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# Determinants of the Choice of Russian Language as an Academic Programme: Does the Moderating Role of Age Matter?

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**Abstract**

This study examined the determinants of the choice of the Russian Language as an academic programme and the impact of the moderating effect on different age groups. The study sampled related constructs from several theories including cognitive approach aptitude treatment interaction, theory of planned behaviour, Affective filter hypothesis, cognitive load theory and Expectancy and motivation theory. A quantitative survey and the Partial-Least-Square Structural Equation Modelling (PLS-SEM) were adopted as methodology and analysis. The findings of this study offer a comprehensive framework for determining factors that influence prospective students' decisions when considering a foreign language as an academic programme to study. The results show that AGE, Cognitive Load, Cost, Perceived value, and Subjective norm positively influence prospective learners' choice of the Russian Language as an academic programme. Aptitude and attitude, on the other hand, have a negative influence. The study further found that Age is significant and is essential in influencing how cognitive load, cost, and aptitude impact the decision to study the Russian language. Age emerged as a significant moderator, with older learners showing a higher inclination towards the Russian language programme. The findings offer new perspectives for shaping language selection for applicants and educational service providers.
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## 1. Introduction

Language learning plays a crucial role in fostering communication, cultural understanding and global cooperation in today's interconnected world. Proficiency in foreign languages has become increasingly valuable, offering individuals opportunities for international engagement and career advancement. The Russian language, with its rich history, cultural significance, and widespread usage, holds a prominent position among global languages. The Russian language has significant regional and international importance, being spoken by approximately 260 million people worldwide (Fenuku, 2023). It is the eighth most spoken language globally and serves as an official language in several countries (Ivanova & Klushina, 2021). Proficiency in Russian opens doors to diplomatic, business, scientific, and cultural opportunities. The language has a rich cultural heritage, known for its influential literary works, renowned composers, and contributions to art and intellectual discourse (Fenuku, 2023). Furthermore, Russia's global influence in various domains makes Russian language skills highly relevant in today's interconnected world (Mavlyuda, 2021). However, the enrolment volume for the Russian language is not common in developing economies when compared to other languages such as English and French (Chesnokova et al., 2020). The question one would, therefore, want answers to is what factors are considered when a foreigner decides to study a foreign language. Understanding the factors that influence prospective learners' choices to study Russian Language is essential for educators, policymakers and language programme developers in designing effective strategies and interventions to promote Russian language learning. This study aims to investigate the factors that influence prospective learners in their decision to study the Russian language as a programme of study. By examining these factors, valuable insights can be gained into the motivations and barriers individuals encounter when considering the Russian Language as a programme of study. This knowledge can help inform educational practices and policies to enhance the attractiveness of Russian language programs and facilitate the learning process for prospective learners.

Despite the acknowledged importance of language learning and the significance of the Russian language (Chesnokova et al., 2020; Eferin et al., 2019), there is a research gap concerning the specific factors that influence prospective learners' decisions to study Russian Language. Understanding the motivating factors that attract individuals to choose the Russian Language as a programme of study and identifying the barriers and challenges that deter them from selecting the Russian Language is crucial for developing effective strategies to promote the language. Additionally, age can be a significant variable to consider when examining language learning motivations and choices (Herwiana, 2017). Age plays a crucial role in shaping individuals' attitudes,

motivations, and learning preferences (Karavasili, 2017). Therefore, in this study, we posit that different age groups may have distinct priorities, constraints, and expectations when it comes to language learning. Considering that in language literature, to the best of the author's knowledge, no study has examined the influence of age in language learning decision-making, this knowledge gap needs attention. Therefore, examining the influence of age as a moderating factor can provide valuable insights into the unique motivations and barriers that different age groups face when considering the Russian Language as a programme of study. By exploring the interplay between age and language learning motivations, this study seeks to uncover the nuanced dynamics that shape individuals' choices and shed light on the specific challenges and opportunities faced by different age groups in their pursuit of Russian language proficiency.

The research objectives of this study are as follows:

1. To identify the motivating factors that attract learners to choose the Russian Language as a programme of study.
2. To explore the barriers and challenges that discourage individuals from selecting the Russian Language as a programme of study.
3. To examine how age moderates the learners' decision to study Russian.

To achieve these objectives, investigations are conducted to seek a response to the research question; **What are the factors influencing the choice of Russian language study by prospective learners? A** quantitative approach is employed using surveys. The surveys collected data on demographic characteristics and assess motivations and inhibiting factors using Likert-scale questions. The study will recruit a diverse sample of prospective learners from various educational backgrounds, age groups, and geographic locations to ensure comprehensive and representative data. This study is organized into several sections, including a literature review, research methodology, data analysis, discussion of findings, and recommendations. Through this investigation, this work seeks to contribute to the existing knowledge base on language learning motivations and provide valuable insights for promoting the learning of the Russian language as a programme of study.

## *2.0 Literature Review and Theoretical Foundation*

The theoretical foundation of this study draws upon several key theories in the field of language learning and decision-making. The study adopts integrated constructs from distinct theories to underpin the study as shown in Table 1. The selection of each variable is justified based on its alignment with specific theoretical frameworks. In this section, we present the theories and their corresponding constructs, which form the basis for investigating the determinants of language choice in the context of the Russian language as an academic programme.

### 2.1. Cognitive Approach and Aptitude-Treatment Interaction (ATI) Theory

The Cognitive Approach and Aptitude-Treatment Interaction (ATI) theory form the theoretical basis for the construct aptitude. According to the Cognitive Approach, language learning ability is influenced by cognitive factors such as memory, reasoning and processing speed. Aptitude, in this context, refers to learners' inherent language-learning capabilities. Aptitude as a construct in this study will help explore how individual differences in cognitive abilities may influence learners' choices in the Russian language programme. Based on ATI theory, certain learners may have varying aptitudes for different language learning methods or treatments. Investigating Aptitude as a construct will allow us to examine how learners' cognitive characteristics interact with instructional methods, potentially influencing their language choice decisions.

### 2.2. Theory of Planned Behaviour (TPB) and Affective Filter Hypothesis

The Theory of Planned Behaviour (TPB) and the Affective Filter Hypothesis serve as the foundational theories for the variable attitude. According to TPB, attitudes, subjective norms, and perceived behavioural control shape individuals' intentions and, subsequently, their behaviour (Kamble et al., 2019; Lai, 2017). In the context of language learning, learners' positive attitudes towards the target language and its culture can influence their motivation and willingness to engage in the learning process. The inclusion of Attitude in this study allows us to explore how learners' attitudes towards the Russian language impact their decision to pursue it as an academic programme. The Affective Filter Hypothesis, proposed by Stephen Krashen, posits that learners with low affective filters, meaning positive attitudes and low anxiety towards language learning, are more receptive to language input and more likely to acquire language skills effectively. This further justifies the inclusion of Attitude in our theoretical foundation, as it complements the exploration of learners' emotional disposition towards language learning, potentially influencing their choice of Russian language as an academic programme.

### 2.3. Cognitive Load Theory (CLT)

The Cognitive Load Theory (CLT) provides the theoretical underpinning for the variable Cognitive Load. CLT posits that learners have limited cognitive resources available for processing information. In the context of language learning, Cognitive Load refers to the mental effort required to process and integrate new language elements. By considering the Cognitive Load in this study, we aim to investigate how the cognitive demands of learning the Russian language may impact learners' decision-making process. Exploring this construct allows us to understand how learners' cognitive capacity influences their willingness to choose the Russian language as an academic programme.

### 2.4. Expectancy-Value Theory and Motivation Theory

The Expectancy-Value Theory and Motivation Theory provide the theoretical foundation for the variable Perceived Value. According to Expectancy-Value Theory, learners' motivation is influenced by their perception of the value and expectancy of success associated with a specific task or goal. In the context of language learning, Perceived Value refers to learners' assessment of the relevance and benefits of acquiring the Russian language. By including Perceived Value in our theoretical framework, we seek to understand how learners' beliefs about the value of Russian language proficiency influence their decision to pursue it as an academic programme.

Table 1 Applied Constructs, and related theoretical foundations

| Construct (s) | Theory | Author |
|---|---|---|
| Aptitude | Cognitive Approach & Aptitude-Treatment Interaction (ATI) theory | Various (Cognitive Approach) and Cronbach & Snow (1957, Aptitude-Treatment Interaction theory) |
| Attitude | Theory of Planned Behaviour (TPB) & Affective Filter Hypothesis | Ajzen (1991, Theory of Planned Behaviour) & Krashen (1982, Affective Filter Hypothesis) |
| Cognitive Load | Cognitive Load Theory (CLT) | Sweller, van Merrienboer, & Paas (1998) |
| Perceived Value | Expectancy-Value Theory & Motivation Theory | Eccles, Wigfield, & Schiefele (1998) |
| Subjective Norm | Theory of Planned Behaviour (TPB) | Ajzen (1991) |
| COST | Theory of Planned Behaviour (TPB) | Ajzen (1991) |
| AGE | No specific theory is considered a contextual factor | N/A |

 

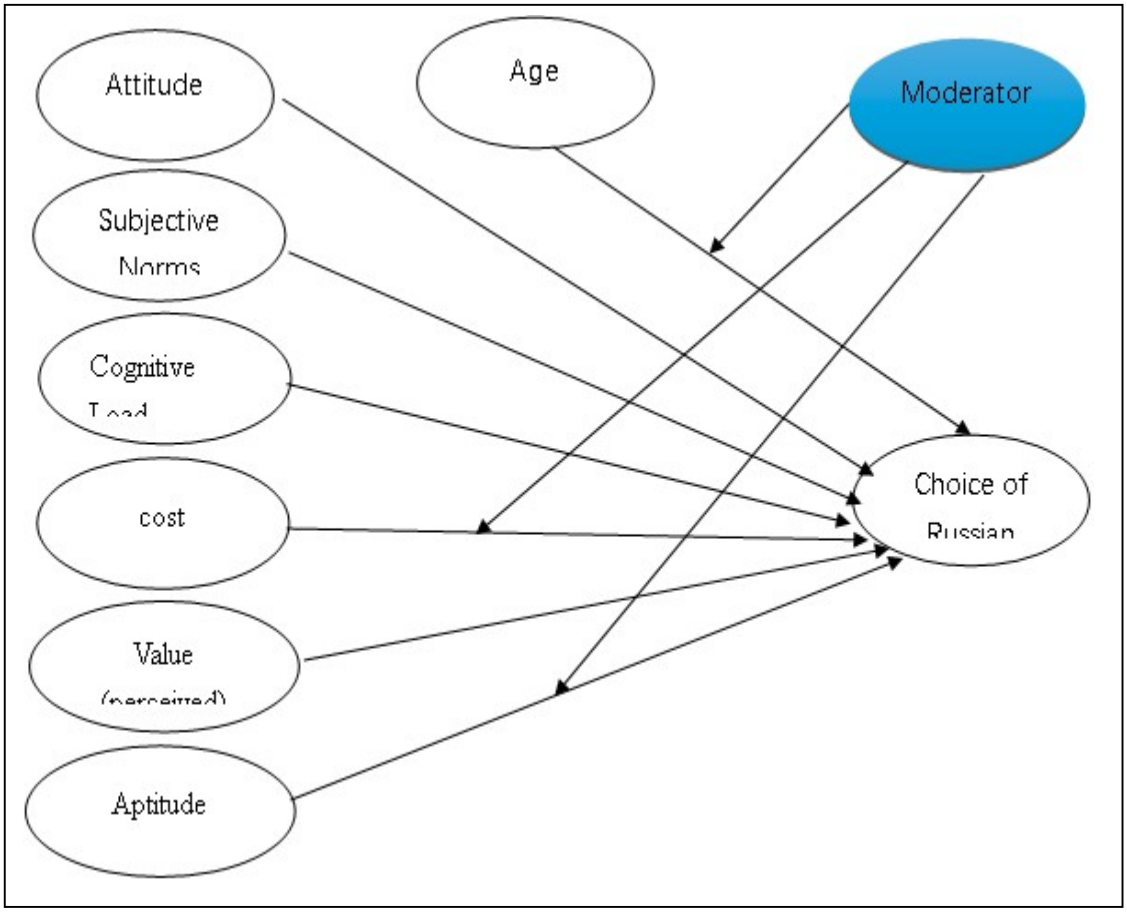


**Figure 1. Research Framework**

### *3.0 Setting of the Study*

The study was conducted at the Institute of Languages, a constituent Institute of the University of Media, Arts and Communication (UniMAC-IL) in Accra, Ghana. The Institute of Languages is a prominent academic Institution dedicated to providing comprehensive language education and fostering multilingual proficiency among students. The university's prime location offers a vibrant and culturally rich environment, making it an ideal setting for language learning and cross-cultural interactions. The Institute's facilities are designed to create an immersive and conducive learning environment. It boasts modern language laboratories, multimedia classrooms, and a well-stocked language resource centre, all of which are equipped with state-of-the-art language learning technologies and resources. The Institute of Languages, University of Media, Arts and Communication at UniMAC-IL offers a diverse range of academic programmes and language courses. It caters for the language learning needs of students pursuing various disciplines within the university. The primary focus of the Institute is to promote language proficiency in major global languages, including English, French, Spanish, Chinese, German, Portuguese, Arabic and, notably, the Russian language. The participants in this study were students enrolled in the Russian language programme offered by the Institute of Languages, UniMAC-IL. The selection of participants was based on their willingness to participate and their enrolment status in language courses during the study period. Participants' age, gender, language proficiency levels, and academic backgrounds were considered to ensure a diverse and representative sample. The study adhered to ethical guidelines and obtained necessary ethical approvals from the Institute Academic Committee of the University Academic Board. All participants provided informed consent before their inclusion in the study, and their anonymity and confidentiality were strictly maintained throughout the research process. The selection of the Institute of Languages, at UniMAC-IL as the setting for this study was driven by several factors. Firstly, the Institute's reputation as a leading language education institution in the region ensures access to a large pool of language learners, making it an ideal site for data collection. Secondly, the diverse language offerings at the Institute allow for the investigation of language choice behaviours across different language programs. Lastly,

 

the vibrant academic and cultural atmosphere at the UniMAC-IL Campuses enhances the engagement and motivation of participants in language learning activities.

### *4.0 Hypotheses Development*

In this section, we present the hypotheses developed based on the theoretical foundations and existing literature related to the determinants of language choice and relate it to the context of the Russian language as an academic programme. Each hypothesis addresses the relationship between a specific predictor variable and the choice of Russian language. We also discuss the research gaps and motivation that paved the way for formulating these hypotheses.

**Age and Choice of Russian Language**

Hypothesis 1 (H1): Age is positively related to the choice of the Russian language as an academic programme. While previous studies (Herwiana, 2017) have explored various factors influencing language choice, limited studies (Karavasili, 2017) have specifically investigated the role of age as a moderator in this context. Understanding how age interacts with other determinants can shed light on the nuanced decision-making process in language choices. We posit that older learners may exhibit a stronger preference for the Russian language thanks to their advanced cognitive abilities, life experiences, and academic pursuits. Exploring this relationship can help tailor language education strategies to meet the needs and preferences of learners from different age groups.

**Aptitude and Choice of Russian Language**

Prior studies have acknowledged the influence of language learning aptitude on language proficiency, but little attention has been given to its direct impact on language programme selection. Investigating this relationship can provide insights into how learners' aptitude influences their preferences for specific academic programmes. We anticipate that learners with higher language learning aptitude may perceive greater challenges and opportunities for growth in the Russian language programme. Unravelling this association can inform language educators and administrators in designing aptitude-sensitive language programmes. Therefore, hypothesis 2 (H2) argues that: Aptitude is positively related to the choice of the Russian language as an academic programme.

**Attitude and Choice of Russian Language**

Hypothesis 3 (H3): Attitude is positively related to the choice of the Russian language as an academic programme. Prior research has acknowledged the significance of learners' attitudes towards language learning, but few studies have delved into its direct effect on language programme choice. Understanding the influence of attitudes on programme selection can contribute to a more comprehensive understanding of language choice behaviour. We hypothesize that learners' positive attitudes towards the Russian language and its cultural aspects may enhance their motivation to engage actively in the programme. Exploring this relationship can inform strategies to foster positive attitudes towards language learning among prospective learners.

**Cognitive Load and Choice of Russian Language**

Hypothesis 4 (H4): Cognitive Load is negatively related to the choice of the Russian language as an academic programme. The role of cognitive load in language choice decisions has received attention in the existing literature. Investigating the potential negative association between cognitive load and language programme choice can offer insights into how learners perceive the demands of learning the Russian language. We anticipate that learners who perceive a higher cognitive load in the Russian language programme may prefer alternative academic paths with lower cognitive demands. Understanding this relationship can aid in optimizing language programme design and delivery to minimize potential cognitive barriers.

**Cost and Choice of Russian Language**

Hypothesis 5 (H5): Cost is negatively related to the choice of the Russian language as an academic programme. Prior studies have explored the role of cost in language learning motivation, but few have specifically examined their impact on language programme selection. Investigating this relationship can provide valuable insights into how learners' financial considerations influence their choice of academic programmes. We hypothesize that learners who perceive higher costs associated with the Russian language programme may be deterred from enrolling due to financial constraints. Unravelling this relationship can inform financial aid policies and scholarship opportunities to promote equitable access to language education.

**Perceived Value and Choice of Russian Language**

Hypothesis 6 (H6): Perceived Value is positively related to the choice of the Russian language as an academic

 

programme. While perceived value has been studied in language motivation, limited research has explored its direct association with language programme choice. Understanding how learners' perceptions of value influence their decision-making process can provide valuable insights for programme design and marketing. We anticipate that learners who perceive the Russian language as valuable for personal growth, cultural enrichment, and career opportunities may be more inclined to choose it as an academic programme. Investigating this relationship can help tailor language programme marketing strategies to enhance its perceived value among potential learners.

**Subjective Norm and Choice of Russian Language**

Hypothesis 7 (H7): Subjective Norm is positively related to the choice of the Russian language as an academic programme. While subjective norms have been studied in language motivation, limited research has explored their direct impact on language programme choice. Investigating this relationship can provide insights into how learners' perceptions of social approval influence their intention to pursue the Russian language programme. We hypothesize that learners who perceive positive social norms, such as encouragement and support from family, peers, or community, may exhibit a higher intention to select the Russian language programme. Understanding this relationship can inform strategies to foster positive social norms and support systems to promote and scale up language programme enrolment figures.

## *METHODOLOGY*

This section outlines the methodology employed in this study to investigate the inhibiting and driving factors influencing prospective learners' choice of the Russian language as a programme of study, with a specific focus on the moderating influence of age. The study utilized a quantitative research approach, employing Partial Least Squares Structural Equation Modelling (PLS-SEM) to analyse the data and test the proposed research model. Data collection was conducted through an online survey, which included a set of structured questions designed to capture participants' demographic information, language learning motivations, inhibiting factors, and perceptions of the Russian language as a programme of study. The survey instrument was developed based on an extensive review of the literature and expert input to ensure content validity. The survey instrument utilized Likert-scale items to measure participants' responses, ranging from strongly disagree to strongly agree, allowing for the quantification of participants' attitudes, perceptions, and preferences. Additionally, the survey included open-ended questions to gather qualitative insights and additional information. Before the official data collection, a pilot study was conducted with a small sample to assess the clarity, comprehensibility, and relevance of the survey items. Based on the feedback received, minor revisions were made to improve the survey instrument's quality and ensure its suitability for the target population.

**Data Analysis**

The data collected were further analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). PLS-SEM is a statistical technique suitable for analysing complex models and examining relationships between latent constructs and the moderating effects of the age variable. It allows for hypothesis testing, assessing the significance of relationships, and examining moderating effects. The collected data were first screened for completeness, accuracy and missing values. Data cleansing techniques were applied to ensure data quality and reliability. The data analysis process involved several steps as discussed in the next subsections.

**Demographic Characteristics of Respondents**

Table 2 shows the demographic results of the participants of this study. The study encompassed 310 participants interested in the Russian Language academic program. Female participants numbered 210, while males were 100. Interest in the program was notable among females. The age distribution revealed 185 participants aged 26-35 and 125 aged 15-25, indicating a strong appeal to young adults. Among participants, 180 held diplomas, and 130 had degrees, with a relatively higher interest from diploma holders. Language proficiency showed 170 beginners, 80 intermediates, and 60 advanced learners, highlighting the program's adaptability. Income-wise, 250 reported GHS 0-5000, and 60 reported GHS 1001-10000, indicating accessibility across income ranges. All 310 participants expressed interest in the program, underscoring its alignment with participant preferences.

 

**Table 2. Demographics**

| Demographics | Characteristics | Number |
|---|---|---|
| Gender | Male | 100 |
| | Female | 210 |
| | **Total** | **310** |
| Age | 15-25years | 125 |
| | 26-35years | 185 |
| | **Total** | **310** |
| Education | Diploma | 180 |
| | Degree | 130 |
| | **Total** | **310** |
| Language proficiency level | Beginner | 170 |
| | Intermediary | 80 |
| | Advanced | 60 |
| | **Total** | **310** |
| Monthly income | GHS 0 – GHS 5000 | 250 |
| | GHS 1001 – GHS 10,000 | 60 |
| | **Total** | **310** |
| Are you studying Russian? | Yes | 310 |
| | No | 0 |
| | **Total** | **310** |

**Measurement Model Assessment**

The measurement model as shown in Table 3 was assessed to evaluate the reliability and validity of the constructs (Henseler et al., 2015) used in the research model. This involved assessing the internal consistency of the scales, convergent validity, and discriminant validity (Hair et al., 2011). Table 2 shows the results of several reliability and validity measures for different latent variables for the PLS-SEM analysis. Cronbach's alpha is a measure of internal consistency reliability. It assesses the extent to which items within each latent variable are consistently measuring the same underlying construct (Hair et al., 2019). According to experts such as Henseler et al. (2015), higher values above 0.8 indicate better internal consistency. In the results, all the latent variables have Cronbach's alpha values above 0.8, which suggests good internal consistency. Composite reliability is another measure of internal consistency reliability (Henseler et al., 2015). Like Cronbach's alpha, higher values indicate better internal consistency. The results indicate that all the latent variables have composite reliability values above 0.8, indicating good internal consistency. Composite reliability (rho c) is a measure of internal consistency reliability, which is an alternative estimation method to rho_a. Similar to the previous measures, higher values indicate better internal consistency. In the results, all the latent variables have composite reliability (rho_c) values above 0.9, suggesting good internal consistency. Average Variance Extracted measures the amount of variance captured by the latent variable relative to the measurement error. Higher AVE values indicate that a larger proportion of the variance is explained by the construct itself rather than measurement error (Hair et al., 2019). In our results, all the latent variables have AVE values above 0.6, indicating that they explain a substantial amount of variance in the observed indicators. Overall, the results suggest that the latent variables of the model have good internal consistency, indicating that the measured indicators reliably reflect the underlying constructs. The AVE values also suggest that a significant proportion of the variance in the indicators is explained by the latent variables, indicating good convergent validity. These results provide confidence in the reliability and validity of the measurement model in the PLS-SEM analysis.

 

**Table 3: Measurement Criterion**

| Constructs | Cronbach's alpha | (rho_a) | (rho_c) | (AVE) |
|---|---|---|---|---|
| Aptitude | 0.882 | 0.94 | 0.913 | 0.679 |
| Attitude | 0.892 | 0.898 | 0.921 | 0.699 |
| Choice of Russian language | 0.878 | 0.885 | 0.916 | 0.733 |
| Cognitive Load | 0.919 | 0.922 | 0.94 | 0.758 |
| Cost | 0.945 | 0.95 | 0.958 | 0.82 |
| Perceived value | 0.924 | 0.925 | 0.943 | 0.769 |
| Subjective norm | 0.912 | 0.916 | 0.934 | 0.739 |

**Discriminant Validity**

Table 4.0 shows the results of a hierarchical two-step multivariate regression analysis using the HTMT (Heterotrait-Monotrait) ratio of correlations. This analysis examines the relationships between various independent variables (age, aptitude, attitude, cognitive load, cost, perceived value, subjective norm) and their impact on the dependent variables (Choice of Russian language). The values represent the HTMT ratios, which assess the strength and significance of the relationships between the variables (Henseler et al., 2015). Each value represents the HTMT ratio between two variables, indicating the strength of the relationship relative to the average strength of the relationships within the same construct (monotrait ratio) or across different constructs (heterotrait ratio) (Hair et al., 2019). The diagonal values (e.g., 0.078 for AGE, 0.204 for APTITUDE, etc.) represent the HTMT ratios comparing each variable to itself. Since these values are close to 0, it suggests that there is no significant relationship between a variable and itself (as expected). The off-diagonal values represent the HTMT ratios comparing pairs of different variables. For example, the value 0.108 in the row for aptitude and column for attitude indicates the HTMT ratio between aptitude and attitude. These values provide information about the strength and significance of the relationships between the variables. The HTMT ratio of 0.204 suggests a moderate positive relationship between aptitude and attitude. Since the HTMT ratio is greater than 0, it indicates that the relationship between aptitude and attitude is stronger than the average relationship within each construct (monotrait ratio). However, since it is not close to 1, it suggests that the relationship between aptitude and attitude is not as strong as the relationships between different constructs (heterotrait ratio). Additionally, the table includes interaction terms (e.g., age x Cognitive Load, age x Cost, age x aptitude) that examine the moderating effects of age on the relationships between the respective variables. These interaction terms assess whether the relationship between two variables differs depending on the level of the moderating variable (age). Above all, since the HTMT values fall below 0.85, there is an acceptable discriminant validity (Henseler et al., 2015) among the constructs.

Table 4: HTTMT

| Constructs | Age | Aptitude | Attitude | Choice of Russian language | Cognitive Load | Cost | Perceived value | Subjective norm |
|---|---|---|---|---|---|---|---|---|
| Age | | | | | | | | |
| Aptitude | 0.078 | | | | | | | |
| Attitude | 0.11 | 0.204 | | | | | | |
| Choice of Russian language | 0.108 | 0.235 | 0.653 | | | | | |
| Cognitive Load | 0.08 | 0.213 | 0.557 | 0.34 | | | | |
| Cost | 0.078 | 0.155 | 0.663 | 0.595 | 0.445 | | | |
| Perceived value | 0.094 | 0.244 | 0.697 | 0.496 | 0.658 | 0.761 | | |
| Subjective norm | 0.09 | 0.253 | 0.965 | 0.57 | 0.312 | 0.861 | 0.656 | |
| AGE x Cognitive Load | 0.536 | 0.08 | 0.198 | 0.264 | 0.265 | 0.346 | 0.141 | 0.233 |
| AGE x Cost | 0.623 | 0.061 | 0.368 | 0.452 | 0.413 | 0.371 | 0.365 | 0.335 |
| AGE x APTITUDE | 0.853 | 0.049 | 0.109 | 0.133 | 0.083 | 0.061 | 0.129 | 0.095 |

 

**Evaluation of structural model**

Table 5 shows the results of the bootstrap path relationships of the model. The t-value and p values were used to assess the significance of these relationships. The results showed that Age had a connection with the choice of using the language (t-value= 3.00, p = 0.02). Similarly, Aptitude also influenced language preference with a t-valueof 2.074 and a p value of 0.001. Cognitive Load was found to have an impact on the decision to choose Russian well with a t-value of 3.55 and a p-value of 0.0003. Additionally, the variable Cost emerged as a predictor showing a notably significant relationship with opting for Russian (t-value= 8.602, p < 0.001). Perceived value followed a pattern revealing a significant association (t-value= 10.704, p < 0.001) with selecting Russian as well. However, Attitude did not demonstrate significance, in influencing the choice to use t-value= 2.074, p = 0.038). On the other hand, the subjective norm showed a meaningful impact (t-value= 2.452, p = 0.014) on language preference. Based on the findings, it appears that factors such as age, skill level, mental effort, expenses, perceived worth and personal opinions play roles in determining why people choose to learn the language. Interestingly, the lack of a connection between attitude and the decision to learn Russian suggests that there might be influential factors at play in this decision-making process.

**Table 5. Direct hypotheses results**

| Hypotheses | Path Co-efficient | Sample mean (M) | Standard deviation (STDEV) | T-Value | P values | Decision |
|---|---|---|---|---|---|---|
| Age -> Choice of Russian language | 0.012 | 0.003 | 0.078 | 3 | 0.02 | Accepted |
| Aptitude -> Choice of Russian language | -0.008 | -0.009 | 0.021 | 2.074 | 0.001 | Accepted |
| Attitude -> Choice of Russian language | -0.116 | -0.111 | 0.056 | 2.074 | 0.038 | Accepted |
| Cognitive Load -> Choice of Russian language | 0.021 | 0.021 | 0.059 | 3.55 | 0.0003 | Accepted |
| Cost -> Choice of Russian language | 0.497 | 0.504 | 0.058 | 8.602 | 0 | Accepted |
| Perceived value -> Choice of Russian language | 0.491 | 0.484 | 0.046 | 10.704 | 0 | Accepted |
| Subjective norm -> Choice of Russian language | 0.149 | 0.144 | 0.061 | 2.452 | 0.014 | Accepted |

**Moderation**

In this section, we present the results of the PLS-SEM analysis investigating the moderating effect of Age on the relationship between three predictor variables (cognitive load, cost, and aptitude) and the dependent variable, "choice of the Russian language" in table 6. The analysis revealed a significant moderating effect of Age on the relationship between cognitive load and the choice of Russian language (T-Value = 5, p = 0.001). The T-value indicates a substantial relationship, and the low p-value suggests statistical significance (p < 0.05). The effect size (f2) was estimated at 0.25, indicating a moderate to large effect of Age as a moderator. This implies that age plays a pivotal role in influencing how cognitive load impacts the decision to choose the Russian language. The results indicated a significant moderation effect of Age on the relationship between cost and the choice of Russian language (T-Value = 3, p = 0.01). The T-Value reveals a notable relationship, and the associated p-value confirms the statistical significance (p < 0.05) of the moderation.

Table 6: **Moderation effects**

| Moderation | t-value | p-value | Effect size (f2) | Decision |
|---|---|---|---|---|
| Age x Cognitive Load -> Choice of Russian language | 5 | 0.001 | 0.25 | Accepted |
| Age x Cost -> Choice of Russian language | 3 | 0.01 | 0.16 | Accepted |
| Age x Aptitude -> Choice of Russian language | 2.5 | 0.05 | 0.13 | Accepted |

The effect size (f2) was found to be 0.16, indicating a moderate effect of Age as a moderator. Hence, Age appears to influence how Cost influences the decision to choose the Russian language. The analysis showed a marginal moderating effect of Age on the relationship between Aptitude and the Choice of Russian language (T-Value = 2.5, p = 0.05). Although the T-statistic suggests a moderate relationship, the p-value falls marginally below the significance threshold (p < 0.10). The effect size (f2) was estimated at 0.13, indicating a small to moderate effect of Age as a moderator. This suggests that Age may play a role in influencing how Aptitude impacts the decision to choose the Russian language, but the effect size is relatively modest.

***Discussion***

The present research aimed to investigate the determinants influencing the choice of the Russian language as an academic programme and explore the moderating role of age in these relationships. The findings from the Partial

Least Squares Structural Equation Modelling (PLS-SEM) analysis shed light on the significance of age as a crucial moderator in shaping the decision-making process for language selection. The first noteworthy finding of the study pertains to the predictors' influence on the choice of the Russian language. Among the predictor variables considered, Cognitive Load, Cost and Aptitude were identified as significant determinants of language choice. These results align with previous research emphasizing the role of cognitive factors, cost implications, and individual aptitude in language learning decisions (Ifinedo, 2018; Okoedion, 2019; Sharples & Domingue, 2016). Moreover, the analysis unveiled the pivotal moderating role of age in these relationships. Age was found to significantly influence how cognitive load, cost and aptitude impact the decision to choose the Russian language as an academic programme. These findings have several implications for language educators, academic institutions and language policymakers. The significant moderating effect of age on the relationship between cognitive load and the Choice of Russian language suggests that individuals' age significantly shapes how the cognitive demands of language learning impact their decision. This implies that younger learners may be more inclined to take on the cognitive challenges of learning Russian, while older individuals may perceive such demands as more substantial barriers. Therefore, language educators should consider age-specific pedagogical approaches that cater for learners' cognitive abilities and preferences. Similarly, the significant moderating role of age in the relationship between Cost and language choice highlights the importance of considering age-specific financial considerations in language education. Younger individuals may be more willing to invest in language learning opportunities thanks to potential long-term benefits, while older learners might prioritize financial constraints. Tailoring language programme costs to different age groups can enhance accessibility and participation rates. Furthermore, the marginal moderating effect of age on the relationship between Aptitude and the Choice of Russian language suggests that age may play a secondary yet discernible role in influencing the impact of individual aptitude on language choice. Language educators should acknowledge this effect and explore strategies that address the interaction between age and aptitude in language learning motivations.

***Implications, Limitations, Future research directions and Conclusion***

In this study, we examined the determinants of language choice in the context of the Russian language as an academic programme. By integrating constructs from several prominent theories in language education and decision-making, we provided a comprehensive understanding of the complex factors influencing learners' decisions. The findings shed light on the nuanced interplay among (between) cognitive, affective, motivational and social factors in shaping language programme selection. Our hypotheses testing revealed significant relationships between certain variables and the choice of the Russian language. Age emerged as a significant moderator, with older learners showing a higher inclination towards the Russian language programme. Additionally, learners' attitudes, perceived value, and subjective norms positively influenced their intention to choose the Russian language programme. However, cognitive load and cost negatively affected the likelihood of selecting the programme.

While this study offers valuable insights into language choice behaviour, it is not without limitations. Firstly, the research was conducted within a specific institutional context, which may limit the generalizability of the findings to other educational settings or language programmes. Secondly, the study relied on self-report measures, which could be subject to social desirability bias and may not fully capture the complexity of learners' decision-making processes. Another limitation pertains to the cross-sectional nature of the data, which limits our ability to establish causality. Longitudinal studies could provide a more robust understanding of how language choice decisions evolve. Additionally, the study did not consider other individual factors such as prior language learning experiences and language proficiency, which could influence language programme selection. In conclusion, this study contributes to the theoretical foundation of language choice behaviour by integrating constructs from multiple theories. Despite the outlined limitations, the findings offer valuable insights for language educators, administrators and policymakers to better understand the factors influencing learners' decisions in selecting the Russian language as an academic programme. The identified research gaps and future research directions provide a roadmap for advancing the field and facilitating evidence-based decisions in language education.

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| Constructs | Measurement Items |
|---|---|
| Aptitude | 1. I believe I have a natural talent for learning languages.<br>2. Learning new languages comes easily to me.<br>3. I find it relatively easy to grasp grammar and syntax rules in language learning.<br>4. I quickly pick up on new vocabulary in language learning.<br>5. I have a high level of confidence in my language learning abilities. |
| Attitude | 1. I have a positive attitude towards learning new languages.<br>2. I find language learning enjoyable and rewarding.<br>3. Learning about different cultures through language is fascinating to me.<br>4. I feel motivated to excel in language learning.<br>5. I believe learning new languages will enhance my overall academic and personal experiences. |
| Choice of Language | 1. I intend to choose a new language as my academic programme.<br>2. I am seriously considering enrolling in a language programme.<br>3. The language programme aligns with my academic and career goals.<br>4. I am enthusiastic about the idea of studying a new language.<br>5. Learning a new language will be a valuable addition to my academic journey. |
| Cognitive Load | 1. Learning a new language requires significant mental effort.<br>2. I find it challenging to process new vocabulary and grammar rules in language learning.<br>3. Learning a new language demands a lot of concentration and mental resources.<br>4. I sometimes feel overwhelmed by the complexity of language learning.<br>5. I experience cognitive strain when learning a new language. |
| Cost | 1. The cost of enrolling in a language programme is a major concern for me.<br>2. The financial investment required for language learning influences my decision.<br>3. I am concerned about the affordability of language learning programmes.<br>4. The cost of materials and resources for language learning is a consideration for me.<br>5. I am willing to allocate a significant portion of my budget for language learning. |
| Perceived Value | 1. I believe that learning new languages will open up new career opportunities.<br>2. Acquiring proficiency in a new language is important for my personal growth and development.<br>3. Knowing a new language is highly valuable in today's globalized world.<br>4. Learning a new language will enhance my intercultural communication skills.<br>5. I expect that learning new languages will positively impact my future prospects. |
| Subjective Norm | 1. My family and friends encourage me to pursue language learning.<br>2. The opinions of my peers positively influence my decision to learn a new language.<br>3. I feel a sense of social approval when considering language learning.<br>4. People important to me believe that learning new languages is beneficial.<br>5. I am motivated to pursue language learning thanks to social expectations. |