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# تقييم مقياس نظرية تحديد المصير الذاتي للغة الثانية (SDT–L2) في تعلم اللغة الصينية لدى طلاب المدارس الابتدائية السعودية

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# Evaluating Self-Determination Theory of Second Language (SDT-L2) Scale in Chinese Language Learning Among Saudi Elementary School Students

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**الملخص:**

تم إدخال دورات اللغة الصينية في المدارس الابتدائية السعودية في إطار رؤية السعودية ٢٠٣٠ لتعزيز المشاركة العالمية. ويُعد فهم دوافع الطلاب أمرًا أساسيًا لاكتساب اللغة بفعالية في سياقات غير اللغة الأم. قيّمت هذه الدراسة التوجهات التحفيزية لطلاب المرحلة الابتدائية في المملكة العربية السعودية باستخدام مقياس نظرية تقرير المصير لتعلم اللغة الثانية (SDT–L2). أُجريت دراسة مقطعية في ٢٠ مدرسة ابتدائية، شارك فيها ٩٩٣ طالبًا وطالبة (٨٠.٠٦٪ من الإناث و١٩.٩٤٪ من الذكور). أفاد معظم الطلاب (٩٢.١٥٪) بتشجيع الأسرة على تعلم اللغة الصينية، وأعرب ٧٨.٢٥٪ منهم عن اهتمامهم بتعلم اللغات الأجنبية. كان المتوسط العام للدرجات على مقياس SDT–L2 3.94 ± 0.88، وكان الدافع الداخلي (٤.١١ ± ٠.٩٦) هو الأعلى، يليه الدافع المحدد (٤.١٠ ± ٠.٩٧)، والدافع الخارجي (٤.٠٥ ± ٠.٩٤)، والدافع الذاتي (٣.٥١ ± ١.١٢). وكان التشجيع الأسري والاهتمام بتعلم اللغة من المؤشرات الهامة التي تنبئ بارتفاع الدافعية الكلية. ولوحظت فروق كبيرة بين الجنسين فيما يتعلق بالدوافع المحددة، حيث سجلت الإناث درجات أعلى (P = 0.035). تم العثور على ارتباطات قوية بين الدوافع الذاتية والمحددة (r = 0.84)، بينما أظهرت الدوافع الذاتية ارتباطات أضعف. تسلط هذه النتائج الضوء على أهمية تعزيز الدوافع الجوهرية والمحددة من خلال البيئات الأسرية الداعمة، واستراتيجيات التدريس الجذابة، والأنشطة التي تحفز الاهتمام. تقدم الدراسة رؤى قيمة للمعلمين وصانعي السياسات والأسر لتعزيز اكتساب اللغة الصينية.

**الكلمات المفتاحية:** التوجهات التحفيزية، SDT–L2، تعلم اللغة الصينية، تعلم اللغة، المملكة العربية السعودية.

**Abstract:**

Chinese language courses were introduced into Saudi elementary schools under Saudi Vision 2030 to promote global engagement. Understanding students' motivation is key to effective language acquisition in non-native contexts. This study assessed the motivational orientations of elementary students in Saudi Arabia using the Self-Determination Theory for Second Language Learning (SDT-L2) Scale. A cross-sectional study was conducted in 20 elementary schools, with 993 students participating (80.06% female, 19.94% male). Most students (92.15%) reported family encouragement to learn Chinese, and 78.25% expressed interest in learning foreign languages. The overall mean score on the SDT-L2 scale was 3.94 ± 0.88, indicating moderately high motivation levels. Among the types of motivation, intrinsic motivation was the highest, followed by identified motivation, external motivation, and, lastly, introjected motivation. Family encouragement and interest in language learning were significant predictors of higher overall motivation. Significant gender differences were observed for identified motivation, with females scoring higher. Strong correlations were found between intrinsic and identified motivations, while introjected motivation showed weaker associations. These findings highlight the importance of fostering intrinsic and identified motivations through supportive family environments, engaging teaching strategies, and activities that stimulate interest. The study offers valuable insights for educators, policymakers, and families to enhance Chinese language acquisition.

**Keywords:** Motivational Orientations, SDT-L2, Chinese Language Learning, Language Learning, Saudi Arabia.

## 1 Introduction

Aligned with the goals of Saudi Vision 2030 to equip students for global citizenship, Chinese language courses have been progressively introduced into Saudi elementary schools. Beginning with a pilot phase in selected schools in 2019, the initiative has expanded each year, aiming for widespread inclusion across the educational landscape (Al Roomy, 2022; Alalwi, 2025). This strategic endeavor seeks not only to broaden the linguistic abilities of Saudi students but also to deepen cultural and economic connections with China (Wenjia & Mengfan, 2021).

The acquisition of Chinese as a second language presents unique challenges for Arabic-speaking students (Aatif, 2022). Unlike Arabic, which employs an alphabetic and phonetic script, Chinese is characterized by its tonal nature and a logographic writing system (Al-Nahdi & Zhao, 2022). These fundamental differences necessitate a rethinking of traditional language learning approaches and underscore the importance of understanding the motivational dynamics that influence student engagement and learning success (Liao et al., 2020).

Motivational orientations, as conceptualized within Self-Determination Theory (SDT) by (Deci & Ryan, 2000), play a pivotal role in educational outcomes. The Self-Determination Theory of Second Language (SDT-L2) Scale is designed to assess various types of motivation—from intrinsic to extrinsic—that affect language learning. Previous research has demonstrated the significance of these motivational orientations in enhancing student engagement and success in language acquisition (Al-Hoorie et al., 2022). However, studies focusing on the motivational orientations of students learning Chinese in the context of the Saudi educational system are notably absent.

To the best of the authors' knowledge, no prior research has examined the motivational orientations of elementary students learning Chinese in Saudi Arabia. This oversight is particularly significant considering the complexities involved in learning a language as structurally and linguistically different from Arabic as Chinese. This study seeks to fill this gap by utilizing the SDT-L2 Scale to assess the motivational orientations of these students. By understanding the specific motivational factors that influence language learning, this research aims to shed light on how to effectively support and enhance the educational experiences of students, thus facilitating better language acquisition outcomes and fostering greater educational persistence in the face of linguistic challenges.

**Literature Review**

SDT has been extensively studied as a framework for understanding motivation in second language (L2) learning. The SDT-L2 Scale, validated by Alamer (2021), provides a robust measure of L2 motivation, demonstrating that autonomous motivation positively predicts L2 performance, while controlled motivation does not (Alamer, 2021). Early foundational work by Noels et al. (2000) integrated SDT into L2 learning, revealing correlations between SDT subtypes and traditional motivational orientations (Noels et al., 2008). Later studies, such as those by Lou et al. (2018) and Joe et al., emphasized the significance of autonomy, competence, and relatedness in fostering L2 motivation and achievement (Joe et al., 2017; Lou et al., 2017). Comparative research by Takahashi demonstrated that SDT constructs outperform other motivation theories in predicting L2 proficiency (Takahashi & Im, 2020). Extensions of SDT in L2 contexts highlight its applications to formal education (McEown & Oga-Baldwin, 2019), classroom social climates (Shelton-Strong, 2020), and the influence of teacher communicative styles (Rahmanpanah, 2017a). The SDT-L2 framework has also been applied to specific areas, such as vocabulary learning (Tanaka, 2016), advising practices (Shelton-Strong, 2020), and bilingualism (Landry et al., 2009).

Several studies have explored the structural relationships in SDT-L2, such as Alamer and Lee's process model linking basic psychological needs (BPN) to L2 achievement, and Kim's investigation of how L2 self-guides and autonomous motivation predict learning behavior (Alamer & Lee, 2019; Kim, 2023). The role of technology in supporting SDT principles has been examined by Fathali and Okada (2016) in out-of-class learning contexts (Fathali & Okada, 2016). Meta-analyses, such as that by (Al-Hoorie et al., 2022), underscore the strength of SDT in explaining L2 learning motivation over three decades. Practical implications extend to understanding how teacher autonomy-supportive styles foster intrinsic motivation (Rahmanpanah, 2017b) and how addressing psychological needs predicts willingness to communicate and achievement (Joe et al., 2017). Collectively, these studies validate SDT as a comprehensive framework for exploring motivational dynamics in L2 learning, with the SDT-L2 Scale providing an empirical foundation for assessing and enhancing motivation in diverse educational contexts.

Research on SDT in Chinese language learning contexts has yielded valuable insights. Studies have shown that learners who find Chinese personally meaningful and enjoyable are more engaged in the learning process (Comanaru & Noels, 2009). Autonomy, competence, and relatedness significantly predict learning flow, which in turn predicts persistence and achievement in blended Chinese language learning environments (Joe et al., 2017). For heritage learners, a sense of connection to the Chinese community and personal control over learning are particularly important motivators (Comanaru & Noels, 2009). Recent studies have explored the application of SDT in Chinese language learning contexts. Rahman et al. investigated international students' intentions to learn Chinese as a third language, integrating SDT with the Theory of Planned Behavior (Rahman et al., 2022). Their research involved over 161 participants studying in various Chinese universities, utilizing Partial Least Square analysis to evaluate learning intentions. Yang & Lou examined the psychological determinants of mobile learning for overseas students studying Chinese in China, combining SDT with the Technology Acceptance Model. Their study of 515 participants revealed significant relationships between SDT factors, perceived usefulness, and ease of use in mobile learning environments (Yang & Lou, 2024).

## 2 Materials and Methods

### 2.1 Study design and population

This cross-sectional study was carried out from November to December 2024, involving elementary school students enrolled in Chinese language classes across 20 public schools in Saudi Arabia, located in four regions: Jazan, Riyadh, Aseer, and Makkah Al-Mukarramah. The study's primary goal was to evaluate students' motivational orientations using the SDT-L2 Scale. The study specifically targeted Grade 7 elementary students, as Chinese language instruction was recently introduced at this level within Saudi Arabia's national curriculum. Focusing on this age group provides early insights into motivational dynamics that could influence long-term language acquisition strategies. Convenience sampling was used, which allowed for straightforward access to a readily available cohort of students. The required sample size for this study was calculated using G*Power software for a one-way ANOVA with an effect size of F = 0.25 (medium), an alpha level of 0.05, a power of 0.95, and 3 groups. The analysis indicated a minimum total sample size of 252 participants.

Teachers assisted in the recruitment process by identifying eligible students, whose parents were subsequently contacted to obtain approval and help facilitate survey administration. Students completed the questionnaire individually using school-provided tablets during regular class hours. The survey was administered via Google Forms under teacher supervision.

### 2.2 Ethical Considerations

Ethical clearance was granted by the Institutional Review Board (IRB). Consent was explicitly obtained from both students and their parents or legal guardians, with comprehensive information provided about the study's objectives and procedures. All personal data were anonymized to maintain confidentiality and securely stored to ensure privacy protection.

### 2.3 Data Collection Tool

The demographic data collected in this study include gender, family encouragement for learning Chinese, and interest in learning other languages. The SDT-L2 Scale, initially developed for older students and adults, has been carefully adapted to be age-appropriate and culturally relevant for elementary students learning Chinese. The scale was translated into Arabic to ensure both linguistic and conceptual fidelity to the original English version, with special attention to the educational and psychological context of Chinese language learning. The SDT-L2 Scale is comprised of 20 items, each measured on a 5-point Likert scale ranging from "Strongly Agree" (5) to "Strongly Disagree" (1). The SDT-L2 Scale distributed evenly across four motivational constructs, with each construct containing 5 items:

- Intrinsic Motivation: This construct assesses students' engagement in learning Chinese due to the inherent pleasure and interest they find in the activity. The 5 items here probe into the aspects of enjoyment, curiosity, and personal satisfaction derived from learning Chinese.
- Identified Motivation: This construct measures the recognition by students of the personal value and importance of learning Chinese, reflecting a conscious valuing of the language learning, which they believe will contribute to their personal growth and future opportunities. The 5 items evaluate how students internalize the benefits of learning Chinese.
- Introjected Motivation: Consisting of 5 items, this construct looks at the internal pressures students feel to engage in learning Chinese, such as the desire to meet expectations of others or to avoid feelings of guilt for not participating.
- External Motivation: This construct assesses the extent to which external factors motivate students to learn Chinese. The 5 items explore motivations driven by external rewards or demands, such as passing exams, meeting curriculum requirements, or future job prospects.

After translation, the scale underwent a rigorous back-translation process to confirm the accuracy of the Arabic version. A panel of experts in educational psychology, child development, and language acquisition reviewed the adapted items for content validity, ensuring they are appropriate for the target age group and effectively measure the intended constructs. The scale was then pilot tested with a representative sample of the target population. This pilot test aimed to assess the comprehension of the items among elementary students and to gather preliminary reliability and validity data. Reliability for each construct was evaluated using Cronbach's alpha, aiming for a minimum threshold of 0.7 to ensure good internal consistency. Cronbach's alpha values ranged from 0.79 to 0.92 across the scale constructs, indicating good to excellent internal consistency.

The overall mean scores for each construct and the overall SDT-L2 scale were calculated by averaging participants' responses within each construct and across all constructs combined. Mean scores were obtained by summing item responses for a construct and dividing by the total number of items. The classifications were derived by dividing the range of possible scores (5.00–1.00 = 4.00) into five equal intervals of 0.80, resulting in the following categories: very high motivation (4.21–5.00), high motivation (3.41–4.20), moderate motivation (2.61–3.40), low motivation (1.81–2.60), and very

low motivation (1.00–1.80). Participants' scores were categorized accordingly for each construct and the overall scale, with frequencies and percentages calculated to determine the distribution of motivation levels.

### 2.4 Data analysis

Data analysis was conducted using SPSS (Version 27). Descriptive statistics were computed to provide a summary of the sample demographics and scale responses. The Shapiro-Wilk test was used to check the normality of the data. Mann-Whitney U tests and Kruskal-Wallis tests were utilized to explore differences in motivational scores across various demographics due to non-normal data. Spearman's correlation and multiple linear regression analyses were performed to examine relationships and predict the influence of demographic variables on the different motivational orientations. A significance level of $p < 0.05$ was maintained throughout all statistical tests.

## 3 Results

### 3.1 Participant Demographics

Table 1 summarizes the demographic distribution and motivational scores of elementary students (N = 993). Of these, 795 (80.06%) were female and 198 (19.94%) were male. Significant differences in identified motivation scores were observed between sexes, with females scoring higher than males (4.16 ± 0.90 vs. 3.88 ± 1.22, $P = 0.035$). Students who reported receiving family encouragement to learn Chinese (92.15%) had significantly higher motivational scores across all dimensions compared to those who did not ($P < 0.001$). For example, intrinsic motivation scores were 4.28 ± 0.78 among students with family encouragement compared to 2.45 ± 1.19 in those without ($P < 0.001$). Similarly, interest in learning foreign languages was associated with significant differences in motivational scores across all dimensions ($P < 0.001$), with the highest scores observed in students who expressed interest (4.28 ± 0.78 for intrinsic motivation). Students who were uncertain about their interest in foreign languages reported intermediate scores, while those with no interest showed the lowest scores.

**Table 1:** *Demographic distribution of elementary students and motivational orientation construct scores (Mean ± SD)*

| Item | Variables | Count (%) N=993 | Intrinsic Motivation | Identified Motivation | Introjected Motivation | External Motivation |
|---|---|---|---|---|---|---|
| **Sex** | Female | 795 (80.06%) | 4.14 ± 0.91 | 4.16 ± 0.90 | 3.50 ± 1.07 | 4.08 ± 0.88 |
| | Male | 198 (19.94%) | 3.97 ± 1.17 | 3.88 ± 1.22 | 3.56 ± 1.30 | 3.92 ± 1.16 |
| | | P value | 0.188 | 0.035 | 0.704 | 0.216 |
| **Family encouragement (Do you get motivation or encouragement from your family to learn Chinese?)** | Yes | 915 (92.15%) | 4.28 ± 0.78 | 4.27 ± 0.78 | 3.61 ± 1.07 | 4.20 ± 0.77 |
| | No | 78 (7.85%) | 2.45 ± 1.19 | 2.37 ± 1.22 | 2.35 ± 1.14 | 2.46 ± 1.23 |
| | | P value | < .001 | < .001 | < .001 | < .001 |
| **Interest in foreign learning languages** | Yes | 777 (78.25%) | 4.28 ± 0.78 | 4.27 ± 0.78 | 3.61 ± 1.07 | 4.20 ± 0.77 |
| | No | 48 (4.83%) | 2.45 ± 1.19 | 2.37 ± 1.22 | 2.35 ± 1.14 | 2.46 ± 1.23 |
| | Maybe | 168 (16.92%) | 3.60 ± 1.13 | 3.69 ± 1.16 | 3.35 ± 1.13 | 3.72 ± 1.07 |
| | | P value | < .001 | < .001 | < .001 | < .001 |

Based on the SDT-L2 scale, Table 2 provides detailed insights into the motivational orientations among elementary students learning Chinese. The overall mean score on the SDT-L2 scale was 3.94 ± 0.88. Intrinsic motivation emerged as the strongest, followed closely by identified motivation and external motivation, while introjected motivation ranked the lowest among the measured dimensions. For intrinsic motivation, the items' agreement rates ranged from 75.52% to 84.90%. A total of 84.90%

of participants agreed that 'Learning Chinese is fun'. The overall mean score for intrinsic motivation was 4.11 ± 0.96, indicating a generally high level of engagement driven by personal enjoyment and interest.

Under identified motivation, students consistently recognized the importance of Chinese for personal and professional growth, as reflected in agreement rates between 78.24% and 84.59%. The item "Learning Chinese is important for my future" had the highest agreement (84.59%). The overall mean for identified motivation was 4.10 ± 0.97, highlighting its strong influence.

Introjected motivation scores were more variable, with agreement rates ranging from 47.44% to 69.79%. The highest agreement was observed for "I learn Chinese because I want others to see I am capable" (69.79%). In contrast, the item "I feel pressure from others to learn Chinese" had the lowest agreement (47.44%). The overall mean score for introjected motivation was 3.51 ± 1.12, indicating a moderate level of motivation stemming from external pressures or internalized obligations.

External motivation showed relatively high agreement rates, ranging from 71.60% to 83.08%. The highest agreement was tied between "I learn Chinese because it will be useful for my job" and "I learn Chinese because I want to get a good job" (83.08%). The overall mean score for external motivation was 4.05 ± 0.94, underscoring the significant role of external incentives in students' motivation to learn Chinese.

**Table 2**: *Agreement rates and mean scores for motivational orientation constructs among elementary students*

| Construct | Item | Agreement Rate | Mean ± SD |
|---|---|---|---|
| **Intrinsic Motivation** | Because I enjoy learning Chinese. | 831 (83.68%) | 4.14 ± 1.03 |
| | Learning Chinese is fun. | 843 (84.90%) | 4.16 ± 1.01 |
| | I find learning Chinese to be a very stimulating activity. | 825 (83.08%) | 4.13 ± 1.04 |
| | I am really interested in learning Chinese. | 804 (80.97%) | 4.09 ± 1.02 |
| | Learning Chinese has a lot of personal meaning for me. | 750 (75.52%) | 4.01 ± 1.06 |
| | **Overall** | | 4.11 ± 0.96 |
| **Identified Motivation** | Because learning Chinese is important for my personal growth. | 792 (79.76%) | 4.05 ± 1.06 |
| | I am learning Chinese because I think it is good for me. | 828 (83.39%) | 4.12 ± 1.01 |
| | Learning Chinese is important for my future. | 840 (84.59%) | 4.20 ± 1.02 |
| | I think learning Chinese will help me achieve my career goals. | 786 (79.15%) | 4.11 ± 1.05 |
| | Learning Chinese is valuable for my life. | 777 (78.24%) | 4.03 ± 1.09 |
| | **Overall** | | 4.10 ± 0.97 |
| **Introjected Motivation** | I would feel ashamed if I couldn't learn Chinese. | 618 (62.23%) | 3.56 ± 1.34 |
| | I feel I should learn Chinese because it is what people expect. | 621 (62.54%) | 3.63 ± 1.24 |
| | I learn Chinese because I want others to see I am capable. | 693 (69.79%) | 3.79 ± 1.26 |
| | I learn Chinese to avoid feeling guilty. | 564 (56.80%) | 3.38 ± 1.36 |
| | I feel pressure from others to learn Chinese. | 471 (47.44%) | 3.20 ± 1.36 |
| | **Overall** | | 3.51 ± 1.12 |
| **External Motivation** | Because I need to pass the Chinese exams. | 789 (79.46%) | 4.02 ± 1.10 |
| | I study Chinese because it is required to graduate. | 711 (71.60%) | 3.88 ± 1.17 |
| | I learn Chinese because it will be useful for my job. | 825 (83.08%) | 4.15 ± 1.05 |
| | Learning Chinese is necessary for my degree. | 756 (76.13%) | 4.01 ± 1.13 |
| | I learn Chinese because I want to get a good job. | 825 (83.08%) | 4.18 ± 1.02 |
| | **Overall** | | 4.05 ± 0.94 |
| | Overall mean of SDT-L2 scale | | 3.94 ± 0.88 |

Table 3 shows the correlation matrix for motivational orientations, with all correlations being significant ($P < 0.05$). The highest correlation was between intrinsic and identified motivation ($r =$

0.84), followed by identified and external motivation (r = 0.75). Intrinsic and external motivation were moderately correlated (r = 0.70). Introjected motivation had weaker correlations with other constructs, ranging from 0.47 to 0.63. These results highlight strong links between intrinsic and identified motivations, while introjected motivation is more distinct.

**Table 3:** *Correlation matrix for motivational orientations constructs*

| Construct | Intrinsic Motivation | Identified Motivation | Introjected Motivation | External Motivation |
|---|---|---|---|---|
| **Intrinsic Motivation** | 1 | 0.84 | 0.47 | 0.7 |
| **Identified Motivation** | 0.84 | 1 | 0.52 | 0.75 |
| **Introjected Motivation** | 0.47 | 0.52 | 1 | 0.63 |
| **External Motivation** | 0.7 | 0.75 | 0.63 | 1 |

Table 4 presents the distribution of students based on the classification of mean scores for motivational orientation constructs. The largest proportion of students fell into the high motivation category for the overall scale (46.22%), followed by very high motivation (35.35%). Among individual constructs, the very high motivation category had the highest proportions for identified motivation (45.32%) and intrinsic motivation (44.11%). In contrast, introjected motivation had the lowest proportions in the very high motivation category (23.87%) and the highest in the moderate motivation range (17.52%). A smaller percentage of students exhibited very low motivation, particularly for introjected (3.93%) and external motivation (3.32%).

**Table 4:** *Student distribution based on classification of mean scores for motivational orientation constructs*

| Perception Category | Score Range | Intrinsic Motivation | Identified Motivation | Introjected Motivation | External Motivation | Overall Scale |
|---|---|---|---|---|---|---|
| **Very high motivation** | 4.21 - 5.00 | 146 (44.11%) | 150 (45.32%) | 79 (23.87%) | 139 (41.99%) | 117 (35.35%) |
| **High motivation** | 3.41 - 4.20 | 131 (39.58%) | 125 (37.76%) | 113 (34.14%) | 128 (38.67%) | 153 (46.22%) |
| **Moderate motivation** | 2.61 - 3.40 | 21 (6.34%) | 26 (7.85%) | 58 (17.52%) | 36 (10.88%) | 32 (9.67%) |
| **Low motivation** | 1.81 - 2.60 | 15 (4.53%) | 51 (15.41%) | 15 (4.53%) | 18 (5.44%) | 15 (4.53%) |
| **Very low motivation** | 1.00 - 1.80 | 15 (4.53%) | 30 (9.06%) | 13 (3.93%) | 11 (3.32%) | 15 (4.53%) |

Table 5 shows regression analysis results for predictors of higher motivational orientation, the overall mean SDT-L2 scale. Family encouragement was a strong positive predictor, with students receiving encouragement scoring significantly higher (Estimate = 1.09, P < 0.001). Similarly, interest in learning languages positively predicted motivation, with clear interest associated with the highest scores. In contrast, uncertain ("maybe") and no interest were linked to lower scores (Estimates = -0.41 and -1.29, respectively, P < 0.001). Sex was not a significant predictor (Estimate = -0.15, P = 0.147).

**Table 5:** *Predictors of higher motivational orientation based on regression analysis*

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| **Intercept** [a] | 4.19 | 0.05 | 84.29 | < .001 |
| **Sex:** | | | | |
| **Male – Female** | -0.15 | 0.1 | -1.45 | 0.147 |
| **Family Encouragement** | | | | |
| **No – Yes** | -1.09 | 0.16 | -6.61 | < .001 |

| | | | | |
|---|---|---|---|---|
| **Interest in Learning Languages** | | | | |
| **Maybe – Yes** | -0.41 | 0.11 | -3.76 | < .001 |
| **No – Yes** | -1.29 | 0.21 | -6.24 | < .001 |

## 4 Discussion

This study aimed to assess the motivational orientations of elementary students learning Chinese in Saudi Arabia using the SDT-L2 Scale. Understanding these orientations is essential for enhancing second language acquisition, particularly for Chinese, a language that holds growing global importance. Despite the increasing focus on Chinese language education in Saudi Arabia, research exploring motivational factors in this unique cultural and educational context remains limited. This study addresses this gap, providing insights into the types and levels of motivation that drive language learning among elementary students and offering valuable implications for educators, policymakers, and families.

The overall findings revealed that students demonstrated moderately high motivation (Mean = 3.94 ± 0.88), with a significant proportion classified as having high (46.22%) or very high (35.35%) motivation. Among the predictors of motivation, family encouragement emerged as the strongest influence, significantly associated with higher motivation scores ($P < 0.001$). This is consistent with prior studies in language learning contexts that highlight the vital role of family support in motivating students to persevere in learning challenging languages, particularly in collectivist cultures where familial expectations heavily influence educational choices (Gardner & Lambert, 1972; McEown & Oga-Baldwin, 2019). Interest in language learning was another significant predictor, with students reporting clear interest achieving higher motivation, while those expressing uncertainty or disinterest scored lower ($P < 0.001$). This aligns with findings showing that intrinsic interest and curiosity about language learning are powerful drivers of motivation and engagement (Howard et al., 2021). Furthermore, consistent with SDT, intrinsic motivation emerged as the most significant dimension, followed by identified and external motivation, while introjected motivation was the least influential (Litalien et al., 2017; Ryan & Deci, 2017).

The study identified intrinsic motivation as the highest-scoring construct (Mean = 4.11 ± 0.96), reflecting the students' strong enjoyment and personal satisfaction in learning Chinese (Alamer, 2021; Joe et al., 2017; Noels et al., 2008). This aligns with the central premise of SDT, which positions intrinsic motivation—defined by inherent interest and the joy of the activity itself—as the most autonomous and self-sustaining form of motivation (Ryan & Deci, 2017). The highest agreement reported for the item "Learning Chinese is fun" (84.90%) highlights the significance of creating an engaging and enjoyable language learning experience. This finding is supported by prior studies that emphasize the role of intrinsic enjoyment in predicting language learners' perseverance, higher academic achievement, and positive emotional engagement with the learning process (Howard et al., 2021; McEown & Oga-Baldwin, 2019). Additionally, intrinsic motivation has been shown to play a critical role in fostering long-term retention of second languages, as it aligns with learners' innate psychological needs for autonomy, competence, and relatedness (Litalien et al., 2017).

Identified motivation emerged as the second highest-scoring construct (Mean = 4.10 ± 0.97), underscoring students' recognition of the personal and professional value of learning Chinese (Alamer, 2021; Lou et al., 2017; Takahashi & Im, 2020). The high agreement for the item "Learning Chinese is important for my future" (84.59%) illustrates the prevalence of goal-oriented

motivation. These findings align with prior studies emphasizing the role of identified motivation in language learning, particularly when students associate language proficiency with achieving long-term life goals (Litalien et al., 2017; Ryan & Deci, 2017; Slimane, 2018). Moreover, research has shown that identified motivation contributes significantly to persistence and performance in language learning contexts, as it bridges extrinsic and intrinsic motivations by fostering a sense of ownership and alignment with personal values (Alizadeh, 2016; Howard et al., 2021).

Introjected motivation was identified as the lowest-scoring construct in this study (Mean = 3.51 ± 1.12), indicating that while some students might engage in language learning due to feelings of guilt, obligation, or pressure, this form of motivation was less prominent compared to others. Introjected motivation reflects a controlled form of extrinsic motivation, where actions are driven by internal pressures rather than autonomous choice (Ryan & Deci, 2017). This aligns with prior findings that introjected motivation often yields weaker learning outcomes and lower persistence compared to more self-determined forms of motivation (Howard et al., 2021; Lamb, 2017). Strategies to address this include fostering supportive, autonomy-promoting environments that emphasize intrinsic enjoyment and personal relevance (Muñoz-Restrepo et al., 2020; Woodrow, 2017).

External motivation, while extrinsic in nature, was observed to be a moderately high-scoring construct in this study (Mean = 4.05 ± 0.94), highlighting the importance of external rewards such as career opportunities and societal expectations in motivating students to learn Chinese (Rahman et al., 2022; Yang & Lou, 2024). The items "I learn Chinese because it will be useful for my job" (83.08%) and "I learn Chinese because I want to get a good job" (83.08%) received the highest levels of agreement. These findings align with studies showing that instrumental motivations, such as securing employment and fulfilling societal roles, are significant factors influencing students' decision to learn a second language (Howard et al., 2021; Lamb, 2017). Educational strategies can enhance external motivation while encouraging a transition to more autonomous forms by emphasizing real-world applications and career relevance (Mantiri, 2015).

Family encouragement was identified as the strongest predictor of motivation in this study (Estimate = 1.09, $P < 0.001$), significantly influencing students' intrinsic, identified, and even introjected motivation. This finding aligns with prior research emphasizing the critical role of familial support in fostering language-learning motivation, particularly in collectivist cultures where parental involvement often shapes students' educational aspirations and perseverance (Al-Hoorie et al., 2022; Gardner & Lambert, 1972; Iwaniec, 2016). Encouraging parental involvement has been shown to create a supportive environment that enhances students' motivation by instilling a sense of purpose and responsibility toward their language-learning goals (Rahman et al., 2017). The role of family in sustaining motivation is particularly evident in environments where language learning is viewed as a means of securing future career opportunities or fulfilling cultural expectations. Studies indicate that parents who communicate positive attitudes toward language learning, provide verbal encouragement, and actively engage with their children's education foster stronger intrinsic and identified motivation among students (Escobar Fandino et al., 2019; Mantiri, 2015). Suggested interventions include hosting parental engagement workshops and providing resources for at-home language activities to deepen family involvement (Thohir, 2017). Addressing the pivotal role of family encouragement ensures a robust foundation for fostering sustained motivation in language learning.

Interest in learning languages emerged as a strong predictor of motivation, with students expressing clear interest achieving higher motivation scores,

while those with uncertain or no interest scored the lowest ($P < 0.001$). Research emphasizes that curiosity about language and culture drives higher engagement and persistence in learning (Ryan & Deci, 2017). Strategies for sustaining interest include interactive methods such as gamification, cultural exposure, and real-world language applications (Harvey, 2017; Muñoz-Restrepo et al., 2020).

The study identified a significant gender difference in identified motivation, with females scoring higher than males ($P = 0.035$). This difference may be attributed to sociocultural factors, as females often view language learning as a means for empowerment and career opportunities (Rahman et al., 2017). However, the absence of significant gender differences in other constructs suggests that motivational strategies can be uniformly applied across genders.

Strong correlations were observed between intrinsic and identified motivation ($r = 0.84$), underscoring their complementary roles in fostering engagement and achievement. Moderate correlations between identified and external motivation ($r = 0.75$) highlight the coexistence of practical and personal goals. Weaker correlations with introjected motivation ($r = 0.47–0.63$) reinforce its distinct nature as a less self-determined construct (Howard et al., 2021). Educators should aim to transition students from less self-determined forms of motivation, such as external and introjected, to more autonomous motivations (Harvey, 2017).

**Pedagogical Implications:**

Based on the study's findings, several pedagogical strategies can enhance motivation among elementary students learning Chinese. Teachers should incorporate culturally relevant content that connects language learning to students' daily lives and interests, making lessons more engaging and meaningful. Promoting autonomy through student choice in topics or activities can strengthen intrinsic motivation. Interactive and project-based learning—such as storytelling, role-playing, and real-world tasks—helps maintain interest and enjoyment. Family involvement should be encouraged through take-home language tasks that foster support beyond the classroom. Consistent, effort-based feedback can build students' confidence and reinforce positive learning behaviors. These approaches offer practical guidance for designing classroom environments that support sustained motivation and effective language acquisition.

**Limitations and Future Research Directions**

This study has several limitations. Its cross-sectional design restricts causal interpretations, and reliance on self-reported data may introduce response bias. Additionally, while the study identified gender differences in identified motivation, it did not explore the underlying sociocultural factors contributing to these differences. Future research should employ longitudinal designs to assess how motivational orientations evolve over time and examine the impact of targeted interventions. Qualitative approaches may also help uncover how cultural values, gender norms, and family expectations shape students' motivational profiles. Expanding the sample to include more diverse educational settings would enhance generalizability. Further investigation into the roles of teacher practices, peer interactions, and classroom climate is also warranted.

## 5 Conclusion

This study examined the motivational orientations of elementary students in Saudi Arabia learning Chinese, revealing moderately high motivation levels. The key findings indicate that intrinsic and identified motivations were the most prominent drivers of engagement, with family encouragement and personal interest emerging as the strongest predictors. Female students showed significantly higher levels of identified motivation, suggesting possible sociocultural influences. Introjected motivation was the least influential and showed

weaker associations with other motivation types. These results highlight the importance of fostering autonomous forms of motivation through supportive environments, culturally relevant instruction, and sustained family involvement to enhance students' engagement and success in second language acquisition.

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**References:**


Aatif, M. (2022). Attitude and motivation of arab learners learning chinese language in china. *International Journal of Chinese Education*, *11*(1), 2212585X221089103. https://doi.org/10.1177/2212585x221089103

Al-Hoorie, A. H., Oga-Baldwin, W. L. Q., Hiver, P., & Vitta, J. P. (2022). Self-determination mini-theories in second language learning: A systematic review of three decades of research. *Language Teaching Research*, *29*(4), 1603-1638. https://doi.org/10.1177/1362168822110268 6

Al-Nahdi, Y. A. A., & Zhao, S. (2022). Learning Arabic language in China: Investigation on instrumental and integrative motivations of Chinese Arabic learners. *Technium Social Sciences Journal*, *27*, 767-797. https://doi.org/10.47577/tssj.v27i1.5369

Al Roomy, M. A. (2022). Chinese language teaching in a Saudi context: A brief review. *International Conference on Multidisciplinary Research*, 130–138. https://doi.org/10.26803/myres.2022.10

Alalwi, F. S. (2025). Saudi students' attitudes towards Chinese as a foreign language. *Forum for Linguistic Studies*, *7*(5), 1033–1042. https://doi.org/10.30564/fls.v7i5.9488

Alamer, A. (2021). Basic psychological needs, motivational orientations, effort, and vocabulary knowledge. *Studies in Second Language Acquisition*, *44*(1), 164–184. https://doi.org/10.1017/s027226312100005x

Alamer, A., & Lee, J. (2019). A motivational process model explaining L2 Saudi students' achievement of English. *System*, *87*, 102133. https://doi.org/10.1016/j.system.2019.102133

Alizadeh, M. (2016). The impact of motivation on English language learning. *International Journal of Research*, *1*(1), 11–15.

Comanaru, R., & Noels, K. A. (2009). Self-determination, motivation, and the learning of Chinese as a heritage language. *The Canadian Modern Language Review*, *66*(1), 131–158. https://doi.org/10.3138/cmlr.66.1.131

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi.org/10.1207/s15327965pli1104_01

Escobar Fandino, F. G., Munoz, L. D., & Silva Velandia, A. J. (2019). Motivation and e-learning English as a foreign language: A qualitative study. *Heliyon*, *5*(9), e02394. https://doi.org/10.1016/j.heliyon.2019.e02394

Fathali, S., & Okada, T. (2016). A self-determination theory approach to technology-enhanced out-of-class language learning intention: A case of Japanese EFL learners. *International Journal of Research Studies in Language Learning*, *6*(4). https://doi.org/10.5861/ijrsll.2016.1607

Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and motivation in second-language learning*. Newbury House.

Harvey, L. (2017). Language learning motivation as ideological becoming. *System*, *65*, 69-77.

https://doi.org/10.1016/j.system.2016.12.009

Howard, J. L., Bureau, J., Guay, F., Chong, J. X. Y., & Ryan, R. M. (2021). Student motivation and associated outcomes: A meta-analysis from self-determination theory. *Perspectives on Psychological Science, 16*(6), 1300–1323. https://doi.org/10.1177/1745691620966789

Iwaniec, J. (2016). Parents and their role in language learning motivation. *EuroSLA 26: The European Second Language Association Conference*, University of Jyväskylä, Jyväskylä, Finland.

Joe, H.-K., Hiver, P., & Al-Hoorie, A. H. (2017). Classroom social climate, self-determined motivation, willingness to communicate, and achievement: A study of structural relationships in instructed second language settings. *Learning and Individual Differences, 53*, 133-144. https://doi.org/10.1016/j.lindif.2016.11.005

Kim, H.-i. (2023). The effect of L2 self-guides and autonomous motivation on L2 motivated behavior. *SAGE Open, 13*(4). https://doi.org/10.1177/21582440231204156

Lamb, M. (2017). The motivational dimension of language teaching. *Language Teaching, 50*(3), 301-346. https://doi.org/10.1017/s0261444817000088

Landry, R., Allard, R., & Deveau, K. (2009). Self-determination and bilingualism. *Theory and Research in Education, 7*(2), 203-213. https://doi.org/10.1177/1477878509104325

Liao, J., An, N., & Zheng, Y. (2020). What motivates L3 learners' investment and/or divestment in Arabic? Understanding learning motivation in terms of "identity". *Círculo de Lingüística Aplicada a la Comunicación, 84*, 27–39. https://doi.org/10.5209/clac.71993

Litalien, D., Morin, A. J. S., Gagné, M., Vallerand, R. J., Losier, G. F., & Ryan, R. M. (2017). Evidence of a continuum structure of academic self-determination: A two-study test using a bifactor-ESEM representation of academic motivation. *Contemporary Educational Psychology, 51*, 67-82. https://doi.org/10.1016/j.cedpsych.2017.06.010

Lou, N. M., Chaffee, K. E., Vargas Lascano, D. I., Dincer, A., & Noels, K. A. (2017). Complementary perspectives on autonomy in self-determination theory and language learner autonomy. *TESOL Quarterly, 52*(1), 210–220. https://doi.org/10.1002/tesq.403

Mantiri, O. (2015). Principles in language learning motivation. *Linguistics and Literature Studies, 3*(2), 70–74. https://doi.org/10.13189/lls.2015.030206

McEown, M. S., & Oga-Baldwin, W. L. Q. (2019). Self-determination for all language learners: New applications for formal language education. *System, 86*. https://doi.org/10.1016/j.system.2019.102124

Muñoz-Restrepo, A., Ramirez, M., & Gaviria, S. (2020). Strategies to enhance or maintain motivation in learning a foreign language. *Profile: Issues in Teachers´ Professional Development, 22*(1), 175–188. https://doi.org/10.15446/profile.v22n1.73733

Noels, K. A., Pelletier, L. G., Clément, R., & Vallerand, R. J. (2008). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning, 50*(1), 57–85. https://doi.org/10.1111/0023-8333.00111

Rahman, F., Mahmud, I., Jiang, B., & Sarker, K. (2022). Extending the theory of planned behavior: A case of learning Chinese as a third language. *International Journal of Instruction, 15*(1), 945–964. https://doi.org/10.29333/iji.2022.15154a

Rahman, H. A., Rajab, A., Wahab, S. R. A., Nor, F. M., Zakaria, W. Z. W., & Badli, M. A. (2017). Factors affecting motivation in language learning. *International Journal of Information and Education Technology, 7*(7), 543–547. https://doi.org/10.18178/ijiet.2017.7.7.927

Rahmanpanah, H. (2017a). Investigating teachers' communicative styles in EFL context: A self-determination theory perspective. *Journal of Applied Linguistics and Language Research, 4*, 268-289.

Rahmanpanah, H. (2017b). Self-determination theory as a grand theory of motivation in EFL classroom. *Journal of Applied Linguistics and Language Research, 4*(6), 153-164.

Ryan, R. M., & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Press. https://doi.org/10.1521/978.14625/

Shelton-Strong, S. J. (2020). Advising in language learning and the support of learners' basic psychological needs: A self-determination theory perspective. *Language Teaching Research, 26*(5), 963-985. https://doi.org/10.1177/1362168820912355

Slimane, M. B. (2018). Investigating motivation in language learning among university students. https://doi.org/10.17169/refubium-24158

Takahashi, C., & Im, S. (2020). Comparing self-determination theory and the L2 motivational self system and their relationships to L2 proficiency. *Studies in Second Language Learning and Teaching, 10*(4), 673-696. https://doi.org/10.14746/ssllt.2020.10.4.2

Tanaka, M. (2016). Developing and evaluating a questionnaire to measure EFL learners' vocabulary learning motivation. In Q. Zhang (Ed.), *Pacific Rim objective measurement symposium (PROMS) 2015 conference proceedings* (pp. 351–368). https://doi.org/10.1007/978-981-10-1687-5_23

Thohir, L. (2017). Motivation in a foreign language teaching and learning. *Vision: Journal for Language and Foreign Language Learning, 6*(1), 20–29. https://doi.org/10.21580/vjv6i11580

Wenjia, L., & Mengfan, Z. (2021). Chinese language teaching in Saudi: Status analysis, problems and countermeasures. *2021 6th International Conference on Modern Management and Education Technology (MMET 2021)*, 237–241. https://doi.org/10.2991/assehr.k.211011.041

Woodrow, L. (2017). Motivation in language learning. In R. Breeze & C. Sancho Guinda (Eds.), *Essential competencies for English-medium university teaching* (pp. 235–248). Springer International Publishing. https://doi.org/10.1007/978-3-319-40956-6_16

Yang, J., & Lou, K. (2024). Psychological determinants and technology acceptance in mobile learning for overseas students studying Chinese in China: A self-determination theory perspective. *Learning and Motivation, 86*, 101986. https://doi.org/10.1016/j.lmot.2024.101986