
For gender slope			
Intercept	.224	1.360	<i>ns</i>
Class environment	-.053	-.139	<i>ns</i>
For integrative motivation			
Intercept	.700	6.507	<.001
Class environment	-.014	-0.056	<i>ns</i>
Level 2 random effects	Variance	Chi-square (<i>df</i> = 7)	<i>p</i>
Intercept	.211		
Gender slope	.007	35.230	<.001
Integrative motivation slope	.001	8.019	<i>ns</i>
Residual	.911	5.502	<i>ns</i>

Conclusions

The results of this investigation support three generalizations. First, correlations of aggregate scores will be more consistent from sample to sample than the elements that go to make up the aggregate. Thus, as demonstrated, the correlations of integrative motivation will be more consistent than those for its elements and even the correlations of its elements will be more consistent than their elements, though this was not shown here. For a construct like motivation this is an expected result. Motivation itself is multi-dimensional in nature and two individuals can evince the same degree of motivation for very different reasons hence the prediction of achievement would be the same overall but the prediction based on individual elements of motivation might be different.

Second, when investigating the prediction of a variable in samples of classes of students, it is important to take the class into account. For example, if the criterion is class related as in course grades, some of the variation in the grades from class to class will be dependent on the teacher, the class, the nature of the evaluation materials, and so on. And, because of the makeup of the class, the degree of individual differences might well vary from class to class. Hence, class should not be ignored when calculating measures of association between the criterion and possible predictors. By taking class into account in this study it was demonstrated that motivation was a consistent predictor of English grades from class to class that was influenced by gender for the younger students but not for the older ones and that the prediction was not influenced by class environment. A similar result with respect to class environment was reported by Bernaus and Gardner (2008), who showed that Eng-

lish achievement among Catalan students was related to motivation but not to class environment in a study using hierarchical linear modeling. Similarly in a factor analytic study using the class as the unit of analysis, Bernaus, Wilson and Gardner (2009) demonstrated that teacher motivation was associated with student motivation and that whereas student motivation was associated with student achievement teacher motivation was not. In short, the results of the present study as well as these two suggest that the underlying process linking motivation to language achievement derives from the student's perception of the class environment and not simply the environment itself.

It should be noted that the results of this study pertain to the study of English as a foreign language and that the results are consistent with the many studies conducted based on the socio-educational model of second language acquisition and measures derived from the AMTB. The important aspect of second language acquisition is that it involves taking on linguistic features of a community other than one's own, and the motivation to do so is influenced by a set of attitudes reflecting openness to other cultural material (i.e., integrativeness), reactions to the learning environment (i.e., attitudes toward the learning situation), and anxiety associated with the experience of learning the language (i.e., language anxiety). And this configuration might well be called integrative motivation.

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