

Motivation and Multiple Languages in Learners of German

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1. Introduction

Language learning motivation is on the decline, and signs of decreasing interest suggest repercussions for the future of language departments especially in the English-speaking world. In 2013, an analysis of foreign language degree programs at universities in the UK found a drastic decrease in offerings from 1998 to planned availability in 2014 (Bawden, 2013). German programs in particular saw availability halved, from 87 to 44. A similar decline has been observed in North America, where the total number of students enrolled in foreign-language programs at universities in the U.S.A. dropped by 6.7% between 2009 and 2013 (ICEF Monitor, 2015). Research in language learning motivation has also identified changing trends, with a study on Hungarian secondary school language learners revealing a negative trend in overall motivation to learn any foreign language (Dörnyei et al., 2006, p. 143).

Despite changes in language learning motivation, multilingualism is on the rise in Canada. According to national census data, 14.2% of Canadian residents (~4.5 million people) spoke at least two languages at home in 2006. Only five years later, the 2011 census revealed that the percentage had risen to 17.5%, representing an increase of roughly 1.3 million people (Statistics Canada, 2012). Although it is difficult to discern how much of this increase comes from multilingual immigrants and how much from residents learning languages, the end result is the same: more people speak more languages. This leads me to wonder if rising multilingualism and lowering motivation are somehow connected.

The goal of this study is to shed further light on motivation in second language learning, specifically the possible impact of additional language competencies on motivation. As part of a larger planned project, I originally wrote this as a Master's thesis and the data collected go beyond what is used in the following analysis (Sullivan, 2017). To focus this study, I make use of one primary research question, which is informed by two streams of investigation with their own guiding questions. The terms *multilingual* and *monolingual* will be used to refer to two groups of participants. *Multilingual* will be used to refer to students who reported using more than one language for communication outside of language learning classrooms. *Monolingual* will refer to students who reported using only one language in communication outside of language learning classes¹.

¹ Although this is a simplification of language competency, since the focus of this research is not in exploring various degrees of competency in each language these categories have been chosen to distinguish between two groups of participants.

Research Questions	Analysis Procedures	Data Sources
RQ 1: Do <i>multilingual</i> university student learners of German display different motivational patterns as compared to <i>monolingual</i> learners? If so, how?	Mixed methods: Exploration of findings in each stream on investigation	Questionnaire data Participant interviews
RQ 1.1: How do <i>monolingual</i> and <i>multilingual</i> learners of German compare in measurements of <i>ideal</i> and <i>ought-to L2 self</i> motivation?	Quantitative: Calculation of multi-item scale variables and evaluation in <i>t</i> -test / Mann-Whitney U-test	Questionnaire data
RQ 1.2: Do previously learned languages (or language learning experiences) influence the motivation to learn another language?	Qualitative: Hierarchical cluster analysis to identify significant groupings	Participant interviews
	Qualitative: Theme analysis of interviews	Questionnaire data

Table 1: Outline of the research questions, analysis procedures, and data sources

2. Theoretical background

For decades, researchers have been interested in the relationship between learner motivation and the process of learning a language, and in that time studies have investigated learners who vary in age, language, and geographic location. This field can be traced back to Gardner and Lambert when they published a short paper in the *Canadian Journal of Psychology* (Gardner & Lambert, 1959). It begins with an acknowledgement that, until then, research had focused on investigating achievement in a second language as a function of linguistic aptitude, ignoring other factors in the language learning experience. By proposing an additional influencing factor, that of motivation, Gardner and Lambert laid the foundation for the *socio-educational model* of motivation (Gardner, 1985), and in doing so, for future research to incorporate psychological, social, and environmental factors in SLA.

Interest in motivation research increased over the next several decades and researchers refined the *socio-educational* model, developing complimentary theories while maintaining the focus on *integrative* and *instrumental* motivators (for summary see Dörnyei, 2003). As these theories became more widespread, some were called into question as they failed to incorporate advances in psychology and pedagogy. The most prominent of these claims was made by Crookes and Schmidt (1991) and Dörnyei (1994), stating that its dominance as a model for motivation inhibited the progress of research in the field (MacIntyre et al., 2009, p. 45). The theory was used

so pervasively that competing ideas for motivation from outside SLA were not given ground to contest Gardner's ideas, ultimately leading to stagnation in the field. These claims were noted by Gardner and were subsequently addressed. An article published by Tremblay and Gardner (1995) found that they improved their understanding of motivation by incorporating new measures into their investigation of French language acquisition. This confirmation of earlier criticisms and integration of new measures was a major turning point in motivation research, cracking open the door for further exploration beyond the *socio-educational model*.

Responding to the call for new approaches, Dörnyei put forward the *L2MSS* as an alternate conceptualization of motivation using research on possible future self versions as a source of motivation. It comprises three major components which contribute to the motivation to acquire a second language. Motivators associated with desirable future outcomes for the language learner are connected with the *ideal L2 self* (Dörnyei, 2009, p. 29). This future self guide represents what (in the eyes of the learner) the ideal result of learning the language would be (like reading Nietzsche in original or comfortably interacting with locals on a trip to Austria). The second aspect, the *ought-to L2 self*, is conceptualized as a counterpart to the *ideal L2 self*, in that it primarily refers to meeting expectations and avoiding negative future outcomes (Dörnyei, 2009, p. 29). One common example is pressure from family members to learn a heritage language; the motivation to meet this expectation is not for a personal goal, but to appease external sources and avoid a negative outcome. The third aspect, the *L2 learning* experience, encompasses the language learning context including curriculum, teaching style, peer group, etc. Although this component is useful for understanding a given learning context, this study focuses on the learners' *ideal* and *ought-to L2* as future self guides in order to better understand a possible influence of additional language competencies.

Considering the personal and social impact of increasing multilingualism noted in the introduction, I see this as a natural point of interest in motivational research. Furthermore, an unpublished pilot study on German secondary school learners of English concluded with suggestive results of a negative relationship between *ideal L2 self* scores and higher numbers of language competencies (Sullivan, 2016). Continuing in the spirit of researchers like Dörnyei, this study broadens the scope of motivation scholarship by investigating additional language competencies as a relevant factor in language learning motivation.

3. Methodology

Research in language learning motivation has drawn criticism. A focus on global English has called into question how relevant much of the research is to other languages (e.g. Boo et al., 2015; Dörnyei & Al-Hoorie, 2017) and its frameworks and methodologies have been accused of stagnation and needing change (e.g. Crookes & Schmidt, 1991; King & Mackey, 2016; Masgoret & Gardner, 2003). Like Ushioda (2009; 2015; 2016), I see a purely quantitative approach to motivation as insufficient for understanding the intricate dynamics for each learner. Accordingly, I have

designed and carried out a mixed-methods research (hereafter MMR) study, based on Dörnyei's work on research methods (2007) and Riazi's guide to MMR (2017).

3.1 Participants

The total participant count in the questionnaire was $N = 43$. Age of participants ranged from 18 to 68, with a mean of 21.65. Gender distribution was roughly equal, with 24 participants identifying as female and 19 as male. Languages spoken by participants were as follows (from highest to lowest in frequency): Chinese (Mandarin, Cantonese, and unspecified), French, German, Polish, Hungarian, Farsi, Korean, Hindi, Punjabi, Russian, Ukrainian, Tagalog. Using the reported languages spoken, the participants were grouped into *monolinguals* ($n = 21$, 48.8% of N) and *multilinguals* ($n = 20$, 46.5% of N). Two participants did not supply an answer and were excluded from the analysis. The number of courses in the German department taken in total by participants prior to data collection ranged from 1 to 7, with a mean of 1.86 courses. The participant fields of study were as follows (from highest to lowest frequency): Mathematics, Computer Science, Science (unspecified), Engineering, Business, Arts (unspecified), Music, German, Applied Health Sciences, Physics, Environmental Studies, Accounting & Finances, Biology, Recreation & Leisure, Psychology, History, Economics, Classics. For ethical reasons, all participants are discussed using pseudonyms.

3.2 Data collection

I solicited participants in person before a meeting of their German language course. They were given a brief description of the research design, omitting the focus on motivation, and directed to a post on their course's online platform page for a link to the study. Participants in online courses were contacted exclusively through the online platform in an announcement on the main page.

Questionnaire

I developed a questionnaire using an item pool designed for researching language learning motivation (Dörnyei & Taguchi, 2010). I adapted the items for German culture as the target and referred to participant culture with no specific terms, which differs from direct references to Iranian, Chinese, and Japanese culture of participants as seen in Dörnyei & Taguchi (2010). The questionnaire solicited responses to 66 Likert-scale items, as well as a variety of demographic questions regarding such things as age, languages spoken, and German language courses taken (for full list of items see Appendix A). No open-ended questions were used in the study, instead opting for interviews as a richer source of data (Dörnyei & Taguchi, 2010, p. 10).

The questionnaire items were used to collect data on several agglomerated variables deriving from the *L2MSS*. For this investigation, the relevant categories were *ideal L2 self* and *ought-to L2 self*. Criterion measures were collected to aid in determining validity and reliability of cluster analysis results by gauging commitment and interest to studying German, with *ideal* and *ought-to L2 self* categories pertaining to the constructs from the *L2MSS*. Each variable is agglomerated from 5+ items drawn

from research in motivation (see Table 2). The answers for every item pertaining to each category are averaged and used to understand the sources of each learner’s motivation. RQ1.1 investigates possible statistical differences in the measurements of these variables between *monolinguals* and *multilinguals*.

Ideal L2 self	Ought-to L2 self	Criterion measures
<ul style="list-style-type: none"> • I can imagine myself writing German emails fluently. • Whenever I think of my future career, I imagine myself using German. • I can imagine a situation where I am speaking German with native speakers. • I can imagine myself as someone who is able to speak German. • I can imagine myself living abroad and having a discussion in German. • Learning German is important to me because I am planning to study abroad. • Studying German is important to me in order to achieve a special goal. 	<ul style="list-style-type: none"> • If I fail to learn German, I will be letting other people down. • It will have a negative impact on my life if I do not study German. • My family believes that I must study German to be an educated person. • I consider learning German important because the people I respect think that I should do it. • I have to study German because, if I do not, my parents will be disappointed in me. • I study German because close friends of mine think it is important. • I have to study German because otherwise I think that I can't be successful in my future career. • I have to study German because without passing the German course I cannot graduate. • Studying German is important because I would feel ashamed if I got bad grades in the course. • I have to study German because I don't want to get bad marks in university. 	<ul style="list-style-type: none"> • If a German course was offered at the university or somewhere else in the future I would like to take it. • I would like to spend lots of time studying German. • If my instructor gave the class an optional assignment I would complete it. • I'm working hard at learning German. • I would like to study German whether it is required for my degree or not.

Table 2: List of items associated with each agglomerated variable in this study

Interviews

I conducted semi-structured interviews with a small number of participants ($N = 3$) using a list of guiding questions (for full list see Appendix B). I formulated these questions after examining the sources of motivation discussed in the *L2MSS* and the *socio-educational model*. The first question was aimed at how the participants found their German class. Although wording differed in each case, participants were also asked about what pressures they felt in terms of language learning. This triangulates with the *ought-to L2 self* in the quantitative stream of study. Questions about plans and goals with German were used to triangulate with *ideal L2 self* in the quantitative stream. I also asked why each participant was learning German to see what factors they identify as particularly important in their motivation.

The participants were selected based on their answers in the questionnaire in an attempt to solicit varied interview data. Although they were planned to be 20 minutes in length, interviews ranged from approximately 32 minutes to 40 minutes. The longer interview length was the result of participants elaborating on topics they felt were relevant. Each participant influenced the direction of their interview and the resulting topics showed variation between interviews. The core questions aided in keeping the focus of the interviews relevant to this research. Some common themes discussed were experiences learning languages in the past, plans with German, and perceived pressures with learning languages.

These interviews were audio recorded, and I took field notes as the discussions progressed. I reviewed the recordings with the help of field notes to identify and transcribe topics relevant to motivation. After this initial examination, the relevant topics were coded and explored to search for trends. Since all these topics were in some way related to the motivation, I opted to create categories based on how these motivations were discussed by participants. After several iterations of categories, I finalized the groups as the following: internally generated motivations, externally generated motivations, language learning experiences, attitude toward L2 community, and intercultural attitudes. This analysis will focus on internally- and externally-generated motivations.

After establishing categories I revisited the interviews, this time with demographic information from the questionnaire. I used the coded topics in combination with the demographic information to construct profiles of the interview participants. As is clear in examining their responses, individual language learners have widely differing motivational influences. Examining motivations in this individualized way provides a more focused understanding of motivational factors at an individual level, which strengthens understanding of larger trends.

4. Analysis

4.1 Quantitative analysis

In The quantitative stream of investigation for this study involved examining questionnaire answers for differences, specifically between the subgroups of *multilingual* ($n = 19$) and *monolingual* ($n = 21$) participants from the total participant group ($N = 40$). This examination focuses on investigating *ideal* and *ought-to L2 self* values and does not include any other variables.

I ran a non-parametric Welch-test to compare measures of *ideal L2 self* between *monolinguals* and *multilinguals* to investigate possible significant differences between the two groups. This test returned a p -value of 0.4587 and a t -value of -0.74872. I also calculated Cohen's d , determining it to be $d = 0.237575$. Generally speaking, d -values higher than 0.2, 0.5, and 0.8 display small, moderate, and large effect sizes respectively. However, since the p -value is too high to be considered statistically significant, the null hypothesis is not rejected, and the two groups are seen to display no significant differences in mean *ideal L2 self* measurements. For this reason, the effect size is irrelevant. Furthermore, the two overall group means are very close, differing by less than 0.2 on a 1 to 6 scale. This further suggests a lack of discernable difference between the two groups.

After determining that the data were normally distributed, *ought-to L2 self* measurements were analyzed using a parametric independent samples t -test. Here, the independent samples t -test returned a t -value of 1.7331 and a p -value of 0.09119. This p -value is not lower than 0.05 and therefore does not satisfy the standard 95% confidence level. However, I identified it as low enough to be of interest in the analysis. Cohen's d -value was calculated to determine the effect size, returning a moderate result of $d = 0.555222$. As the p -value was relatively low, the effect size is of note in interpreting the results of the

4.2 Qualitative analysis

Cluster Analysis

I performed a cluster analysis on the questionnaire data to investigate possible trends in motivation scores. Participants were clustered according to *ideal* and *ought-to L2 self* agglomerated values from the questionnaires. I first determined the appropriate number of clusters to use, and after this, organized the data into clusters. The methods for determination can vary, with the R software I used supplying 30 different tests (R Core Team, 2017). As it is possible for tests to suggest different numbers of clusters, I used the recommended method which performs all 30 calculations, allowing me to use the most recommended number for the highest reliability (STHDA, 2017).

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* Among all indices:
* 6 proposed 2 as the best number of clusters
* 4 proposed 3 as the best number of clusters
* 8 proposed 4 as the best number of clusters
* 2 proposed 5 as the best number of clusters
* 1 proposed 9 as the best number of clusters
* 6 proposed 10 as the best number of clusters

***** Conclusion *****

* According to the majority rule, the best number of clusters is 4

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Figure 1: Readout of meta-calculation recommending four clusters

As seen in Figure 1, majority rule indicated four clusters as the best match. I performed hierarchical clustering using R and selected a dendrogram output to visualize the groupings (see Figure 2). The resulting chart shows the similarity of individual participants in terms of *ideal* and *ought-to L2 self* scores, represented by the intersecting lines connecting at different heights. Generally speaking, the higher the connection, the lower the similarity between (groups of) participants. Colored boxes representing the four clusters are overlaid on top of the dendrogram, identifying the assignment of participants to clusters. In this case, all groups are well-fit as there are no outlying members in the form of single-participant branches.

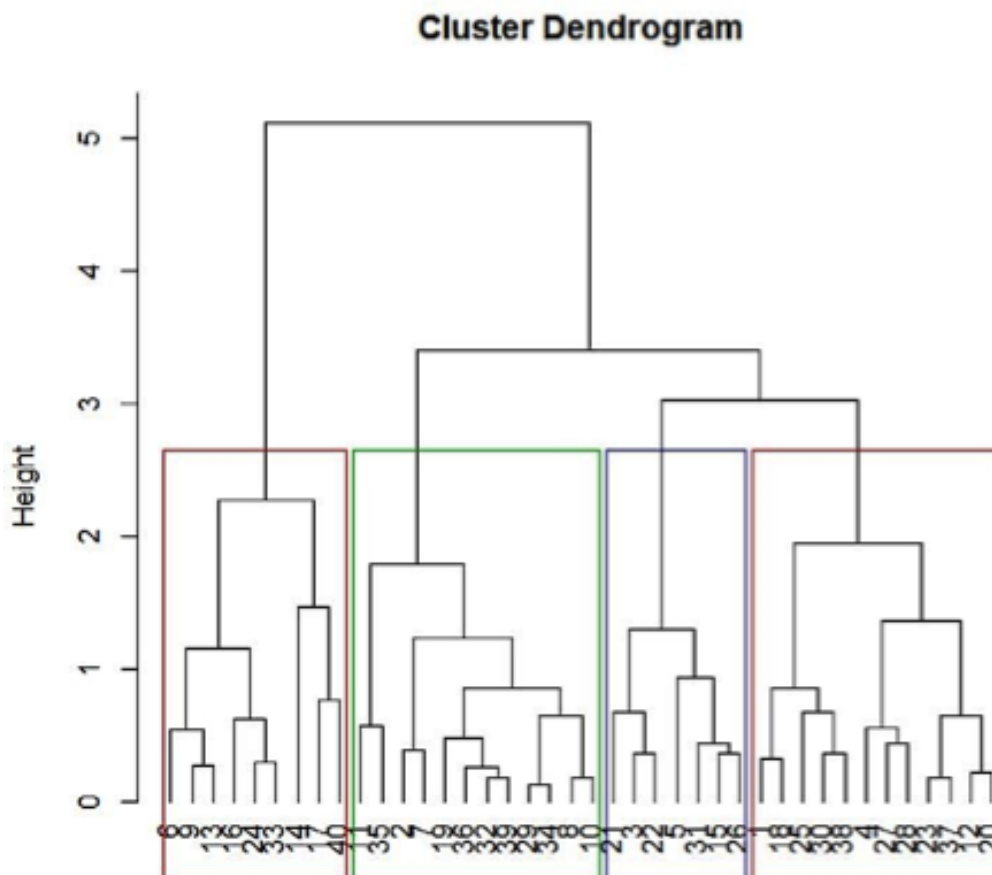


Figure 2: A cluster dendrogram displaying four clusters and the relative similarity of each participant

After checking reliability using criterion measures, I examined the groups with the help of descriptive statistics to assess the trends of each cluster (see Figure 3 & Figure 4). Since this examination relies on differentiating groups, the absolute values are not the focus. Instead, the values are examined in relation to each other, revealing tendencies in each cluster. After examination, I assigned the following descriptions to each of the clusters.

- Cluster One: high *ideal*, high *ought-to L2 self*
- Cluster Two: high *ideal*, low *ought-to L2 self*
- Cluster Three: low *ideal*, high *ought-to L2 self*
- Cluster Four: low *ideal*, low *ought-to L2 self*

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Descriptive statistics by group
group: 1
  vars n mean  sd median trimmed  mad  min  max range  skew kurtosis  se
ideal  2  9 5.22 0.39  5.14  5.22 0.42 4.71 5.86  1.14  0.29  -1.47 0.13
ought  3  9 2.92 0.57  2.70  2.92 0.44 2.40 3.90  1.50  0.64  -1.42 0.19
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group: 2
  vars n mean  sd median trimmed  mad  min  max range  skew kurtosis  se
ideal  2 12 4.86 0.36  4.86  4.83 0.32 4.43 5.57  1.14  0.62  -0.78 0.10
ought  3 12 1.57 0.31  1.58  1.58 0.32 1.10 2.00  0.90 -0.32  -1.44 0.09
-----
group: 3
  vars n mean  sd median trimmed  mad  min  max range  skew kurtosis  se
ideal  2  7 4.18 0.26  4.14  4.18 0.21 3.86 4.57  0.71  0.23  -1.69 0.10
ought  3  7 2.56 0.36  2.70  2.56 0.44 2.10 3.00  0.90 -0.18  -1.86 0.14
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group: 4
  vars n mean  sd median trimmed  mad  min  max range  skew kurtosis  se
ideal  2 12 3.44 0.39  3.36  3.41 0.42 3.00 4.14  1.14  0.45  -1.33 0.11
ought  3 12 1.48 0.39  1.40  1.45 0.30 1.00 2.20  1.20  0.48  -1.17 0.11

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Figure 3: Descriptive statistics of clusters, including mean levels for *ideal* and *ought-to L2 self*

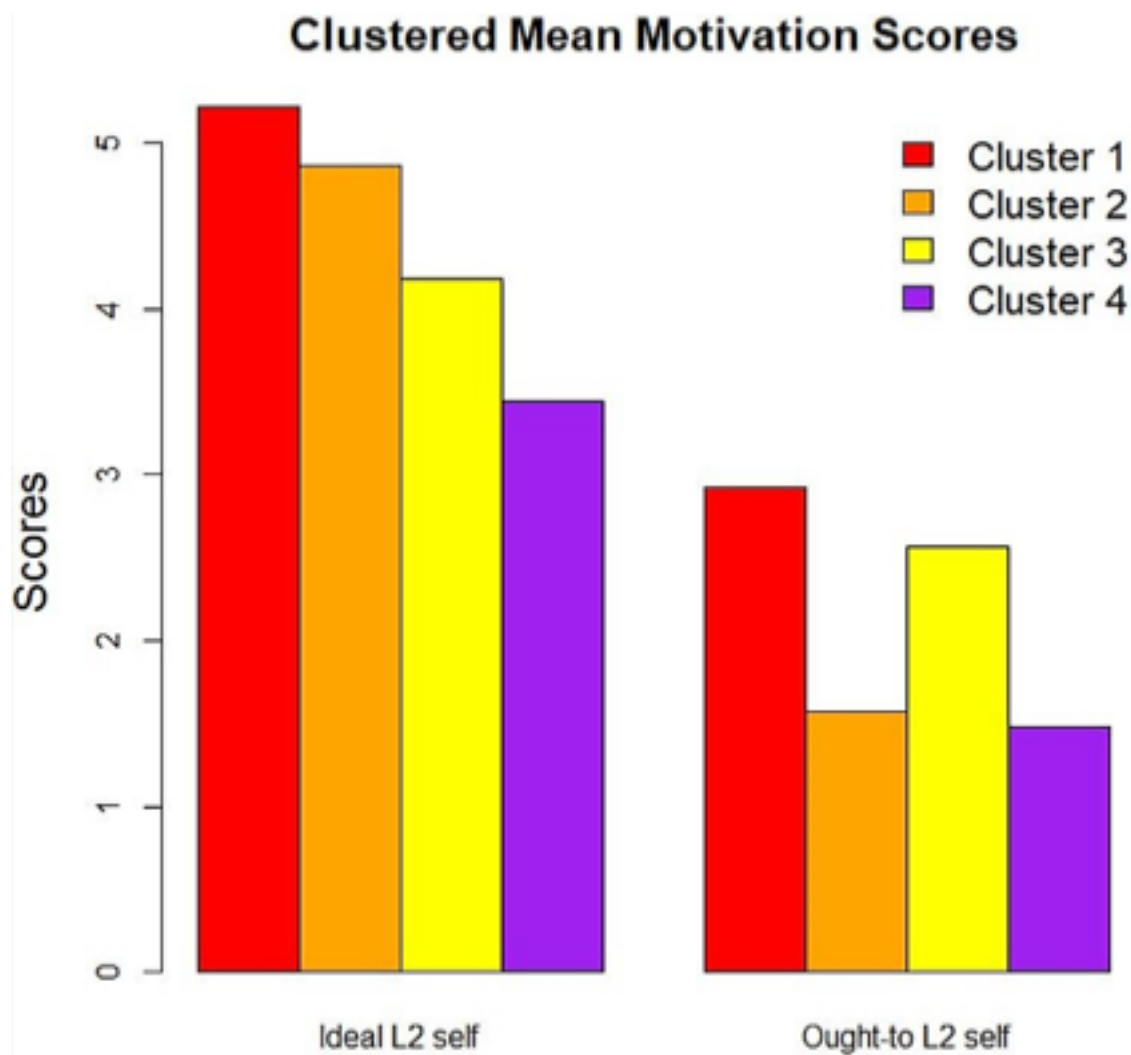


Figure 4: Mean *ideal* and *ought-to L2 self* scores for the four clusters

The identification of these attributes allows for better understanding the individuals in each cluster. Furthermore, when compared to the selection of interview participants, the cluster results strongly support the variation of attributes initially determined by a cursory of questionnaire answers. Each interview participant is located in a different cluster: Catherine (participant 14) in cluster one, Jessica (participant 29) in cluster 2, and Jacob (participant 21) in cluster 3 (see Figure 2).

Theme Analysis

Due to space limitations, only summarized results from theme analysis will be given here, and complete interview transcriptions will not be supplied.

Catherine

Catherine is an undergraduate student at the University of Waterloo. At the time of this interview, she was enrolled in a Bachelor of Arts program with a major in History

and a second major in German Studies. She grew up speaking English with limited exposure to other languages outside of school. Therefore, she is a member of the *monolingual* participant group. She learned French starting in elementary school, but did not continue with it into university. She described her family as being culturally mixed. Her mother was born in Venezuela and raised in Quebec, and her step-father is from Mexico. Her step-father and his family speak Spanish, and Catherine discussed feelings of pressure to learn Spanish herself. She chose to learn German, however, and highlighted the freedom associated with learning German without external pressures as a positive factor in learning the language. Learning German is closely tied to Catherine's long-term goal of studying History, since she became interested in the history of German-speaking countries.

Catherine has felt passionate about history for several years, and this interest led her to an interest in German history, which led her to the German language:

Okay, so what happened is, like, I said I'm in History so I read a lot of historical fiction. And I read a book; it's called 'Fall of Giants' by Ken Follett. And it shows World War I from a variety of perspectives. And I love World War I [...] learning about it [...]. I felt that Canadian history had always taught it very subjectively, like Canada was good and Germany was bad, and England is always the greatest blah, blah, blah. I always found that frustrating. And so reading it from the German perspective I thought 'Wow, this is more interesting. It is more objective because they don't feel good about what happened.' But there's also [...] a lot more explanation to why. [...] I thought that the people sounded very resilient [...] and I just wanted to learn more. (C 9:10 – 10:30)

Here, Catherine recounts how she became interested in studying German. Aside from being motivated to learn German, she was also conscious of this motivation and could identify the point at which this motivation began. With such a clear connection to her scholarly interests, along with her own description of her motivation, we can identify the source of her motivation to learn German, at least initially, as internally generated and relating to plans and goals.

For Catherine, learning German is not the most obvious choice based on the external pressures that she identifies, but owing to its ability to help in with long-term goals, she describes strong reasons to pursue German further: to grant her better access to historical materials for study, as a language requirement, and to learn from the culture.

I don't know if I feel pressure to learn German, but I feel pressure to learn a second language. [...] I feel like I couldn't succeed where I wanted to go if I didn't learn a second language in general. (C 1:00 – 1:25)

She also identifies a pressure to be bilingual and sees it as a goal. This fits with Catherine's cluster assignment of high *ideal* and *ought-to L2 self*. The corroboration between her answers in the interview and her cluster assignment helps us better understand the clusters themselves. Since clusters are based on numerical scores in

abstract constructs, it is difficult to imagine what a learner would be like based on numbers alone. In this case, Catherine acts as a clear example of what a student motivated highly by both *ideal* and *ought-to L2 self* would be, grounding our cluster and quantitative analyses in something more tangible.

Jessica

Jessica is an undergraduate student at the University of Waterloo. She had already taken GER 101 in a previous semester and was nearing the end of an Online GER 102 class. Although language courses are not the focus of her studies, Jessica expresses a high level of interest in many languages. She identifies Cantonese and English as her primary languages, speaking them from a young age at home, and both Mandarin and French as languages she learned in formal settings (at a language school and through French immersion schooling respectively). Jessica is a member of the *multilingual* group. She goes on to mention that she had begun learning Japanese in high school. She also describes her family as being culturally diverse, with Swiss family members who speak French and German in addition to her Cantonese-speaking family.

In choosing language courses at university, Jessica opted against Chinese (Mandarin or Cantonese) and French, preferring to continue with Japanese. When this did not fit into her schedule, she turned to online German courses.

I do travel to Japan a lot. Like, I love the culture and the country so I thought it'd be useful to learn the language. (Je 30:10 – 30:20)

I'd much rather take a new language, which is why I'm learning German. (Je 3:55 – 4:00)

This points to a trend in Jessica's language learning motivation. In preferring to take courses in Japanese, and even German, she displays preference to internally-generated motivations. This preference is further shown as she identifies explicit pressure from family members to continue with French or Chinese (both Mandarin and Cantonese). For German, however, Jessica describes feeling no such pressure. Since familial expectation to learn German does not appear to be an influencing factor, the most relevant motivating factor she identifies is novelty.

The preference to learn German and Japanese due to their novelty exemplifies the major influencing abilities of internally-generated motivators in Jessica's language learning. Despite acknowledging pressures to continue with other languages, she does not cite them as relevant in her decision-making. Instead, she identifies her own curiosity and interest as primary influencing factors in her choices.

Similar to Catherine, Jessica's profile acts as an anchor point for the cluster analysis. By examining the results of the theme analysis using the MMR design of this study, I can use Jessica's profile to deepen my understanding of her cluster. Her identification of novelty as a strong motivator helps to understand the higher number of multilinguals in her cluster, since it may be a trend among those exposed to more languages.

Jacob

Jacob is an undergraduate student at the University of Waterloo. His program of study is a Bachelor of Engineering in Mechanical Engineering and Mechatronics. Both of Jacob's paternal grandparents immigrated to Canada from Germany and German is a heritage language in Jacob's family, which he identifies as a motivator. Jacob learned French starting in elementary school, but did not continue with it in university. By the time this interview took place, Jacob was nearing the end of GER 102, but had not taken any German courses at the university level before that. Instead, he had experience with German from a weekend language school that he attended as a youth which allowed him to skip GER 101. Although German is present in Jacob's family, his exposure to the language was primarily limited to formal schooling and he was still in an early stage of language learning (GER 102). He identified as having little competence in German, and was therefore placed in the *monolingual* group in this study.

Throughout the interview, Jacob emphasized motivating factors external to himself. This is not to say that he does not display internally-generated motivation, but that externally-generated motivation is identified as more impactful or significant in his language learning:

Being able to speak a language [...] is valuable. (Ja 37:25 – 37:35)

There was always the feeling that I wish I'd done more German, and that's why now I'm doing more German. (Ja 9:55 – 10:05)

In the first excerpt, the emphasis rests on the practicality of being bilingual. Although not necessarily perceived as a pressure, the desire to gain a "valuable" advantage in a job market is a response to an external factor (the expectation of marketable skills). The second topic continues to show a trend in internalized-external factors. Although this example is unclear on its own, when examined in the context of the rest of the interview it points toward a desire to align with a self-image, such as the one alluded to when he discussed his German heritage:

I want to be able to speak German. Whether that's because German is important to me because the culture has been impressed on me or just because it's an opportunity that I have, because I've spent so much time already learning German, it's like, I can do it. I'm almost there. (Ja 10:25 – 10:40)

This final example displays the importance of learning German to Jacob, regardless of the source of his motivation. In his statement, he reaffirms his desire to learn German and points to externally-generated motivating factors in his language learning. Although they are internalized, his use of a German course to facilitate a year abroad and his desire to align with his German identity ultimately stem from external factors.

Jacob's profile is particularly useful for this MMR approach in understanding both the cluster and quantitative analysis results. Although the sources of his

motivation are not clean-cut, the strong trend of practicality as a motivator to learn German could identify his cluster as those students who are primarily concerned with learning German as a skill. This is similar to the trend identified by Heller with French in Canada (2002). Furthermore, the societal pressure to be bilingual is echoed in Jacob and Catherine's profiles. Since both participants are members of the monolingual group in the quantitative analysis, this provides insight into the shared factors within *ought-to L2 self* that may differ between *mono-* and *multilingual* participants.

5. Discussion

There is evidence that university student learners of German display different motivational patterns based on the number of languages spoken. In addressing RQ1.1, I concluded that there was suggestive evidence of a negative relationship between the *multilingual* group and *ought-to L2 self* scores. RQ1.2 also revealed that participant clusters based on *ideal* and *ought-to L2 self* scores displayed a suggestive relationship with the *monolingual* and *multilingual* groups. Clusters with higher *ought-to L2 self* mean scores were more likely to contain participants who did not identify multiple language competencies. Furthermore, both interview participants from the *monolingual* group highlighted their perceived pressure to learn a second language (compare to *ought-to L2 self*), where the interview participant from the *multilingual* group revealed no such pressure. Since all three methods of analysis measure *ideal* and *ought-to L2 self*, their agreeance represents a robust triangulation. Addressing RQ1, I conclude that there is suggestive evidence of differing motivational patterns between participants in the *monolingual* and *multilingual* groups since both the quantitative RQ1.1 and qualitative RQ1.2 provided at least suggestive evidence.

Due to the nature of this research and data collection some limitations must be considered. Students who are generally more motivated may be more likely to participate in a research project outside of their curriculum. Since the incentives involved for participants related to increasing awareness of their language learning experience, fewer of the less-motivated students would be expected to take part. Although this is not optimal, the main interest of this study is not in identifying amounts of motivated and unmotivated students and therefore this limitation is acceptable. Furthermore, the low *ideal* and *ought-to L2 self* scores of Cluster Four participants support the claim that a representative range of students participated in the study. This is further supported by the fact that students choose their own courses and generally require some level of motivation to register for any given class, meaning that all students enrolled in German are likely to have some level of motivation.

To my knowledge, this is the first study to examine language learning motivation using combination of inferential statistics, cluster analysis, and theme analysis. In doing so, it also expanded the scope of the established language learning motivation and bilingualism research in Canada. The triangulation of results

suggests a negative relationship between multiple language competencies and *ought-to L2 self* motivation in language learning, a phenomenon which has until now been unobserved.

6. Conclusions

The results suggest that students with more linguistic competencies experience lower *ought-to L2 self* motivation when learning German at university. There is also some evidence suggesting that these students experience higher levels of *ideal L2 self* motivation, although this is less conclusive. Previous research has already established the positive influence of *ought-to L2 self* motivation on language learning achievement, even if it is less significant than the influence of *ideal L2 self* motivation (Dörnyei et al., 2006). Since language departments at the university level have been shrinking (Bawden, 2013; ICEF Monitor, 2015), it follows that university language departments will benefit by targeting an identified deficit in motivation.

For example, students who display lower *ideal* and higher *ought-to L2 self* motivation have the most to gain from a more thorough understanding of the ways in which language learning can enrich their lives (outside avoiding economic repercussions). Students in departments such as History could benefit from exposure to the ways in which German linguistic and cultural knowledge can compliment their academic interests. Since students who predominantly speak one language would be less likely to have had this exposure, *ideal L2 self* images relating to German would be made both clearer and more relevant for learners who would otherwise be unaware of the possibilities.

Although these results are intriguing, more research in this area is needed. Future studies could examine possible underlying influences on language learning motivation for those learners with multiple language competencies. One possibility is that those learners with additional language competencies also have increased intercultural competence, meaning that their knowledge of cultural and linguistic differences informs their future self guides. *Ideal* and *ought-to L2 self* motivation could also be further investigated in other linguistically diverse contexts such as the U.S.A. or Germany. Studies exploring this interaction could also benefit from integrating more varied qualitative approaches as part of their MMR design. For example, an ethnographic analysis of participants in a linguistically diverse group could allow much more informed conclusions about motivational trends.

ⁱ Note from the author

I have come to this final version of the article with the help and insight of others and would like to express my thanks to the readers of my original Master's thesis, and the reader and editor at Forum Deutsch/Forschungsforum.

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Appendices

Appendix A – List of questionnaire items

Likert-Scale Questions

- 1) If a German course was offered at the university or somewhere else in the future, I would like to take it.
- 2) Studying German is important to me because it offers a new challenge in my life.
- 3) I can imagine myself writing German emails fluently.
- 4) I enjoy reading German books.
- 5) Studying German is important to me because with it I can work with companies in Europe.
- 6) My parents encourage me to study German.
- 7) As multiculturalism advances I think people are in danger of losing their cultural identities.
- 8) I have to study German because otherwise I think that I can't be successful in my future career.
- 9) I find it difficult to work with people who have different values and customs.
- 10) Whenever I think of my future career, I imagine myself using German.
- 11) If I make an effort, I am sure I can learn German.
- 12) I like the atmosphere of my German classes.
- 13) I get nervous and confused when I have to speak German in class.
- 14) I think that multiculturalism is a danger to preserving my culture.
- 15) I really enjoy learning German.
- 16) If I fail to learn German, I will be letting other people down.
- 17) My parents encourage me to study German in my free time.
- 18) I am proud of my cultural identity.
- 19) I am interested in the way German is used in conversation.
- 20) I would like to spend lots of time studying German.
- 21) I would get tense if a foreigner asked me for directions in German.
- 22) I usually like the people who live in German-speaking countries.
- 23) If my instructor gave the class an optional assignment I would complete it.
- 24) I have to study German because without a passing the German course I cannot graduate.

- 25) Learning German is important to me because I am planning to study abroad.
- 26) It will have a negative impact on my life if I do not study German.
- 27) I'm working hard at learning German.
- 28) Being successful in German is important so that I can please my parents / relatives.
- 29) Studying German is important because I would feel ashamed if I got bad grades in the course.
- 30) My family believes that I must study German to be an educated person.
- 31) I think some languages are being corrupted by multiculturalism.
- 32) I consider learning German important because the people I respect think that I should do it.
- 33) I always look forward to my German classes.
- 34) I am very interested in the customs and values of other cultures.
- 35) Learning German is important to me because I want to travel internationally.
- 36) I enjoy German TV programs.
- 37) I think I would be happy if other cultures were similar to mine.
- 38) I think that people who move to Canada should adapt their cultural practices.
- 39) I can imagine a situation where I am speaking German with native speakers.
- 40) I believe I will be capable of reading and writing German if I keep studying it.
- 41) I like the rhythm of German.
- 42) I would feel uneasy speaking German with a native speaker.
- 43) I enjoy listening to German music.
- 44) I like meeting people from German-speaking countries.
- 45) I would study like to study German whether it is required for my degree or not.
- 46) I have to study German because, if I do not study it, my parents will be disappointed in me.
- 47) I'm sure I have a good ability to learn German.
- 48) Studying German is important because I think someday it will help me get a good job.
- 49) I can imagine myself as someone who is able to speak German.
- 50) Studying German is important to me in order to achieve a special goal.
- 51) I respect the customs and values of other cultures.
- 52) I have to study German because I don't want to get bad marks in university.

- 53) Studying German is important because I don't like to be considered a poorly educated person.
- 54) I can imagine myself living abroad and having a discussion in German.
- 55) My parents encourage me to take every opportunity to use my German.
- 56) I find learning German very interesting.
- 57) Without German, I would not easily be able to travel to places that I want to go.
- 58) I think that the influences of other languages and cultures are a danger to my own culture.
- 59) I would like to know more about people from German-speaking countries.
- 60) It would be better if everybody lived like my culture.
- 61) I study German because close friends of mine think it is important.
- 62) I feel excited when I hear German being spoken.
- 63) I would like to travel to German-speaking countries.
- 64) I find the differences between English and German interesting.
- 65) I enjoy watching German movies.
- 66) If I met a native German speaker, I would feel uneasy.

Demographic Questions

- 1) Age
- 2) Gender
- 3) Degree program (Faculty, Program Name, Year of Study)
- 4) German class taken this semester (Course name and number, Section)
- 5) Please list any other German classes you are taking or have taken online at the University of Waterloo
- 6) Nationality(ies)
- 7) Non-English languages spoken at home or with family
- 8) Have you studied French in the Canadian school system?
- 9) If you have, was it a good experience?
- 10) Years spent in Canada (if not born here)
- 11) Would you identify as being Canadian?
- 12) Have you ever spent an extended period of time in a German-speaking country (at least a total of 3 months)?

- 13) Do you have German-speaking relatives?
- 14) University of Waterloo email address (Required for participation!) Example: a3sulliv@uwaterloo.ca
- 15) Would you like to receive a copy of the study's results once they are published?

Appendix B – List of semi-structured interview questions

- 1) What stuck out to you when you completed the questionnaire the first time?
Second time?
 - 2) What questions do you have about the questionnaire?
 - 3) How do you like your German class(es)?
 - 4) Why are you learning German?
 - 5) What pressures, if any, do you feel to learn German?
 - 6) How has your drive to learn German changed over the semester?
 - 7) How have the pressures to learn German changed over the semester?
 - 8) What do you think caused these changes?
 - 9) How much contact did you have with languages other than English growing up?
 - 10) Describe your culture.
 - 11) What does multicultural mean to you? Multilingual?
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