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Motivation in Foreign Language Learning: The Relationship between Classroom Activities, Motivation, and Outcomes in a University Language-Learning Environment

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Abstract

In the study of academic motivation in a language-learning setting, motivation has traditionally been considered an independent variable. The present study treats it as both a dependent function of classroom activities and an independent predictor of study time, expected grade, and whether a student will continue to study the language. Six distinct motivational types are discussed: motivation about the language, motivation about the class, confidence, external motivation, whether the class feels required, and self-reported motivation. Motivation about the language is found to be of particular importance in predicting outcomes, along with fun activities and activities that promote language use about students' own lives and interests.

Introduction

Although national attention tends to focus on improving math and reading scores for American children, achievement in foreign language learning receives relatively little consideration. Factors contributing to language learning are complex, and the role motivation plays in achievement is a particularly interesting question that deserves to be studied. Research suggests that motivation can influence language learning outcomes independently from language aptitude (Gardner, 1972; Wigfield & Wentzel, 2007). Therefore, an examination not only of motivation's contribution to learning outcomes, but also of ways to foster such positive motivation among students, is certainly relevant in improving language education for all students.

The study of academic motivation is generally explained by researchers as pertaining to some other psychological domain: as a subset of identity development (McCaslin, 2009; Roeser

& Peck, 2009), Self-Determination Theory (La Guardia, 2009), goal-directed behavior (Boekaerts, de Koning & Vedder, 2006; Vansteenkiste, Lens & Deci, 2006), or interest development (Renninger, 2009), to name a few. Dörnyei (2005) provides a nice overview of the various phases of the study of motivation as it pertains to second-language learning specifically. The social-psychological period (roughly 1959-1990), as the name suggests, was concerned with the social-psychological aspects of language motivation. Work from this period suggests that, unlike other content fields such as science and math, language learning is not a socio-culturally neutral field of study because it is influenced by language attitudes, cultural stereotypes, and geopolitical considerations towards the second-language (henceforth, L2) group. Following this research phase came the cognitive-situated period, which is characterized by the application of cognitive theories to educational psychology (late 1990s), and most recently the process-oriented period, which is characterized by an interest in motivational change and evolution. Several of these theoretical constructs and periods are discussed in further detail in the following sections.

Types of Motivation

Several theories and categorizations contribute to an understanding of academic motivation generally and second-language motivation specifically. These include the theory of integrative motivation introduced during the social-psychological period, as well as Self Determination Theory, its extensions, and the general categorizations of intrinsic and extrinsic motivation developed during the cognitive-situated period.

As mentioned above, the social-psychological period posited that L2-learning motivation is profoundly impacted by attitudes towards the L2 group. Although positive attitudes towards the people who natively speak a language can positively influence a learner's motivation to learn

that language, negative attitudes towards the group can likewise negatively influence motivation. The work of James Gardner and associates characterizes this conceptualization of motivation. As defined by Gardner (2001), *integrativeness* is one of two major factors that influence overall motivation. It is a complex construct that reflects an interest in learning a foreign language *in order to* become closer to the L2 community. Thus, the term denotes not only attitudes towards learning foreign languages and towards the L2 group generally, but also the learner's willingness to interact with members of that L2 community (Dörnyei, 2005). *Attitudes towards the learning situation* constitute the second component of Gardner's two-pronged theory of motivation. Gardner (2001) explains that, in a classroom context, this term subsumes attitudes towards the teacher, classmates, coursework, activities associated with the course, and all other facets of the situation in which the language is learned. Integrativeness and attitudes towards the learning situation together contribute to overall motivation to learn the language. In this conceptualization of the term, a *motivated* individual makes an effort to learn the language (i.e. does their homework, participates in class, etc.), wants to learn the language, and will enjoy learning the language (Gardner, 2001).

The theories of motivation developed during the cognitive-situated period, although certainly distinct from those described above, nevertheless do not negate that social-psychological work. Rather, those foundations are still accepted, and the newer perspectives about how motivation functions in the real world (e.g. in classrooms) can be studied in conjunction with the earlier models (Dörnyei, 2005).

Self Determination Theory (SDT) is not specific to the study of motivation as it pertains to language. Rather, it is a more general psychological theory which suggests that intrinsic motivation and internalization, and ultimately identity development, are molded by three basic

psychological needs: autonomy, competence, and relatedness (La Guardia, 2009). La Guardia's (2009) account of the theory explains that autonomy refers to actions that a learner initiates and regulates himself. Autonomous actions are willingly engaged in, whereas participating in non-autonomous behaviors make the learner feel compelled or controlled. Competence refers to a learner's feelings of content mastery or intellectual challenge, and is expressed in curiosity, exploration of new or difficult material, etc. Relatedness is the need to feel acceptance by, and importance to, others (e.g. teachers, parents, peers). SDT as a whole suggests that people are likely to devote their energies to activities that promote these three psychological needs; in other words, they are likely to be motivated by people, situations, and undertakings that support those needs.

Within this SDT framework arise the concepts of intrinsic and extrinsic motivation. *Intrinsic* motivation, based in autonomy and competence, describes a situation in which material is engaged in for its inherent interest and the satisfaction and enjoyment it engenders. An example would be a person who enjoys learning a language because of the satisfaction felt when new concepts are mastered (competence) or because of the inherent interest and joy associated with learning the language. *Extrinsically* motivated activities, on the other hand, are engaged in in order to accomplish some goal that is separate from the activity in and of itself: for example, a person who wishes to learn a language because they believe bilingualism to be a valuable job skill, or because they believe it will make travel easier and more enjoyable. Activities can be initiated extrinsically and later be internalized to become intrinsically motivated, or they can begin out of intrinsic interest and be perpetuated in order to obtain other (extrinsic) outcomes. Thus, there is a continuum of behaviors, ranging from those that are completely extrinsically to completely intrinsically motivated. On the controlled, extrinsic end of the scale, *externally*

regulated behaviors are done in order to avoid punishment or obtain reward. *Introjected* behaviors are somewhat more internalized and are performed not to avoid punishment or gain reward per se, but rather to avoid the shame or guilt one would feel if the behavior were not done or to feel pride and worth in the eyes of others. More internalized, autonomous, and intrinsic, *identified* behaviors have been accepted and are valued as one's own (e.g. because a student understands their usefulness), and *integrated* behaviors are the most intrinsically motivated (La Guardia, 2009). An integrative orientation such as that described above (Gardner, 2001) is most closely correlated with intrinsic motivation (Noels, Clément & Pelletier, 2001).

Noels, Pelletier, Clément and Vallerand (2000) extend this model to language learning specifically and expand upon the traditional intrinsic-extrinsic categorizations with their seven-point Language Learning Orientations Scale. In this characterization, *amotivation* is characterized by a feeling that there is no point, or that material is beyond the student's interest or capabilities. External, introjected, and identified regulation have definitions consistent with those above. Intrinsic motivation is then broken into three separate parts: intrinsic motivation for knowledge (doing the activity for the intrinsic pleasure of exploring ideas and learning new things), for accomplishment (the pleasure associated with mastering a task or achieving a goal), and for stimulation (feelings such as fun and excitement).

Motivation and Student Outcomes

Studies of various age groups in a variety of content areas support the idea that intrinsically motivated students perform better in the classroom. Evidence suggests that these students, as well as students who receive autonomy-support from teachers to enhance their intrinsic motivation, perceive themselves to be more competent and have more interest in and

enjoyment of material. Instructor autonomy-support also predicts academic performance (Black & Deci, 2000). Autonomy-support here refers to instructors who understand and empathize with students' perspectives and allow students to make choices and initiate activities. Likewise, Miserandino (1996) finds that students with high perceived competence receive better grades in some subjects. Those who are more intrinsically motivated are more involved and persistent, participate more, and are curious about school activities, whereas more extrinsically motivated students report feeling more angry, anxious, and bored at school and therefore tend to avoid school activities. Again, more autonomous/intrinsically motivated students receive better grades than their extrinsically motivated peers. Motivation quality has also been linked to high school retention rates, with extrinsic motivation and a lack of autonomy-support from teachers and administrators leading to higher dropout rates (Vallerand, Fortier & Guay, 1997). Autonomous, as opposed to controlled, motivation has been linked to higher grades and achievement in school (Grolnick & Ryan, 1987), and intrinsic motivation and autonomy-support to persistence, test performance, and deeper processing of concepts (Vansteenkiste et al., 2004). Specific goal contents can be intrinsically or extrinsically oriented, just as people can be, and studies show that intrinsic goal framing leads to deeper engagement in learning activities, more persistence in learning material, and deeper understanding of concepts (Vansteenkiste, Lens & Deci, 2006).

Conversely, controlled behavior has been associated with negative learner outcomes (Grolnick & Ryan, 1987) and extrinsic goal framing was found to undermine conceptual learning, although it did not harm rote learning (Vansteenkiste, Lens & Deci, 2006). Although intrinsic motivation is generally considered superior in terms of interest-enhancement and learner outcomes, externally regulated behaviors too can have their place in the classroom. For example, one study indicates that perceived importance of current class work to future success—

an internalized, but extrinsic goal orientation—can contribute to motivation in the classroom (Green et al., 2004).

The Importance of Instructional Techniques

If intrinsic motivation is generally considered superior to extrinsic motivation, consideration of how such inherent interest develops is relevant. Renninger (2009) explains that it is possible for learners to develop and deepen interest in a topic over time, and that a person's environment (teachers, peers, texts, activities, etc.) contributes to this interest development. Typically, interest development goes through four phases: triggered situational interest, maintained situational interest, emerging individual interest, and well-developed individual interest. At all levels, interest is piqued and developed through "triggering." In early stages, interest might be triggered through a fun activity or personally-meaningful connection to content; in later stages it might be triggered by related knowledge or curiosity. Very few students have well-developed individual interest in any given subject, and educators can and do often mistake situational interest (triggered, for example, by fun activities) for this more self-directed interest (Renninger, Bachrach & Posey, 2008). Although by late adolescence students may be able to self-regulate behavior even in the absence of intrinsic interest, all learners can benefit from support that will help them to engage with the material (Renninger, 2009). Such supports can include curricular design, including what activities students engage in in the classroom (Freeman, McPhail & Berndt, 2002; Zahorik, 1996). Additionally, Wentzel (1998) demonstrates that perceived parent support is a positive predictor of school-related interest and perceived teacher support a predictor of both school- and class-related interest.

Interest can advance, stagnate, or regress at any stage, and thus appropriate triggers should be included for learners at all interest levels (Renninger, 2009). A study by Nikolov (2001) demonstrates how inappropriate instructional styles can hinder otherwise motivated students. In her study of unsuccessful Hungarian language learners, she found that unsuccessful students who generally had positive feelings about learning foreign languages (i.e. integratively motivated) attributed their lack of success to un-motivating classroom practices: particularly assessment, focus on form, and rote-learning. Situational (classroom) factors negatively overrode initial student interest.

Ford's Taxonomy of Multiple Goals is one framework that gives general insight into what makes particular activities "motivating." Ford (1992) explains that most behavior is simultaneously informed and guided by multiple goals. Goals can take on a variety of forms, with high-level goals (e.g. "I want to be bilingual") being supported by lower-level goals (e.g. "I want to do well/have fun in this class"), which are often accompanied by action steps (e.g. "I will study to get an 'A' on this Spanish test"). Goals can relate to achievement, security, socialization, etc., and the most "motivating" activities are those that relate to the pursuit of multiple goals.

Although it has been noted that people are more willing to engage in activities when they value either the activity itself or its outcome, when they expect to succeed, and when they find the activity interesting, the majority of this research has considered value, interest, and intrinsic motivation to be independent, rather than dependent, variables (Brophy, 2008). Few studies have attempted to explore activity characteristics that might make various academic content areas motivating. One that does treat motivation as a dependent variable finds that contextualization and personalization of material, as well as choice, facilitate significant

increases in motivation, engagement in learning, the amount of content learned in a given time period, perceived competence, and aspirations for future study (Cordova & Lepper, 1996). Brophy (2008) asserts that learners find curricula meaningful when the content is structured around big ideas and has genuine application to life outside of school. When material is relevant to students' current lives and interests, they see a good reason to engage with the material and so autonomously do so. Learning content without learning when, where, or why it might be useful is less constructive. Clément's Theory of Linguistic Self-Confidence, which came out of the social-psychological period of motivational literature, is one of few models that discuss activities and motivation for language learning specifically. One supporting study indicates that linguistic self-confidence derives in part from contact between the learner and the L2 community (Clément, Gardner & Smythe, 1980) and that the quality and quantity of this contact can be a major factor contributing to motivation in learning the L2 and to the desire for further intercultural communication (Dörnyei, 2005).

Despite these general theories about what makes a particular learning task interesting, there is currently little research that examines the specific classroom activities students might find meaningful, and therefore motivating. The current study, therefore, attempts to explore this question by examining the relationships between specific activities undertaken in university elementary and intermediate level language classrooms, student motivation, and outcomes (time spent studying, grades, and whether a student plans to continue study of the L2).

Methods

The Sample

A total of 151 Carnegie Mellon students from Elementary and Intermediate (100 and 200 level) language classes participated in the study; this is between one third and one quarter of the total number of students registered for such courses. Students' ages ranged from 17-38 years; the mean age was 20 with a standard deviation of 2.5 years and there were two outliers: a 31 and a 38 year old. Sixty-four percent of participating students were female, which is slightly more than the actual percentage in the population. The racial breakdown of the students was similar to that for the University as a whole, with the majority of students being either White or Asian (1.3% American Indian or Alaska Native, 40.9% Asian, Asian-American, or Pacific Islander, 4.7% Black or African American, 5.4% Hispanic, Latino, or Latin American, 41.6% White, 3.4% Other, and 2.7% choosing not to answer the question). Among students, 60 (40.5%) were freshmen, 32 (21.6%) were sophomores, 34 (23%) were juniors, 13 (8.8%) were seniors, and 9 (6.1%) were fifth year or graduate students; freshmen were overrepresented in the sample, sophomores and seniors were underrepresented and the proportions of juniors and fifth year/graduate students were similar to that in the department as a whole. All colleges across the university were represented: 6 students were enrolled in an interdisciplinary program, 12 came from the College of Fine Arts, 41 from the engineering school, 15 from the School of Computer Science, 40 from the college of Humanities and Social Sciences, 2 from the graduate school of public policy and management, 21 from the college of science, and 11 from the business school. This sample distribution is very close to that of Elementary and Intermediate students within the department as a whole.

Eight languages of study were represented. Chinese and Japanese were by far the most popular languages in the sample, with 41 (27.2%) and 40 (26.5%) students, respectively, responding to the survey. This was followed by Spanish (21, 13.9%), Italian (20, 13.2%), French (14, 9.3%), Arabic (6, 4.0%), Russian (5, 3.3%), and German (4, 2.6%). For all eight languages, Elementary I and II and Intermediate I and II levels are offered at the University, but because the study took place during the Spring semester, the majority of courses offered, and therefore students responding, were from the Elementary II and Intermediate II levels. Therefore, Elementary I and II classes were combined for analysis (with 93 total respondents) and Intermediate I and II courses were combined (55 total respondents); the level of students in Intensive Intermediate Chinese were treated as "missing" in analyses examining the effects of level as that course is designed for native speakers and is therefore qualitatively different from other classes. Two students in the sample were enrolled in language courses that were primarily taught online. Six students were native speakers of the language they were studying; of those, three were enrolled in Intensive Intermediate Chinese, one was enrolled in an Elementary II course, and two were in Intermediate II courses. Twenty-five students (13.1%) were planning to either major or minor in the language they were studying; the remainder had either decided not to pursue a language degree or had not yet decided whether they wanted to or not.

The Survey

Students enrolled in Elementary and Intermediate level language classes at Carnegie Mellon University were invited via email (sent out by their professors) to participate in the study. All surveys were completed during the last week of February and first two weeks of March, midway through the second semester. This timing allowed students to have ample experience in

that particular classroom and therefore have fully-formed impressions about their experiences; however, mid-semester grades had not yet been released, so they did not yet have concrete achievement feedback to color their perceptions of the class.

All participating students completed the same survey, which consisted of three sections: a classroom activities inventory, a motivation questionnaire, and a demographics and outcomes page. The classroom activities inventory asked students about the frequency with which they engaged in nineteen different types of activities either in the classroom or as homework. Students responded using a five-point frequency scale: 4=Daily, 3=Weekly, 2=Monthly, 1=At least once this semester, 0=Never. Students were also asked what fraction or percentage of the time their teachers spoke in the target language (see Table 1 for a full list of activities). The motivation questionnaire asked students to assess the degree to which they agreed or disagreed with eighteen statements regarding various aspects of their motivation in the classroom using a five-point scale ranging from "Strongly Disagree" to "Strongly Agree" (Table 2 contains a full list of statements). Using the same scale, they also assessed their agreement with the statement "I feel motivated to do well in this class." The demographics and outcomes page asked students basic demographic questions. It also asked whether students had studied the same or some other language in high school, whether they planned to major or minor in the language, whether the course counted as a general education requirement, or whether the course fulfilled a requirement for a non-language major or minor. Additional questions included what grade they expected to get in the class this semester; whether they planned to take another class in the same language; the approximate number of hours per week spent doing homework or studying for that class; their final grade in their last college language class, if they took one; and their GPA at the end of last semester.

Statistical Analyses

Statistical analysis was done using the SPSS statistical package. Factor analysis was used to determine relationships and categories among both classroom activity and motivational scale items. ANOVA techniques were used to examine differences in variables of interest across a variety of demographic factors. Correlations, linear and logistic regression techniques, and mediational analysis help to illuminate the relationships among classroom activities, motivation, and outcomes of interest.

All variables were checked for skew, and those whose distributions were not approximately normal were recoded as binary variables. For "I feel motivated to do well in this class" (*Self-Reported Motivation*) and the index variable *Motivation about the Language,* one third to one half of respondents had scores of 5 on the 1-5 scale; each variable was therefore recoded into a dichotomous version comparing highly motivated to all other students. Likewise, the distribution of expected semester grades and reported grades for the last language class students took were extremely negatively skewed; both *Expected Grade* and last grade were therefore recoded as binary variables, with those students who anticipated or received an 'A' in the class receiving a score of 1 and those who expected or received some lower grade being coded as 0. Most students "strongly disagreed" with the statement "I am taking this class because it is required," so *Feels Required* was also made binary with a 0 corresponding to the lowest point on the scale and a 1 meaning that students felt that to some extent they were required to take the course. Students' plans to continue studying the language were also recoded, with students who planned to continue language study "next semester" treated separately from those who planned to continue study "at some point" or who did not plan to continue. In addition, whether the class was being used to fulfill a general education requirement or a

requirement for a non-language major or minor was confounded, as the class was fulfilling both types of requirements for many students. These two variables were combined into one, *Fulfills Requirements*, where a 2 meant that the student was using it to fulfill both types, a 1 that it was fulfilling either a general education or a non-language major/minor requirement, and a 0 that the class fulfilled no requirement.

Subjects who did not answer individual questions were omitted only for analyses which included those skipped measures. In instances where many analyses were done, a more conservative alpha of .01 instead of .05 was adopted in judging significance.

Results

Extraction of Activity and Motivation Factors

In order to make sense of and reduce the number of items in the classroom activities inventory and motivation questionnaire, a factor analysis using Varimax rotation was used on each set of questions. A cutoff point of .5 was used, and when an item cross-loaded onto more than one component, it was considered part of the factor with the higher of the loadings.

Twenty activity items were included in the activities analysis; these are listed in Table 1. Nineteen items were originally coded on a 0-4 frequency scale, so the percentage of time a professor spoke in the L2 was transformed to match (0-20% = 0; 21-40% = 1; 41-60% = 2; 61-80% = 3; 81-100% = 4). Six factors emerged: *Personalized Language Use* represented times when the language was used to communicate about a student's life or interests in either spoken or written form, even if that language use was very simple. *Exclusive Use of the Language* included doing few translation exercises and the professor speaking in the L2 a high percentage of the time. Regardless of how much speech or writing a student *produced* in the L2, this

variable captures the amount of English (or more specifically, the lack thereof) that a student heard or read in the classroom. *Deep Language Use* includes activities related to reading longer selections in the language, as well as producing more complex writing and speech. This index indicates more advanced comprehension and manipulation of the language. *Mechanics* includes activities that either teach, reinforce, or measure mastery of the mechanics of the L2. *Fun* includes exposure to and use of the language in a non-drill format, such as through music, games, or film. Finally, *Cultural Exposure* measures the extent to which students participate in cultural activities or interact with native speakers of the language. It also includes a reverse coding of doing "busywork," which was negatively related to cultural contact.

Table 1 – Classroom Activities Inventory: Rotated Component Matrix

	Component					
	1	**2**	**3**	**4**	**5**	**6**
Personalized Language Use						
Speak about your life or interests using the language	.235	-.024	**.819**	-.103	-.003	.015
Write about your life or interests using the language	.088	.146	**.833**	.084	-.031	-.136
Exclusive Use of the Language						
Do translation exercises [reverse coding]	.179	-.083	-.153	-.270	-.117	**.615**
How much of the time does your teacher speak in the language? (for example, ¼ or 25%) [Coded on a 0-4 scale using 20% increments]	.121	.102	.022	-.151	-.049	**.624**
Deep Language Use						
Read longer selections in the language (i.e. literature/poetry/stories)	-.162	**.718**	.050	.071	.210	.057
Have class discussions using the language	.056	**.684**	-.196	.139	.085	.320
Role-play or create dialogs with the language	.190	**.548**	.315	.011	-.127	-.115
Do large projects (write stories or reports, make videos, give presentations, etc.)	.375	**.522**	.184	.030	-.035	-.233

Mechanics						
The professor gives lectures, either in English or in the language	.035	.091	-.208	**.546**	-.006	.060
Take quizzes or tests	-.091	.007	.066	**.636**	.161	-.280
Repeat things the teacher says, or do call and response exercises	.052	.008	.190	**.733**	-.079	-.108
Fun						
Sing or listen to songs in the language	**.735**	.018	.008	-.058	.212	.132
Play games using the language	**.768**	.112	.237	.044	-.042	.074
Watch movies/television	**.770**	.009	.062	.022	-.059	.015
Cultural Exposure						
Do cultural activities (learn dances, make food, celebrate holidays, etc.)	.519	.044	.020	.113	**.640**	-.126
Talk with native speakers (people who grew up speaking the language)—not including the teacher	.174	.203	.014	.184	**.738**	-.052
Do worksheets or exercises out of the textbook or workbook [reverse coding]	-.321	-.084	-.106	-.306	**.644**	-.073
Not Included on Any Index						
Read in the language (includes reading directions, simple sentences, questions, etc.)	-.176	.251	.455	.285	.045	.480
Use authentic materials (newspapers, magazines, movies, cartoons, etc. that were originally made for people who grew up speaking the language, not students learning the language)	.469	.389	.026	-.282	.326	.114
Use technology (not including TV/movies)	.279	.400	.154	-.273	.026	-.447

These six factors were coded into new variables by averaging the component activities' scores, with higher scores corresponding to greater frequency of the activity.

A similar analysis was performed to identify factors within the motivational questionnaire (see Table 2). The following four factors emerged: *Motivation about the Language* roughly corresponds with intrinsic motivation and measures the degree to which a student wants to learn the language for its intrinsic interest or value. Two items—"I will someday be capable of effective communication in the language" and "I want to get a good grade in this class"—loaded moderately onto the factor at levels below .6. These two items were not included in the index, however, because they did not seem to fit psychologically with the other three items. *Motivation about the Class* represents the degree to which students enjoy the classroom environment, including whether they find specific classroom activities or things they learn interesting and the extent to which they feel that their teacher is invested in them and wants them to succeed. *Confidence* characterizes how confident students are that they will succeed in learning the language and that this knowledge will be useful in their lives. Included too is the extent to which they believe that they will succeed in life more generally. *External Motivation* incorporates the degree to which students are motivated to do well either by their family or by the belief that learning the language will be of value in achieving some external goal that is separate from knowledge of the language itself.

A fifth component emerged as well. It included the items "I am currently capable of effective communication in the language" and "I am taking this class because it is required." Although it makes sense that these two beliefs are correlated (even if a person believes that they already understand all of the material being covered in a course, they may take it anyway to fulfill a requirement), these two items taken together do not reveal any insights into a "type" of motivation. Whether or not a student self-identifies as taking a class because it is *Feels Required* is an interesting variable, however, and will be treated independently as such.

Table 2 – Motivation Questionnaire: Rotated Component Matrix

	Component				
	1	**2**	**3**	**4**	**5**
Motivation about the Language					
I wish to someday be able to communicate with someone who speaks the language.	**.830**	.024	.250	-.034	-.053
I want to be fluent in the language someday.	**.798**	-.002	.109	.105	-.132
I enjoy learning about other cultures.	**.752**	.315	.024	-.155	.212
Motivation about the Class					
I enjoy coming to class.	.229	**.830**	-.059	-.007	.150
I find classroom activities interesting.	-.027	**.781**	.299	.083	-.019
The things I am learning in this class are interesting.	.184	**.771**	.107	.061	-.039
I feel that the teacher wants me to do well in this class.	-.046	**.542**	.531	.179	-.197
Confidence					
What I learn in this class will be useful in my life.	.478	.058	**.531**	.133	.038
I will someday be capable of effective communication in the language.	.540	.152	**.601**	.049	.116
I will go far in life.	.168	.043	**.627**	.086	.131
By the end of the semester, I will have learned everything I am supposed to for this class	.389	.230	**.506**	.048	.098
External Motivation					
Someone in my family wants me to do well in this class.	-.025	-.088	.323	**.791**	-.065
This class will look good on grad school and/or job applications.	.059	.217	-.062	**.757**	.218

Not included on Any Index					
I am taking this class because it is required.	-.209	-.040	-.051	.223	.730
I am currently capable of effective communication in the language.	.136	.104	.425	-.030	.673
My teacher expects a lot of me.	.308	.472	.032	.482	.247
I am capable of learning the material taught in this class.	.553	.259	.477	-.031	-.156
I want to get a good grade in this class.	.585	.118	.182	.132	-.038

Comparison of Classroom Activities by Level and Language

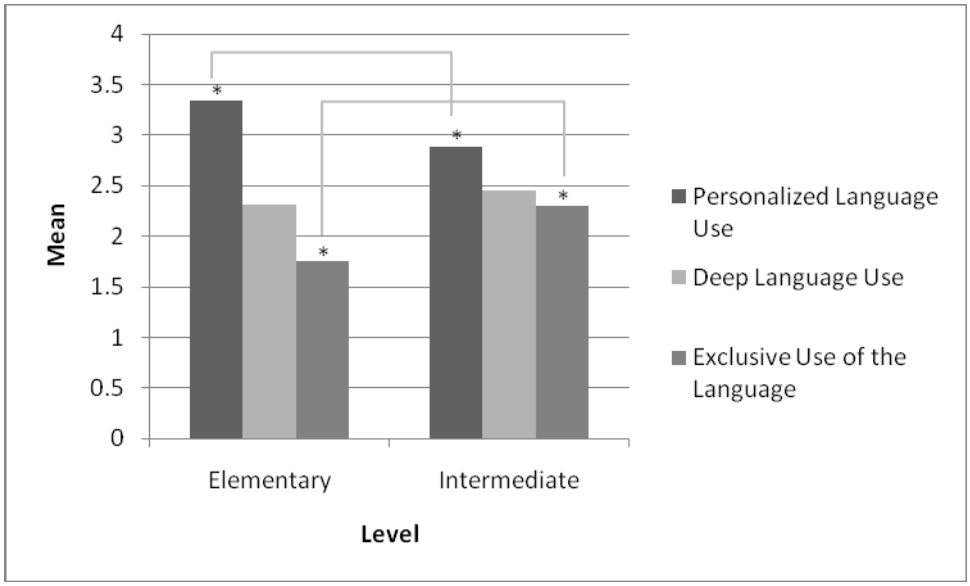
The distribution of scores for all activity indices was approximately normally distributed; mean index scores are described below. Additionally, as can be expected, analysis shows that the frequencies with which students engage in different types of classroom activities vary based on their course level (Elementary or Intermediate) and language of study. Because of the disparate number of respondents from different languages of study, languages were grouped into language families: Asian languages (Japanese and Chinese) and Romantic languages (Spanish, French, and Italian). The sampled number of students studying Arabic, German, and Russian was small and these students were therefore excluded from analyses of activity type by language of study.

A 3x2x2 Repeated Measures ANOVA compares type of language use (*Personalized Language Use, Deep Language Use,* and *Exclusive Use of the Language*) across both level (Elementary vs. Intermediate) and language family (Asian vs. Romantic) (see Figures 1 and 2). There is a main effect of language use type ($F(2, 252)=66.07$, $p<.001$) as well as an interaction

between language use type and level ($F(2, 252)=13.34$, $p<.001$) and an interaction between language use type and language family ($F(2,252)=9.468$, $p<.001$). There is no significant effect of level or language family.

In order to interpret these interactions, simple effects were examined for each type of language use. As students move up in level, they participate in *Personalized Language Use* less often ($p<.001$), dropping from several times per week to somewhat less than "weekly" use. Intermediate students also engage in *Exclusive Use of the Language* more than Elementary students ($p<.001$). There is no significant difference in *Deep Language Use*; the two cohorts both participate in this type of activity somewhere between "monthly" and "weekly."[1]

Figure 1 – Type of Language Use by Level

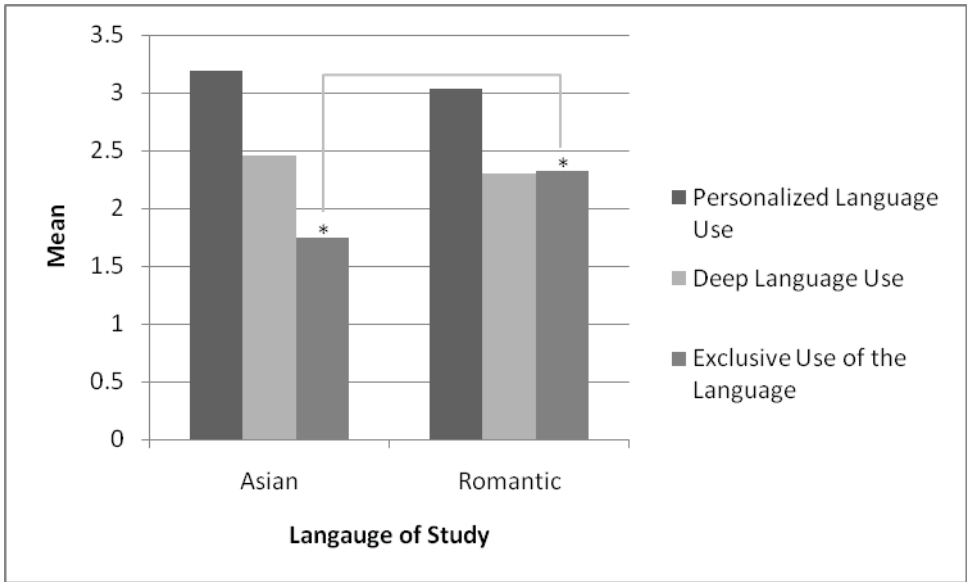


Simple effects tests also reveal language use type differences by language of study. There are no differences in *Personalized Language Use* or *Deep Language Use* between students of Asian and Romantic languages, but there is a significant difference in *Exclusive Use of the Language,* with students of Romantic languages doing more of this ($p<.001$). This makes sense

[1] When students of Russian, Arabic, and German are included in this means analysis by level, the results are nearly identical. Excluding those fifteen students had no significant effect on results.

given the relative similarity between English and Romantic languages in comparison to English and Asian languages; more use of the second language is possible in low-level (i.e. Elementary and Intermediate) classes of Romantic languages where the writing system and sounds are more similar to those of English.

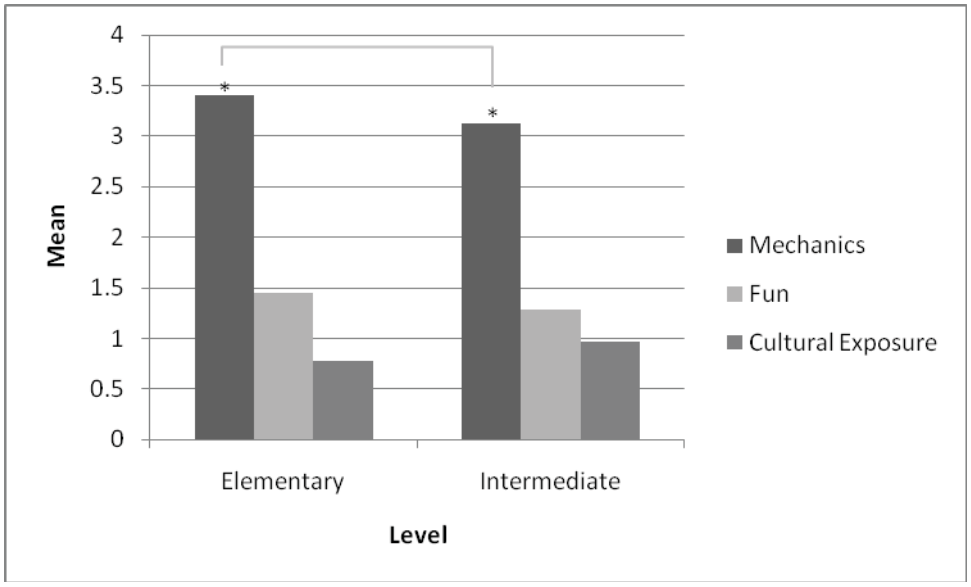
Figure 2 – Type of Language Use by Language of Study



A 3x2x2 Repeated-Measures ANOVA compares type of language learning experience (*Mechanics, Fun,* and *Cultural Exposure*) across level (Elementary vs. Intermediate) and language family (Asian vs. Romantic). This analysis reveals fewer differences between the two levels and language families (see Figures 3 and 4). There is a main effect of language learning experiences ($F(2, 258)=350.63$, $p<.001$) and a significant interaction between language of study and type of language learning experience ($F(2,258)=11.20$, $p<.001$), but the interaction between level and type of activity is only marginally significant ($F(2,258)=2.845$, $p<.10$). Although there is no effect of level, there is a significant effect of language family.

Simple effects tests clarify these interactions. Elementary students engage in more *Mechanics* activities than do Intermediate students ($p<.05$). This corresponds to doing activities related to mechanics somewhere between "weekly" and "daily" for Elementary students and approximately "weekly" for Intermediate students. Both cohorts participate in *Fun* activities less than monthly and *Cultural Exposure* activities somewhere between "never" and "at least once this semester."[2]

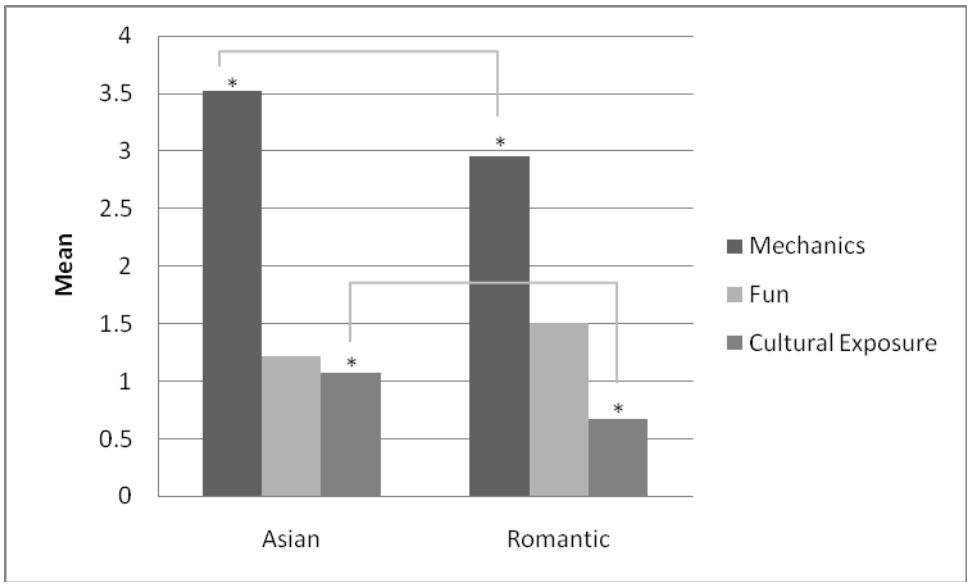
Figure 3 – Type of Language Learning Experience by Level



There are more differences in type of language learning activity by language family. Simple effects tests show, somewhat predictably given the huge disparity between the structure of Asian and English/Romantic languages, that Asian language students engage in more activities concerning the *Mechanics* of the language than do students of Romantic languages ($p<.001$). Students of Asian languages also participate in significantly more *Cultural Exposure* activities than do Romantic language students ($p<.01$). There is no significant difference in the frequency of *Fun* activities.

[2] As before, even when students of Russian, Arabic, and German are included in this means analysis by level, the results are nearly identical to those reported. Excluding those fifteen students had no significant effect on results.

Figure 4 – Type of Language Learning Experience by Language of Study



Description of Student Motivation across Demographic Groups

Repeated Measures ANOVAs compare motivation indices (*Motivation about the Class, Confidence,* and *External Motivation*) as well. Figure 5 shows significant differences in mean levels of these indices ($F(2, 288)=305.28$, $p<.001$). On average, students tended to be highly motivated about the class and quite confident. Their *External Motivation* was lower, however; post-hoc tests using Sidak confidence interval adjustments indicate that although there are no significant differences between students' levels of *Motivation about the Class* and *Confidence,* these two indices are significantly different from *External Motivation* ($p<.001$).

Figure 5 –Means for Motivational Indices

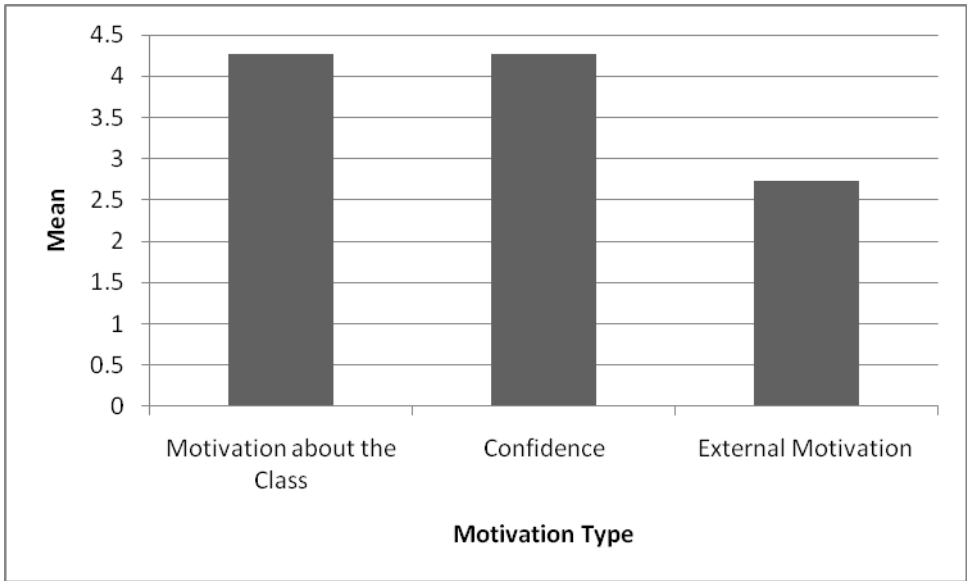
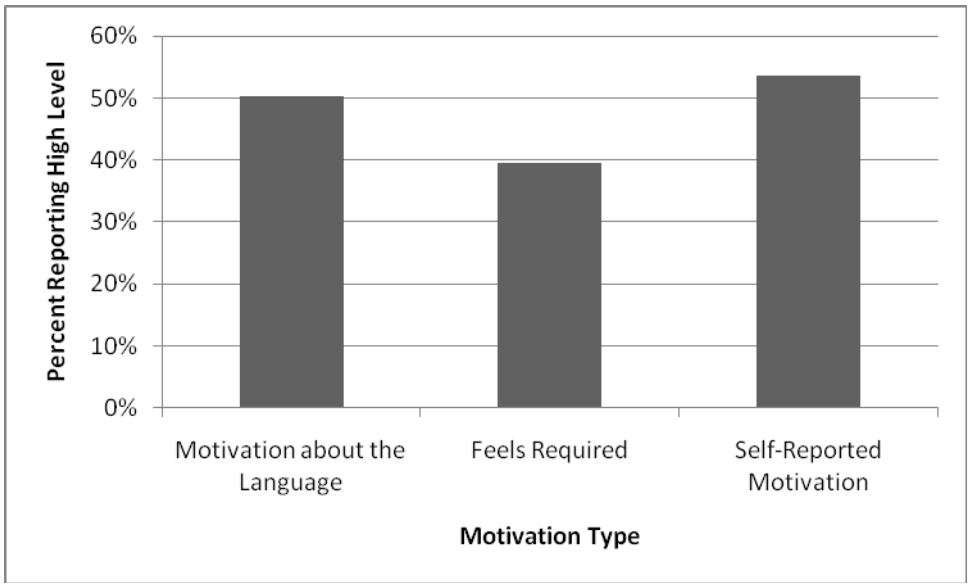


Figure 6 – Percentage of Students Reporting High Motivation Level



A similar ANOVA comparing the three dichotomous motivational indices (*Motivation about the Language, Feels Required,* and *Self-Reported Motivation*) was also conducted. Figure 6 shows the results. Overall differences between the percentage of students reporting high levels

of these motivation types are significant ($F(2, 292)=3.214$, $p<.05$). Post-hoc tests with Sidak confidence interval adjustments reveal only marginally significant pair-wise differences between the three variables, however ($p<.07$ for all three pairs).

There were no significant differences between Elementary and Intermediate students on any of the motivational factors, nor were there significant motivational differences by gender, race, or whether or not a student had studied a language in high school.

Not surprisingly, the more requirements the course fulfilled (higher *Fulfills Requirements* scores) the more a student agreed that the class *Feels Required* (28.3% for zero requirements, 49.0% for one, and 71.4% for two; $F(2, 113)=6.19$, $p<.01$).

Interestingly, language majors/minors and non-majors/minors differed on only one factor, and then only marginally (particularly given the alpha=.01 that was used because of the high number of significance tests run): *Motivation about the Language* ($F(1, 145)=3.804$, $p=.053$). Sixty-eight percent of majors and minors were highly motivated about the language compared to only 47% of the non-majors/minors.

Relationship between Activities, Motivation, and Outcomes

Simple linear and logistic regressions illuminate some connections between classroom activity frequencies and motivation type; these relationships are summarized in Table 3 below. In all cases, *Level* was controlled for in the regression model.

Table 3 – Classroom Activity Frequencies Regressed onto Motivation Type

	Dependent Variable					
Variables Included in Regression	*Motivation about the Language*	*Motivation about the Class*	*Confidence*	*External Motivation*	*Feels Required*	*Self-Reported Motivation*
Personalized Language Use	.518† (.274)	.126† (.360)	-.007 (.074)	-.002 (.102)	.246 (.274)	.396 (.267)
Deep Language Use	.210 (.258)	.004 (.066)	.090 (.071)	-.102 (.096)	-.163 (.243)	.177 (.244)
Exclusive Use of the Language	-.057 (.206)	-.020 (.057)	-.044 (.060)	-.203* (.083)	.033 (.212)	-.282 (.211)
Mechanics	.400 (.276)	-.052 (.071)	.009 (.077)	-.082 (.107)	-.344 (.267)	.093 (.271)
Fun	-.045 (.200)	.111* (.053)	.001 (.058)	.088 (.081)	-.243 (.205)	.201 (.204)
Cultural Exposure	-.029 (.257)	-.017 (.069)	-.040 (.074)	.147 (.103)	.608* (.265)	.169 (.265)
Level	.343 (.417)	.046 (.110)	.201† (.119)	.073 (.657)	.058 (.415)	-.313 (.410)
Constant	-3.417* (1.418)	3.894*** (.360)	4.089*** (.387)	3.313*** (.539)	-.019 (1.379)	-1.725 (1.397)
R-squared	***.079***	***.084***	***.037***	***.074***	***.072***	***.114***

Note: Significance levels are noted as †p<.10, *p<.05, **p<.01, ***p<.001. Standard errors are reported in parentheses.

Across motivation types, activity frequencies account for little of the variation in motivation scores. *Personalized Language Use* in the classroom is marginally related to *Motivation about the Language*. Although this test cannot speak to the direction of causality, the relationship suggests that using the language to talk about one's own life or interests, even superficially, is somewhat predictive of how motivated the student will be about learning the language.

Both *Fun* activities and *Personalized Language Use* are positively related to *Motivation about the Class,* the latter only marginally. Although causality cannot be asserted from these

relationships, they do seem to indicate that *Fun* classes in particular seem to be more motivating to students.

No activity type is related to *Confidence*, although *Level* is marginally predictive of it; higher-level students tend to feel more confident about their growing ability to effectively communicate in the language.

Exclusive Use of the Language is significantly, and negatively, related to *External Motivation.* This reflects that the more English is used in the classroom (i.e. the less the L2 is used exclusively), the more *External Motivation* a student feels.

The only variable related to whether or not the class *Feels Required* was *Cultural Exposure* activities. Because this relationship is not as clear and simple to interpret as the previous regressions, the analysis was run a second time controlling for language of study (Asian versus Romantic), and the relationship remained significant.

Table 4 – Motivation Type Regressed onto Self-Reported Motivation

	Dependent Variable
Variables Included in Regression	*Self-Reported Motivation*
Motivation about the Language	-.472 (.440)
Motivation about the Class	1.322*** (.384)
Confidence	1.262** (.479)
External Motivation	-.334 (.303)
Feels Required	.422 (.498)
Level	-.749† (.405)
Constant	-9.583*** (2.195)
R-squared	***.281***

Note: Significance levels are noted as †$p<.10$, *$p<.05$, **$p<.01$, ***$p<.001$. Standard errors are reported in parentheses.

No activity type was significantly related to the general question tapping *Self-Reported Motivation,* although the model accounted for the largest amount of the variation for any motivation type. A regression predicting *Self-Reported Motivation* from the other motivation indices is shown in Table 4. Interestingly, *Self-Reported Motivation* is significantly related to both *Confidence* and *Motivation about the Class*. What students seem to tap into when assessing their own motivation is how confident they are in their ability to master the language and how much they enjoy coming to class.

Relationships between activities, motivations, and outcomes are clearer. Regressing different types of motivation onto *Study Time* (controlling for level) shows that students with higher *Motivation about the Language* study more each week, although this relationship is only marginally significant (see Table 5). Apparently those students who are most motivated about learning the language are willing to put in more time to learn it well.

Table 5 –Motivation Types Regressed onto Study Time

	Dependent Variable
Variables Included in Regression	*Study Time*
Motivation about the Language	.453† (.235)
Motivation about the Class	.295 (.216)
Confidence	-.070 (.224)
External Motivation	-.119 (.156)
Feels Required	.011 (.270)
Self-Reported Motivation	-.068 (.233)
Level	-.365 (.222)
Constant	2.039† (1.037)
R-squared	***.078***

Note: Significance levels are noted as †p<.10, *p<.05, **p<.01, ***p<.001. Standard errors are reported in parentheses.

Regressing activities onto *Study Time*, the relationship with *Personalized Language Use* is quite high (p<.001) (see Table 6). This is possibly because activities involving such personalized language use are often assigned as homework.

Table 6 –Classroom Activity Frequencies Regressed onto Study Time

	Dependent Variable
Variables Included in Regression	*Study Time*
Personalized Language Use	.452** (.142)
Deep Language Use	-.004 (.134)
Exclusive Use of the Language	-.138 (.115)
Mechanics	-.157 (.149)
Fun	.160 (.112)
Cultural Exposure	-.060 (.144)
Level	-.084 (.228)
Constant	1.914* (.750)
R-squared	***.137***

Note: Significance levels are noted as †p<.10, *p<.05, **p<.01, ***p<.001. Standard errors are reported in parentheses.

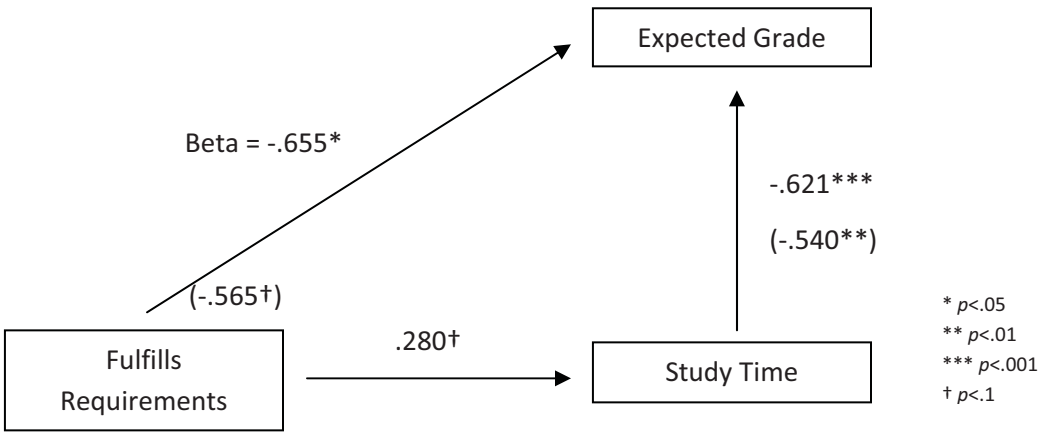
Expected Grade is another academic outcome of interest. Two regressions were conducted, one with activity types and the other with motivation indices (similar to those in Table 5 and Table 6). They found no significant predictors of *Expected Grade*.

Interestingly, though, there is a high negative correlation between *Expected Grade* and *Study Time* (r=-.328, p<.001). This may reflect the tendency of those students who are confident that they will get a good grade to feel less need to study. There also exists a negative relationship between *Expected Grade* and whether or not the class *Fulfills Requirements*

(r=-.216, p<.05). Students who are taking the class to fulfill one or more general education or non-language major/minor requirements expect to get worse grades than their peers, perhaps because the class falls outside of their area of expertise or interest.

In fact, there is a relationship between whether or not the class *Fulfills Requirements*, *Study Time,* and *Expected Grade,* where *Study Time* partially mediates the effect between the other two. As Figure 7 shows, in two binary logistic regressions (both controlling for level), each of these predictor variables (*Fulfills Requirements* and *Study Time*) significantly predicts *Expected Grade*. To test mediation, a linear regression found that *Fulfills Requirements* marginally predicts *Study Time* (p=.068). When both of these predictors are included in the model predicting *Expected Grade*, however, *Fulfills Requirements* drops to marginal significance in the presence of the *Study Time*, indicating that *Study Time* partially mediates the relationship between the other two variables (Baron & Kenny, 1986). It appears that students for whom the class fulfills requirements may study more *because* the class fulfills that requirement, perhaps because it falls outside typical area of study and presumably outside of their typical strengths or comfort zone. Their additional study time is then responsible for the anticipation of a lower grade.

Figure 7 – Mediational Schematic: Fulfills Requirements, Study Time, and Expected Grade



Whether or not a student plans to continue studying the language in the next semester is potentially the most interesting outcome variable. Graduating seniors, none of whom planned to continue taking the language next semester, were excluded from these analyses. Hierarchical binary logistic regressions predicting this outcome variable were conducted. In the first step, only whether a person plans to *Major or Minor* in the language is included; in the second step *Level* is also included as a control, and in the third step activity (Table 7) or motivation (Table 8) indices are added.

Table 7 – Classroom Activity Indices Regressed onto Continue Next Semester

Variables Included in Regression	**Dependent Variable**		
	Continue Next Semester (n=131)		
Major or Minor	2.249* (1.043)	2.465* (1.056)	2.853** (1.090)
Personalized Language Use			.271 (.312)
Deep Language Use			-.306 (.318)
Exclusive Use of the Language			.081 (.269)
Mechanics			.226 (.346)
Fun			.569* (.260)
Cultural Exposure			-.276 (.334)
Level		-.821† (.442)	-.746 (.512)
Constant	.903*** (.216)	1.215*** (.277)	-.346 (1.693)
R-squared	***.096***	***.132***	***.213***

Note: Significance levels are noted as †p<.10, *p<.05, **p<.01, ***p<.001. Standard errors are reported in parentheses.

Table 7 shows that whether a person plans to *Major or Minor* in the language is a significant predictor of whether or not they will continue studying the language next semester,

accounting for 9.6% of the variation. With the inclusion of *Level,* the model explains 13.2% of the variation. Adding the activities indices into the model adds an additional 8.1% of explained variation. In particular, the frequency with which the student engages in *Fun* activities either in the classroom or as homework is a significant predictor of whether or not they plan to continue studying the language.

Table 8 –Motivation Types Regressed onto Continue Next Semester

Variables Included in Regression	**Dependent Variable**		
	Continue Next Semester (n=126)		
Major or Minor	2.269* (1.044)	2.497* (1.059)	2.479* (1.090)
Motivation about the Language			1.359* (.537)
Motivation about the Class			.301 (.493)
Confidence			.002 (.525)
External Motivation			-.179 (.352)
Feels Required			.180 (.606)
Self-Reported Motivation			.286 (.498)
Level		-.814† (.455)	-.882† (.495)
Constant	.909*** (.220)	1.179*** (.278)	-.396 (2.331)
R-squared	***.101***	***.136***	***.251***

Note: Significance levels are noted as †p<.10, *p<.05, **p<.01, ***p<.001. Standard errors are reported in parentheses.

In the second analysis, as Table 8 shows, adding motivational indices into the regression model explains 11.5% more variance beyond what is captured by *Major or Minor* and *Level.* In particular, *Motivation about the Language* is a significant, positive predictor of the outcome (p=.011). In addition, *Level* is moderately negatively related, meaning that Intermediate students are less likely than Elementary students to continue their language studies.

At Carnegie Mellon University, Elementary and Intermediate language classes are prerequisites for classes required to complete a language major or minor, but do not count towards the major or minor themselves. Therefore, it would be interesting to consider whether or not a student plans to *Major or Minor* in the language as a function of these aspects of classroom activities and type of motivation. When activity indices and *Level* are regressed onto *Major or Minor,* no significant relationships are revealed (*Level* is marginally significant, however, with a coefficient of 1.008 and p=.051). Table 9 shows the results when motivation indices are regressed onto *Major or Minor,* with both *Motivation about the Language* and *Level* significantly related to whether a student plans to *Major or Minor* in the language.

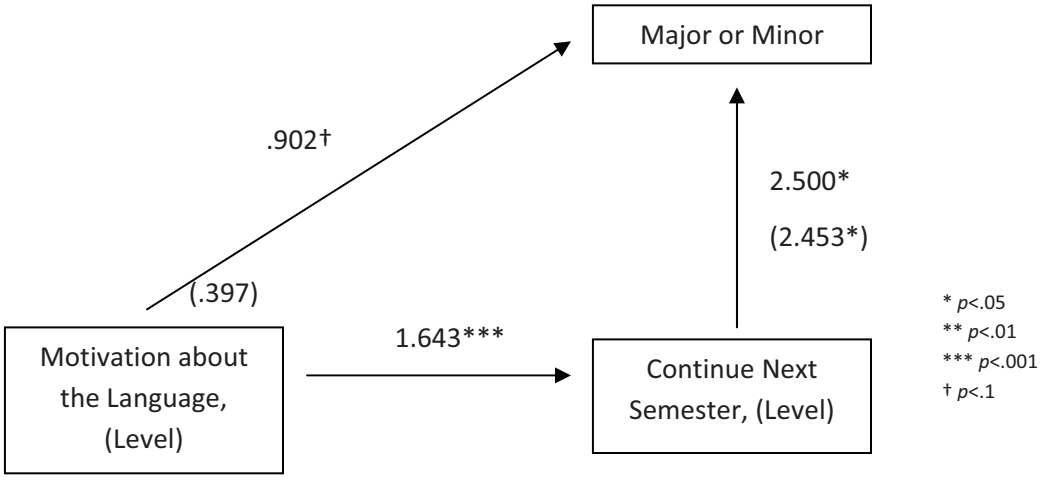
Table 9 –Motivation Type Regressed onto Major or Minor

	Dependent Variable
Variables Included in Regression	*Major or Minor*
Motivation about the Language	1.191* (.562)
Motivation about the Class	-.291 (.462)
Confidence	-.560 (.473)
External Motivation	.399 (.369)
Feels Required	.053 (.601)
Self-Reported Motivation	.647 (.531)
Level	1.027* (.484)
Constant	-.493 (2.227)
R-squared	***.120***

Note: Significance levels are noted as †p<.10, *p<.05, **p<.01, ***p<.001. Standard errors are reported in parentheses.

As shown in Figure 8, it turns out that the relationship between *Motivation about the Language* and the dependent variable *Major or Minor* is mediated by whether a student plans to *Continue Next Semester*. This indicates that *Motivation about the Language* influences the decision to *Continue Next Semester*, which may then lead students to decide that they should major or minor in the language. This pattern suggests that the decision to continue precedes the decision to *Major or Minor* in the language, as opposed to the reverse (the decision to major or minor influencing the decision to continue).

Figure 8 – Mediational Schematic: Motivation about the Language, Continue Next Semester, and Major or Minor



Discussion

Validity of Measures

The findings about differences in curricula and class structure between language families and levels are all quite logical. More advanced students participate in more advanced language use than do less-advanced students, and students of Asian languages spend more time concentrating on language structure than do students of Romantic languages. The reasonable

nature of these findings speaks to the validity of the indices measured, which appear to be tapping into some underlying truth.

Motivation Indices and Motivation Theory

Several of the motivation indices reported in this study map onto those outlined in the literature, as outlined in Table 10.

Table 10 – Motivational Theories and Study Results

Theory	Theoretical Constructs	Implications for Outcomes
Integrative Motivation (Gardner, 2001)	• **Integrativeness –** Related to the index *Motivation about the Language,* which includes items about a desire for communication and contact with the L2 community	• *Motivation about the Language* (i.e. integrativeness) is predictive of *Study Time,* which is one measure of making an effort to learn the language (one of Gardner's outcomes of interest)
	• **Attitudes towards the learning situation –** Related to *Motivation about the Class*	• *Motivation about the Class* is significantly associated with *Self-Reported Motivation,* indicating that students consider this important when assessing their overall motivation
Self-Determination Theory and the Intrinsic/Extrinsic Motivation Scale (La Guardia, 2009; Noels, Pelletier, Clément & Vallerand, 2009)	• **General intrinsic motivation, intrinsic motivation for knowledge** – Related to *Motivation about the Language*	• Intrinsic motivation is generally associated with positive outcomes. Confirming this, the study found that *Motivation about the Language* is positively associated with time spent studying, with the student choosing to continue studying the L2, and with the student deciding to major or minor in the language.

Self-Determination Theory and the Intrinsic/Extrinsic Motivation Scale (continued)	• **General external motivation, introjected and identified behavior** – Related to *External Motivation*	• As SDT would predict, *Extrinsic Motivation* is not associated with any of the outcomes of interest.
	• **Autonomy** – Related to *Personalized Language Use*	• *Personalized Language Use* (i.e. autonomy) is a significant predictor of both *Motivation about the Language* (i.e. intrinsic motivation) and *Motivation about the Class*
Social Relationships and Motivation (Wentzel, 1998)	• **Perceived teacher support –** Related to the survey item "I feel that the teacher wants me to do well in this class"	• This item loads onto the factor *Motivation about the Class,* indicating that perceived teacher support is indeed related to students' interest in the class
Applicability and Usefulness of Material (Brophy, 2008)	• **Real-world application of material** – Related to *Confidence* through survey items such as "I will someday be capable of effective communication in the language" and "What I learn in this class will be useful in my life"	• *Confidence* is positively associated with *Self-Reported Motivation,* indicating that language learners take such applicability into account when assessing whether they find the study of the L2 meaningful

Influencing Student Outcomes

Of particular interest is the application of theory and study results in influencing student outcomes such as motivation, study time, and continuation of language study. As Table 10 reminds us, Self-Determination Theory says that autonomy is a basic psychological need and is

positively associated with intrinsic motivation (La Guardia, 2009). Black and Deci (2000) suggest that autonomy support from teachers may enhance intrinsic motivation among students and increase their interest in and enjoyment of the material. On a simple level, activities associated with *Personalized Language Use* may satisfy this need for autonomy. When students are allowed and encouraged to speak and write about things that are important to them and applicable to their own lives, this is a form of choosing what to do (i.e. write/speak about); instructors who allow this kind of choice are implicitly showing their support for students' perspectives and ideas. This may be why *Personalized Language Use* is a significant predictor both of *Motivation about the Language* and *Motivation about the Class*, the former of which is related to intrinsic motivation. Such intrinsic motivation is, in turn, positively associated with outcomes: study time, whether a student plans to continue studying the language, and whether a student plans to major or minor in the language.

Fun is the only activity besides *Personalized Language Use* that is significantly associated with an outcome of interest. Quite reasonably, it is positively associated with *Motivation about the Class.* In addition, the frequency of *Fun* activities in a class is predictive of a student's decision to *Continue Next Semester*, even when controlling for both *Level* and whether a student plans to *Major or Minor* in the language. Incorporating both *Fun* activities and *Personalized Language Use* into the classroom may trigger the situational interest that is the first stage in interest development (Renninger, Bachrach & Posey, 2008). This situational interest may influence students to continue their study of the L2.

Limitations

This study has several limitations. Only a few activity or motivation indices are related to the outcomes of interest, which may be in part because of the age of the participants. Renninger (2009) tells us that although all students can benefit from activities and support that will help them to engage with the material, older students (late adolescents) may be able to self-regulate their behavior even without these interest-triggering supports. University students certainly fall into this older age category, and additionally are probably more prone than the average (non-college student) person to self-regulate activities surrounding learning—such as study time and mastery of material—regardless of motivation or instructor support.

University students represent a relatively small portion of those who are learning a language in an academic setting, however. Many students begin their language education at a much younger age, when their identities, interests, and ability to self-regulate behavior is significantly less developed. It would be interesting to conduct a similar study on younger language learners, such as those in junior high or high school, who have yet to develop such strong self-regulation skills.

A second limitation is that some unmeasured variables may dominate in analyses. For example, although both *Personalized Language Use* and *Motivation about the Language* are predictors of *Study Time,* the motivational index does not mediate the impact of the language use on the amount of time spent studying. It is likely that this relationship between *Personalized Language Use* and *Study Time* is so strong (indeed, stronger than the relationship between *Motivation about the Language* and *Study Time*) because activities that involve such language use are often assigned as homework, although we lack a direct measure of this likely mediator.

This strong link between the two variables may overshadow other relationships. Additionally, this study finds no predictive link from *Personalized Language Use* to either *Expected Grade* or whether a student plans to *Continue Next Semester*. This does not necessarily negate the importance of *Personalized Language Use,* however, as *Personalized Language Use* is a marginally significant predictor of both *Motivation about the Class,* and *Motivation about the Language*, the latter of which is associated with several positive outcomes. If the grammar and vocabulary associated with the L2 must be mastered in some way, having students speak and write about their own lives and interests may spark interest or motivation about learning the language.

Application of Results

In assessing the outcomes *Continue Next Semester* and *Major or Minor* specifically, it is important to remember that the single motivation or activity factor that is most highly predictive of these outcomes is *Motivation about the Language.* Because this factor is the most closely related to intrinsic motivation, it makes sense that little can be done to directly impact such internalized motivation to learn the language. Nevertheless, Renninger (2009) reminds us that regardless of the phase of a student's interest—whether it be triggered situational interest, well-developed individual interest, or anything in between—it is important to meet students where they are and provide appropriate triggers for students in all phases. Because students of Elementary and Intermediate languages are necessarily at the beginning of their language-learning journeys, and because most students of any subject never reach the "well-developed individual interest" phase, it is logical that most students' interest is still piqued situationally. Given this understanding, providing students with activities that do trigger this situational

interest seems sensible. *Personalized Language Use* and *Fun* might fill this role because of the autonomy, personal meaning, and connection to life outside of school that the former provides and the, well, *fun* that the latter engenders.

Conclusions

One of the main contributions of the study to the literature is the identification of specific motivation types as they apply to language learning. Of particular interest is the distinction between *Motivation about the Language* and *Motivation about the Class,* and, to lesser extent, *Confidence,* which under a traditional system might be lumped together under the heading "intrinsic motivation." This study is also relatively unique in its treatment of motivation as a dependent, as well as an independent, variable. It is interesting to note that when treated as dependent variables, these relatively intrinsic motivation types can be marginally predicted by the frequency of certain activity types (*Personalized Language Use* and *Fun*). It may be possible for teachers to affect their students' motivation through curricular design. Because *Motivation about the Language* in particular is positively associated with several outcomes of interest (notably *Study Time* and whether a student will choose to *Continue Next Semester* or *Major or Minor* in the language), the potential ability to influence such motivation is particularly noteworthy.

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