

Research Article

LANGUAGE XP: A MULTIMEDIA-PSYCHOLOGICAL INTERVENTION FOR ENHANCING FOREIGN LANGUAGE MOTIVATION IN YOUTH

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Received 01st September 2025; Accepted 02nd October 2025; Published online 20th November 2025

ABSTRACT

This study investigates the effectiveness of Language XP, a multimedia-psychological intervention designed to enhance university students' motivation for learning English as a foreign language. Conducted at Dragomanov Ukrainian State University, the study employed a quasi-experimental, pre-test/post-test design involving 49 undergraduate students aged 17–21, divided into experimental and control groups. The intervention, delivered over 12 weeks, integrated virtual reality, gamification, AI personalisation, psycho education, and psychological support across five motivational domains: cognitive, emotional, social, educational-methodological, and behavioural. Quantitative data were collected using validated motivation assessment tools, and qualitative insights were gathered through focus group interviews. Statistical analyses, including Wilcoxon signed-rank tests and effect size calculations, demonstrated significant improvements in all motivational domains for the experimental group ($p < .001$, Cohen's $d = .76-.91$), while no meaningful changes were observed in the control group. Visualised shifts in motivation levels confirmed a reduction in low-engagement profiles and a substantial increase in high-motivation indicators. Correlational analyses also revealed increased structural integration across motivational domains following the intervention. Thematic analysis of qualitative data supported the quantitative findings, highlighting improvements in confidence, emotional regulation, and behavioural engagement. The results underscore the practical and pedagogical value of Language XP as a systemic intervention for enhancing language learning motivation in emerging adults. The study contributes to the growing body of research advocating for holistic, technology-enhanced, and psychologically informed approaches in foreign language education. Implications for future implementation and directions for further research are discussed.

Keywords: Foreign language motivation, multimedia intervention, university students aged 17-21, psychological support in education.

INTRODUCTION

In the era of global communication and technological advancement, foreign language acquisition has become a fundamental educational goal. Yet, despite the growing need for multilingual proficiency, many students – particularly those aged 17 to 21 – struggle to maintain motivation in traditional language learning environments (Lapadat, & Lapadat, 2023; Makukhina, 2024). This developmental stage, often referred to as “emerging adulthood,” is marked by identity formation, increased autonomy, and heightened sensitivity to the relevance of learning tasks (Arnett, 2000; Santrock, 2016). Motivation, particularly intrinsic motivation, plays a decisive role in language learning success, directly influencing students' engagement, resilience, and long-term achievement (Vansteenkiste *et al.*, 2017; Urhahne & Wijnia, 2023).

However, the conventional methods of foreign language instruction often fall short of addressing the psychological and cognitive needs of today's youth. A growing body of research in educational psychology and pedagogy emphasises that learning environments must be emotionally supportive, socially engaging, and cognitively stimulating to foster sustained motivation (Pekrun *et al.*, 2007; Kohnke & Moorhouse, 2025; Li *et al.*, 2025). Emotional regulation, perceived competence, and meaningful social interaction are especially vital in reducing language anxiety and promoting a growth-oriented mindset (Fattahi Marnani & Cuocci, 2022; Othman, 2025; Stark *et al.*, 2018). Simultaneously, the increasing digitalisation of education offers new pathways for innovation in motivational strategies. Interactive, gamified, and multimedia-rich formats have been shown to increase

learner engagement and make abstract language content more personally relevant and emotionally resonant (Aayushi & Kamboj, 2024; Jiang *et al.*, 2025; Nozhovnik *et al.*, 2023). Nonetheless, few educational interventions systematically integrate psychological theory with multimedia technology in a way that is tailored to the motivational dynamics of youth in higher education. To address this gap, the current study presents Language XP, a multimedia-psychological intervention programme specifically designed to enhance motivation for learning foreign languages among university students aged 17–21. Grounded in cognitive-behavioral and humanistic learning theories, and aligned with the principles of self-determination theory (Ryan & Deci, 2017), the Language XP program creates immersive learning environments using simulations, gamification, and real-time feedback. The intervention fosters internal motivation by fulfilling students' needs for autonomy, competence, and social connection aligning with motivational frameworks proposed by Yu and Wang (2025) and Porter and Castillo (2023). This article outlines the theoretical foundations, structural components, and implementation framework of the Language XP programme, developed and piloted in Ukrainian universities. Drawing upon both national and international research, we explore how psychologically informed, technology-enhanced instruction can serve as a catalyst for motivational transformation in young language learners.

The present study aims to evaluate the effectiveness of the Language XP programme – a multimedia-psychological intervention designed to enhance foreign language learning motivation among university students aged 17–21 – by comparing outcomes between an experimental group (EG) and a control group (CG). Specifically, the study investigates whether the intervention significantly improved the EG students' motivation across five key dimensions: cognitive, emotional, social, educational-methodological, and behavioural components related to English language learning.

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LITERATURE REVIEW

Motivation in Foreign Language Acquisition

Motivation is widely recognised as a central factor in successful foreign language acquisition. It not only initiates learning behaviour but also sustains effort over time (Zhong, 2024). In the context of university education, motivation encompasses intrinsic elements (such as enjoyment and self-efficacy) and extrinsic elements (such as grades and career prospects), both of which can vary based on linguistic, cultural, and pedagogical contexts (Zhang, 2025). Notably, intrinsic motivation – fuelled by personal interest, autonomy, and perceived competence – has been associated with higher levels of engagement, language retention, and communicative confidence. A comparative study among Chinese students revealed significant variation in motivational levels across language majors, with English and Japanese learners showing the highest motivation and Russian and Korean majors the lowest (Zhang, 2025). These differences suggest the need for interventions that are culturally sensitive and psychologically adaptive, rather than one-size-fits-all.

Multimedia Tools and Technology Integration

The integration of multimedia tools in language education has shown considerable promise in enhancing student motivation and autonomy. Brutman *et al.*, (2024) found that the use of multimedia materials – videos, animations, and interactive simulations – not only increased learner interest and self-directed behaviour but also contributed to improved classroom dynamics and greater student satisfaction. Importantly, multimedia usage appears to redefine teacher-student roles, encouraging more active learner participation. Similarly, Dibrova *et al.*, (2025) emphasised that in the era of digitalisation, the alignment of multimedia innovations with pedagogical objectives is essential for fostering communicative competence in students. These tools, when properly implemented, create immersive learning environments that reflect real-world communication contexts and accommodate diverse learning styles.

Psychological Interventions and Emotional Support

Beyond technological enhancements, psychological support plays a critical role in language motivation. Emotional regulation, self-confidence, and perceived relevance of tasks are all modifiable factors that affect learner outcomes (Zhong, 2024). Porter & Sofia Castillo (2023) demonstrated that immersive virtual reality (VR) environments significantly reduced language anxiety and enhanced speaking confidence among university students, highlighting the role of emotional engagement in facilitating language acquisition. Furthermore, the integration of psychological principles – such as autonomy-supportive feedback, task relevance, and stress reduction techniques – has been shown to reinforce students' internal motivation (Jiang *et al.*, 2025). This aligns with self-determination theory, which posits that motivation flourishes when learners' psychological needs for autonomy, competence, and relatedness are met (Ryan & Deci, 2017). Despite the growing body of research, few interventions systematically combine multimedia tools with structured psychological support.

METHODOLOGY

Research Design

This study employed a quasi-experimental, pre-test/post-test design with non-randomized control and experimental groups to evaluate the effectiveness of the Language XP programme – a multimedia-

psychological intervention aimed at enhancing motivation for learning English as a foreign language among students aged 17–21 at Dragomanov Ukrainian State University. The intervention was implemented over a 12-week period, integrating immersive multimedia tools, psychological support, and individualised learning strategies aligned with the principles of experiential and humanistic learning.

Participants

Two target groups were formed using convenience sampling, allowing the intervention to be implemented within a naturalistic educational setting while preserving experimental logic. The control group (CG) consisted of 26 undergraduate students (20 female, 6 male) majoring in Journalism (Specialty 061) in the field of "Journalism." The experimental group (EG) included 23 undergraduate students (19 female, 4 male) studying Psychology (Specialty 054) within the field of "Social and Behavioural Sciences." Both groups were statistically comparable at baseline in key characteristics, as shown in Table 1.

Table 1. Descriptive Statistics for Experimental and Control Groups

Group	Mean Age (±SD)	Gender (F/M)	GPA (100-point scale ±SD)	CEFR Level	Prior Multimedia Use (%)	Motivation Index (Pre) (±SD)
EG	19.9 ± 1.2	19 / 4	84.3 ± 4.52	B1.1	78.26%	4.2 ± 0.6
CG	20.1 ± 1.3	20 / 6	83.7 ± 3.22	B1.2	73.07%	4.1 ± 0.7

Intervention Procedure: Language XP Programme

The Language XP programme was delivered over a 12-week period, with 60 additional instructional hours integrated into the university's standard 180-hour English language curriculum. The intervention targeted five motivational domains – cognitive, emotional, social, behavioural, and methodological – through a series of structured, psychologically-informed, and multimedia-supported modules. Each module incorporated specific tools and techniques as follows:

1. VR-Communicative Module: students engaged in immersive VR sessions and AI-driven language simulations, including role-based dialogues with adaptive feedback. These scenarios were designed to increase authentic communicative practice while reducing performance anxiety.
2. Gamified Practice Module: learners participated in gamified exercises, language quests, and creative language challenges, fostering active engagement and cognitive flexibility.
3. Reflective Module: emotional awareness and motivation were reinforced through emotional journaling, self-report questionnaires, and group reflection via interactive text-based platforms.
4. AI-Personalisation Module: students completed individualised tasks that adapted in real time to learner progress and proficiency level, enhancing autonomy and self-efficacy.
5. Social Language Hubs: the programme integrated online discussions, collaborative presentations, and peer dialogues with native speakers, building social motivation and cross-cultural competence.
6. Psycho-Training Sessions: participants attended goal-setting workshops and coaching sessions, focusing on internal motivational strategies and academic resilience.

7. Weekly Master classes: interactive workshops on emotional regulation, motivation, and goal clarification were conducted to deepen psychological insight and meta-cognitive awareness.
8. Psychological Support Module: the programme offered access to counselling services, CBT-based group sessions, and individual support for students experiencing language anxiety or low confidence.

These modules were carefully sequenced to build cumulative motivational impact and promote sustainable behavioural change. All intervention activities were supervised by trained language instructors and psychologists, ensuring alignment with pedagogical and therapeutic goals. The intervention was thematically integrated into the four-course modules, with motivation domain-specific goals: cognitive, emotional, social, behavioural, and methodological. The Control Group continued learning English through traditional instruction methods, without access to Language XP features, psychological support, or gamified content.

Variables and Instruments

The evaluation of the Language XP programme was based on a set of quantitative and qualitative instruments, selected to assess changes in foreign language learning motivation across five core domains: cognitive, emotional, behavioural, social, and methodological.

Quantitative Instruments

The quantitative toolset consisted of the following components: 1) *Motivation Self-Assessment Questionnaire* which measured the type of motivation (intrinsic, extrinsic, amotivation) and the level of academic engagement; 2) *Foreign Language Anxiety Scale* which assessed levels of affective discomfort and anxiety associated with language learning; 3) *Motivational Profile Inventory* which captured the orientation, stability, and flexibility of students' motivational structure over time; 4) *Author-Designed Motivation to Learn Foreign Languages Scale* that was focused on three sub domains: cognitive motivation, emotional-affective engagement, and educational-methodological attitudes toward language learning; 5) *Behavioural Checklist* that was used by observers to record visible indicators of motivational engagement, such as initiative, persistence, and participation in language tasks; 6) *Technological Readiness Test* which evaluated students' digital competence and their comfort using multimedia tools for educational purposes; 7) *Academic Achievement Records* - GPA scores were analysed as a complementary indicator of how motivation correlated with language learning outcomes; and 8) *Multimedia Usage Questionnaire* that identified motivational triggers and barriers related to the use of digital educational technologies. All tools demonstrated adequate reliability (Cronbach's α ranging from .80 to .93). Pre- and post-intervention data were collected to track motivational shifts over time.

Qualitative Instruments

To ensure a deeper, triangulated assessment of programme efficacy, qualitative methods were added during the final stage of the study:

- Zoom-based Focus Groups
- Conducted with participants from the experimental group to collect subjective reflections on motivation, confidence, and perceived transformation.
- Open-Ended Surveys and Post-Training Questionnaires
- Analysed using content analysis to identify recurring patterns in emotional response and cognitive insight.

Thematic coding of interview transcripts was administered to reveal individual trajectories of motivational change and identified indirect effects of the intervention, such as increased self-awareness or shifts in group identity. This mixed-methods approach enabled a comprehensive understanding of both measurable outcomes and personal experiences, strengthening the validity of the findings.

Data Collection and Analysis

Data were collected at two time points – pre-intervention and post-intervention – from both the experimental and control groups. A mixed-methods approach was employed, integrating both quantitative and qualitative procedures. Quantitative data were processed using *Jamovi* (Version 2.2.6). Descriptive statistics were computed for all variables, and group differences were assessed using Mann–Whitney U tests and Kruskal–Wallis H tests, appropriate for non-parametric data. Intra-group dynamics were explored through Spearman's rank correlation and multiple regression analyses to identify predictors of motivational change over time. Given the relatively small sample sizes and the ordinal structure of several instruments (Likert-type scales), non-parametric statistical methods were deemed most suitable for analysis. Specifically, the Wilcoxon signed-rank test was used to evaluate within-group differences (pre- and post-intervention) across the five motivational domains for the experimental group. This test is robust when normality assumptions are violated and is commonly applied to paired data. To confirm the appropriateness of this approach, the Shapiro–Wilk test for normality was conducted for all dependent variables. Although distributions were approximately symmetrical, minor deviations from normality warranted the use of non-parametric techniques. For cross-validation, paired-samples t-tests were additionally performed, and the results converged with those of the Wilcoxon test, reinforcing the reliability of the intervention outcomes. Between-group differences in post-intervention scores were examined using the Mann–Whitney U test, a non-parametric alternative to the independent-samples t-test, suitable for comparing independent samples with non-normal distributions. Qualitative analysis involved thematic coding of transcripts from focus group interviews conducted with selected participants from the experimental group. These discussions, held in Ukrainian, explored students' subjective experiences with the Language XP programme, including changes in motivational confidence, emotional responses, and the perceived effectiveness of VR- and AI-based learning components. All research procedures conformed to ethical standards for studies involving human participants and were formally approved by the Scientific Council of the Department of Theoretical and Counselling Psychology at Dragomanov Ukrainian State University.

RESULTS AND EVALUATION

The Language XP programme led to a statistically and practically significant improvement in students' motivation to learn English across all five assessed domains in the experimental group (EG), compared to the control group (CG), which showed no such trend. At baseline, both groups were statistically comparable in terms of their motivation levels across cognitive, emotional, social, educational-methodological, and behavioural domains. However, following the 12-week intervention, the EG demonstrated substantial shifts in motivational profiles.

Domain-Specific Changes

A comparative analysis using Wilcoxon signed-rank tests confirmed that the EG experienced significant improvements in all five motivational domains ($p < .001$), whereas the CG did not exhibit statistically significant changes (all $p > .47$). Cohen's d values

ranged from 0.76 to 0.91 in the EG, indicating medium to large effect sizes. Table 2 summarises these dynamics:

Table 2. Motivational Domain Dynamics Before and After the Language XP Intervention

Domain	Group	Z	p	Significance	Cohen's d	Effect Size
Cognitive	EG	-3.495	<.001	Significant	0.91	Large
	CG	-0.711	.476	Not Significant	0.05	Negligible
Emotional	EG	-4.112	<.001	Significant	0.87	Medium/Large
	CG	-0.622	.531	Not Significant	0.05	Negligible
Social	EG	-3.781	<.001	Significant	0.79	Medium
	CG	-0.587	.552	Not Significant	0.04	Negligible
Educational-Methodological	EG	-3.669	<.001	Significant	0.76	Medium
	CG	-0.578	.562	Not Significant	0.03	Negligible
Behavioural	EG	-3.845	<.001	Significant	0.81	Medium
	CG	-0.552	.591	Not Significant	0.03	Negligible

Distributional Shifts Across Motivational Levels

A distribution chart (Figure 1) visualised changes in students' motivational development levels – basic, intermediate, and high – before and after the intervention. In the EG, the proportion of students with high-level motivation increased by an average of 19.19% across domains, while the proportion at the basic level decreased significantly. In contrast, the CG showed minimal or contradictory changes; in some domains (e.g., emotional and social), the basic level even increased.

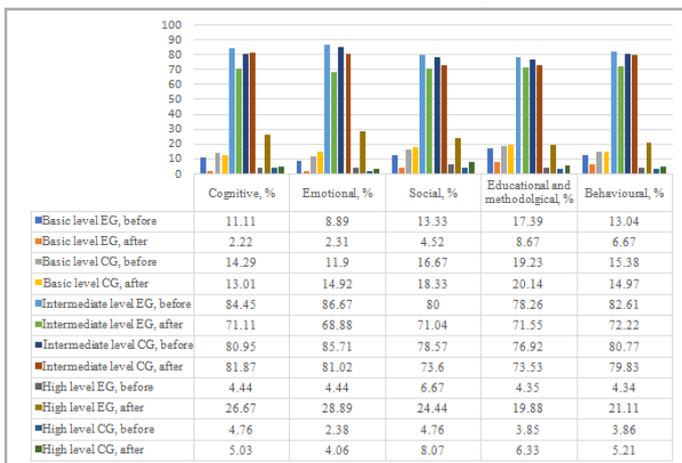


Figure 1. Comparative dynamics of motivational development levels in the experimental group (EG) and control group (CG) before and after the Language XP intervention across five motivational domains: Cognitive, Emotional, Social, Educational-Methodological, and Behavioural.

The comparative analysis presented in Figure 1 highlights a substantial improvement in motivational development among students in the experimental group (EG) following the implementation of the Language XP programme. In the cognitive domain, the proportion of students demonstrating a high level of motivation increased from 4.44% to 26.67%. In the emotional domain, this figure rose from

4.44% to 28.89%, indicating a marked enhancement in emotional engagement and resilience. Similarly, the social domain saw an increase in high-level motivation from 6.67% to 24.44%, reflecting improved interpersonal communication and group collaboration. In the educational-methodological domain, the share of students reaching a high motivational level grew from 4.35% to 19.88%, suggesting greater strategic involvement in learning processes. Lastly, the behavioural domain showed an increase from 4.34% to 21.11%, indicating stronger learning habits and active participation. These changes point to a systemic and multidimensional impact of the intervention on student motivation.

Inter domain Correlation Strengthening

A post-intervention correlation matrix (Figure 2) illustrated strengthened interrelationships between motivational domains in the EG.

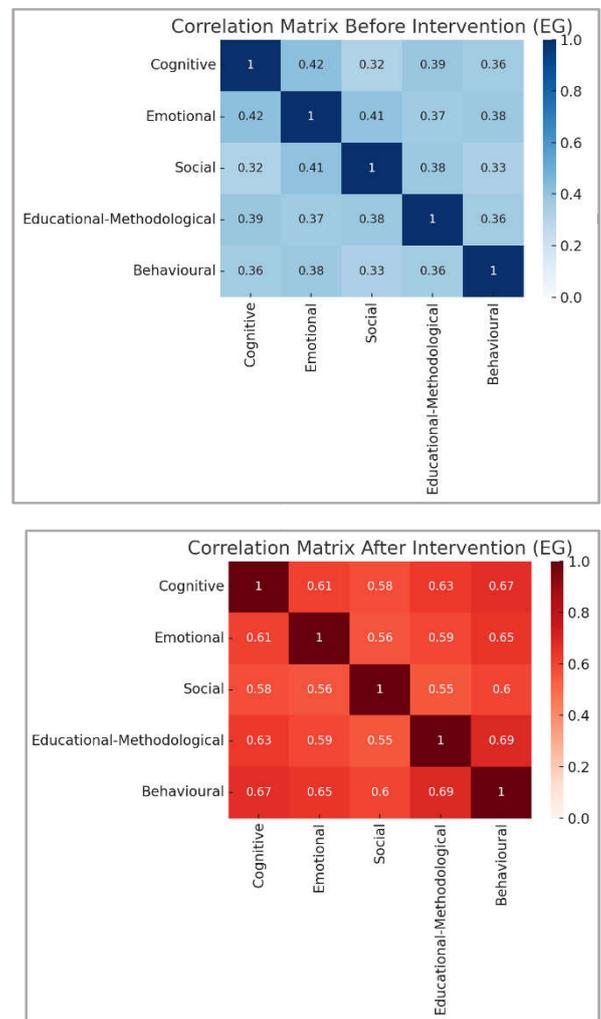


Figure 2. Correlation Matrix of Motivational Domains in the Experimental Group Before and After the Pedagogical Intervention

As can be seen in Figure 2, the left heat map illustrates the pre-intervention correlations among the five motivational domains: cognitive, emotional, social, educational-methodological, and behavioural. As shown, the correlations were moderate at best, with the strongest relationship between the emotional and social domains ($r = .41$). The right heat map shows the post-intervention correlations. The motivational system in the experimental group became more structurally integrated, with stronger inter-domain relationships. Notably: cognitive-behavioural increased from

$r = .36$ to $r = .67$; educational-methodological-behavioural rose from $r = .36$ to $r = .69$; and emotional-educational-methodological grew from $r = .37$ to $r = .59$. These findings suggest that the Language XP intervention not only elevated individual motivational domains but also strengthened the internal cohesion and systemic organisation of students' motivational structures.

Qualitative Findings: Thematic Analysis of Participant Reflections

To deepen the evaluation of the Language XP intervention, a qualitative analysis was conducted based on open-ended responses from participants in the experimental group. The primary source of qualitative data was a series of focus group interviews involving three separate participant cohorts. In total, six thematic sessions were organised, each consisting of approximately 6–7 students, resulting in responses from 20 participants. This approach allowed for a rich, multi-perspective examination of subjective experiences and motivational changes associated with the intervention. The goal of the analysis was to identify meaningful shifts in participants' motivational profiles and evaluate the perceived impact of the programme. Thematic coding was applied to the interview transcripts, yielding five core categories of positive psychological transformation. Representative quotations were selected to illustrate the internal changes reported by students (see Table 3).

Table 3. Thematic Categories of Motivational Change and Illustrative Student Quotes from Focus Group Interviews
(*Quotes have been edited for clarity without altering meaning.)

Thematic Category	Psychologically Relevant Student Quotes
Confidence in English Learning	<i>"I started to feel more confident when doing English tasks."</i> <i>"I stopped avoiding mistakes – now I see them as part of the learning process."</i>
Emotional Stability	<i>"I no longer panic when I don't understand something in class."</i> <i>"I learned to manage my anxiety before speaking."</i> <i>"I now handle public speaking stress better."</i>
Awareness of Personal Value of Learning	<i>"Now I see a clear connection between learning English and my professional future."</i> <i>"Learning feels more like a path to self-fulfilment than a routine."</i>
Social Interaction	<i>"I became more active in communicating with classmates, especially during group work."</i> <i>"Feeling supported by others keeps me motivated."</i>
Behavioural Activation	<i>"I now complete homework regularly, even when it's difficult."</i> <i>"I started initiating discussions and participating more actively in class."</i>

As illustrated in Table 3, the qualitative findings reveal coherent patterns of positive change in students' motivation after completing the Language XP programme. Participants described improvements in self-confidence, emotional regulation, sense of purpose in learning, social engagement, and academic initiative. Although self-reports in focus groups may be subject to social desirability bias, the alignment of these insights with the quantitative results supports the credibility and interpretive validity of the findings. Furthermore, the emergence of themes consistent with the programme's objectives reinforces the pedagogical validity of Language XP. The thematic coherence

confirms the programme's effectiveness as an intervention tool for enhancing youth motivation in foreign language learning through both psychological and technological means. This qualitative dimension serves a triangulatory function, contributing to a comprehensive evaluation of the intervention's multidimensional impact.

DISCUSSION

This study provides compelling empirical evidence for the efficacy of the Language XP programme – a multi-domain multimedia-psychological intervention – in significantly enhancing university students' motivation to learn English. In contrast to traditional language learning approaches that often address motivation as a single construct, this study advances the field by demonstrating that targeted development across five interrelated domains – cognitive, emotional, social, educational-methodological, and behavioural – can generate measurable and systemically integrated improvements. These findings align with and extend existing frameworks in second language acquisition (SLA), motivational psychology, and educational technology (Ushioda & Dörnyei, 2021; Lamb *et al.*, 2019).

Domain-Specific Improvements in Motivation

A central finding of this study was the significant post-intervention improvement across all five motivational domains in the Experimental Group (EG), while the Control Group (CG) showed no significant changes. These improvements, with medium to large effect sizes (Cohen's $d = 0.76 - 0.91$), are consistent with self-determination theory (Ryan & Deci, 2017), which posits that autonomous motivation can be enhanced when interventions address learners' needs for competence, autonomy, and relatedness. The Language XP programme incorporated these principles by offering personalised tasks, peer collaboration, and reflective elements – conditions that have previously been shown to promote motivational growth in language learning (Noels *et al.*, 2003; My, 2021). Moreover, these findings extend the work of Ushioda and Dörnyei (2021), who argue for dynamic and context-sensitive models of L2 motivation. By demonstrating that even a relatively short (12-week) intervention can elicit multidimensional motivational growth, this study supports the view that motivational states are both malleable and responsive to psychologically-informed instruction.

Shifts in Motivation Levels

The distributional analysis (Figure 1) revealed a notable increase in the proportion of students achieving high levels of motivation across all domains in the EG, with an average rise of 19.19%. In contrast, the CG showed stagnant or regressive patterns. These results align with prior research highlighting the impact of well-structured interventions on increasing student engagement and motivational salience (Henry *et al.*, 2015; Saito *et al.*, 2018). Specifically, the increase in high-level emotional motivation echoes findings from MacIntyre and Gregersen (2012), who emphasised the role of emotional regulation in sustaining L2 engagement under anxiety-inducing conditions. Additionally, the educational-methodological gains observed in this study – particularly the improvement in autonomous use of digital tools – support prior evidence suggesting that multimodal and VR-based interventions can enhance learners' perceived agency and technological self-efficacy (Reinders & Benson, 2017; Philippe *et al.*, 2020). This positions Language XP as a model of how digital integration can contribute not only to skills acquisition but also to motivational scaffolding.

Strengthening of Motivational Coherence

A particularly novel contribution of this study lies in its analysis of systemic motivational integration. The correlation matrices (see Figure 2) show that the intervention not only improved individual domains but also enhanced the interrelationships among them. The post-intervention rise in correlations – e.g., cognitive-behavioural ($r = .67$), emotional–educational-methodological ($r = .59$) – suggests the development of a more cohesive motivational architecture. This resonates with the dynamic systems approach to motivation (Ushioda & Dörnyei, 2021), which emphasises the importance of internal consistency and adaptability in motivational systems. The current findings extend this theory by demonstrating how pedagogical interventions can promote not just strength but structure within learners' motivational systems. Such coherence is important because it predicts sustained learning effort over time (Kaplan & Garner, 2017) and may reduce the risk of motivational fragmentation, where learners feel competent but emotionally disengaged or socially isolated – issues commonly reported in university L2 contexts (Papi & Khajavy, 2019).

Student Perspectives on Psychological Change

The qualitative findings further confirmed the effectiveness of the programme, with student reflections indicating increased confidence, emotional stability, purposeful engagement, social interaction, and behavioural initiative (see Table 3). These themes align with those identified in previous qualitative studies on motivational transformation in language learners (Murray, 2011; Sampson, 2012). The emergence of “confidence in English learning” and “emotional stability” as recurring themes supports the role of affective factors in successful language acquisition (Horwitz, 2001), while “behavioural activation” and “strategic engagement” echo findings from studies on learner autonomy and self-regulation (Paethrangsi *et al.*, 2024). Importantly, the consistency between qualitative insights and quantitative outcomes enhances the interpretive validity of the findings and supports the use of triangulation in motivation research (Creswell & Plano Clark, 2018). By combining self-report measures with thematic analysis, the present study offers a more nuanced and credible portrait of how students experience and internalise motivational change.

Contribution to the Field and Future Directions

Taken together, the findings of this study contribute to ongoing efforts to design evidence-based motivational interventions that are both scalable and psychologically grounded. Unlike many prior studies that treat motivation as a static or unidimensional construct, this study provides empirical validation for a multi-domain, integrated approach. It also highlights the pedagogical value of including digital, affective, and reflective components in language education – a direction consistent with recent calls for holistic L2 pedagogy (Lamb *et al.*, 2019; My, 2021).

Nevertheless, several limitations must be acknowledged. The sample size, while sufficient for statistical analysis, limits the generalisability of the results. The study was also confined to two academic disciplines and to a specific cultural context (Ukrainian university students), which may influence how learners respond to psychological and technological interventions. Future research should explore longitudinal retention of motivational gains, cross-cultural applicability, and the interaction of intervention effects with individual difference variables such as personality, language anxiety, and digital literacy.

CONCLUSION AND FUTURE WORK

The results demonstrated statistically significant and practically meaningful improvements across five core motivational domains (cognitive, emotional, social, educational-methodological, and behavioural) in the experimental group (EG), while the control group (CG) exhibited no such gains. The observed effect sizes, ranging from medium to large, underscore the intervention's capacity to induce not only incremental but also systemic changes in students' motivational architecture. Beyond the quantitative advancements, the intervention led to a marked reconfiguration of inter-domain relationships, indicating a higher degree of internal coherence within the motivational system of EG participants. This structural integration aligns with contemporary theories of motivation, such as the L2 Motivational Self System and Self-Determination Theory, both of which emphasise the interaction between self-perception, emotional engagement, and contextual support in sustaining language learning efforts. The programme's emphasis on psychological scaffolding, digital personalisation, and experiential learning positioned it as a pedagogically grounded response to the multifaceted challenges faced by modern language learners. Qualitative data from focus group interviews complemented the statistical findings by revealing affective and cognitive transformations experienced by students. Participants reported enhanced confidence, emotional stability, behavioural initiative, and a redefined sense of purpose in relation to their language learning. These subjective reflections reinforce the validity of the observed changes and support the claim that Language XP not only influenced surface-level behaviours but also triggered deeper motivational restructuring. In future research, it will be important to examine the long-term sustainability of the motivational gains observed in this study and to determine whether they translate into improved language proficiency. Replication across different cultural and educational contexts will help assess the generalisability of the Language XP programme. Further studies might also isolate the effects of specific modules within the intervention, explore the roles of instructors and peer dynamics, and evaluate the programme's scalability within digital and hybrid learning environments. These directions will help validate and optimise Language XP as an evidence-based model for enhancing motivation in language education.

REFERENCES

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469–480. <https://doi.org/10.1037/0003-066X.55.5.469>
- Aayushi, A., & Kamboj, Dr. S. (2024). Engaging English Language Learners through Gamification and Serious Games. *International Journal of English Literature and Social Sciences*, 9(6), 021–027. <https://doi.org/10.22161/ijels.96.4>
- Brutman, A., Tarasenko, K. V., Polyezhaev, Y., Matsegora, I. L., & Rukolyanska, N. (2024). Multimedia resources as a factor of increasing students' motivation in learning foreign languages. *Conhecimento & Diversidade*, 16(41), 546–567. <https://doi.org/10.18316/rcd.v16i41.11545>
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research*, 3rd edition. SAGE.
- Dibrova, V., Dukhanina, N., & Hrabar, O. (2025). Advancing foreign language proficiency: the integration of multimedia tools in higher education. *Scientific innovations and advanced technologies (Management and Administration Series, Law Series, Economics Series, Psychology Series, Pedagogy Series)*, 1(41). [https://doi.org/10.52058/2786-5274-2025-1\(41\)-694-704](https://doi.org/10.52058/2786-5274-2025-1(41)-694-704)

- Fattahi Marnani, P., & Cuocci, S. (2022). Foreign language anxiety: A review on theories, causes, consequences and implications for educators. *Journal of English Learner Education*, (14) 2, Article 2. Retrieved from: <https://stars.library.ucf.edu/jele/vol14/iss2/2>
- Henry, A., Davydenko, S., & Dörnyei, Z. (2015). The anatomy of directed motivational currents. *The Modern Language Journal*, 99(2), 329–345. <https://doi.org/10.1111/modl.12214>
- Horwitz, E. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics*, 21, 112–126. doi:10.1017/S0267190501000071
- Jiang, X., Wang, R., Hoang, T., Ranaweera, C., Dong, C., & Myers, T. (2025). AI-Powered Gamified Scaffolding: Transforming Learning in Virtual Learning Environment. *Electronics*, 14(13), Article 2732. <https://doi.org/10.3390/electronics14132732>
- Kaplan, A., & Garner, J. K. (2017). A complex dynamic systems perspective on identity and its development: The dynamic systems model of role identity. *Developmental Psychology*, 53(11), 2036–2051. <https://doi.org/10.1037/dev0000339>
- Kohnke, L., & Moorhouse, B. L. (2025). Enhancing the emotional aspects of language education through generative artificial intelligence (GenAI): A qualitative investigation. *Computers in Human Behavior*, 167, Article 108600. <https://doi.org/10.1016/j.chb.2025.108600>
- Lamb, M., Csizér, K., Henry, A., & Ryan, S. (2019). *The Palgrave handbook of motivation for language learning*. Palgrave Macmillan.
- Lapadat, L. C., & Lapadat, M.-M. (2023). The Importance of Motivation in Foreign Language Learning. *Scientific Bulletin of the Politehnica University of Timișoara: Transactions on Modern Languages*, 22(1), 142-152. <http://dx.doi.org/10.59168/VGLE2734>
- Li, J., King, R. B., Chai, C. S., Zhai, X., & Lee, V. W. Y. (2025). The AI Motivation Scale (AIMS): a self-determination theory perspective. *Journal of Research on Technology in Education*, 1–22. <https://doi.org/10.1080/15391523.2025.2478424>
- MacIntyre, P. D., & Gregersen, T. (2012). Emotions that facilitate language learning: The positive-broadening power of the imagination. *Studies in Second Language Learning and Teaching*, 2(2), 193–213. <https://files.eric.ed.gov/fulltext/EJ1135856.pdf>
- Makukhina, S. (2024). The impact of motivation on foreign language learning. *Current Issues in the Humanities*, 75(2), 155-159. <https://doi.org/10.24919/2308-4863/75-2-23>
- Murray, G. (2011). 6. Imagination, Metacognition and the L2 Self in a Self-Access Learning Environment. In G. Murray, X. Gao & T. Lamb (Eds.), *Identity, Motivation and Autonomy in Language Learning* (pp. 75-90). Bristol, Blue Ridge Summit: Multilingual Matters. <https://doi.org/10.21832/9781847693747-007>
- My, T. T. (2021). Motivating second language learners: from major L2 motivation theories to implications for L2 classroom practice and research. *VNU Journal of Foreign Studies*, 37(1), 55-65. <https://doi.org/10.25073/2525-2445/vnufs.4657>
- Noels, K. A., Pelletier, L. G., Clément, R., & Vallerand, R. J. (2003). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*, 53(S1), 33–64. <https://doi.org/10.1111/1467-9922.53223>
- Nozhovnik, O., Harbuza, T., Teslenko, N., Okhrimenko, O., Zaliziuk, V., & Durdas, A. (2023). Chatbot gamified and automated management of L2 learning process using smart sender platform. *International Journal of Educational Methodology*, 9(3), 603-618. <https://doi.org/10.12973/ijem.9.3.603>
- Othman, S. M. (2025). Foreign language anxiety and its effects on learner proficiency. *International Journal of Multidisciplinary Research and Growth Evaluation*, 6(4), 64-70. <https://doi.org/10.54660/IJMRGE.2025.6.4.64-70>
- Paethrangsi, N., Teekasap, S., Khiewpan, R., & Jandaboue, W. (2024). Empowering Students' Autonomous Learning through Self-regulation, Metacognitive Strategies, and Collaborative Learning Environments. *Journal of Liberal Arts RMUTT*, 5(1), 69–79. <https://doi.org/10.60101/jla.2024.5.1.4065>
- Papi, M., & Khajavy, G. H. (2019). Motivational mechanisms underlying second language achievement: A regulatory focus perspective. *Language Learning*, 71(2), 537-572. <https://doi.org/10.1111/lang.12443>
- Pekrun, R., Frenzel, A. C., Goetz, T., & Perry, R. P. (2007). Chapter 2 - The Control-Value Theory of Achievement Emotions: An Integrative Approach to Emotions in Education. In P. A. Schutz, & R. Pekrun (eds), *Educational Psychology, Emotion in Education* (pp. 13-36). Academic Press. <https://doi.org/10.1016/B978-012372545-5/50003-4>
- Philippe, S., Souchet, A. D., Lameris, P., Petridis, P., Caporal, J., Coldeboeuf, G., & Duzan, H. (2020). Multimodal teaching, learning and training in virtual reality: a review and case study. *Virtual Reality & Intelligent Hardware*, 2(5), 421-442. <https://doi.org/10.1016/j.vrih.2020.07.008>
- Porter, S., & Sofia Castillo, M. (2023). The effectiveness of immersive language learning: An investigation into English language acquisition in immersion environments versus traditional classroom settings. *Research Studies in English Language Teaching and Learning*, 1(3), 155-165. <https://doi.org/10.62583/rseltl.v1i3.18>
- Reinders, H., & Benson, P. (2017). Research agenda: Language learning beyond the classroom. *Language Teaching*, 50(4), 561–578. doi:10.1017/S0261444817000192
- Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. The Guilford Press. <https://doi.org/10.1521/978.14625/28806>
- Saito, K., Dewaele, J. M., Abe, M., & In'nami, Y. (2018). Motivation, emotion, learning experience and second language comprehensibility development in classroom settings. *Language Learning*, 68(3), 709–743. <https://doi.org/10.1111/lang.12297>
- Sampson, R. (2012). The language-learning self, self-enhancement activities, and self-perceptual change. *Language Teaching Research*, 16(3), 317-335. <https://doi.org/10.1177/1362168812436898>
- Santrock, J. W. (2016). *Life-span development* (16th ed.). McGraw-Hill Education. https://archive.org/details/lifespandevelopment0000sant_z5c0
- Stark, L., Malkmus, E., Stark, R., Brünken, R., & Park, B. (2018). Learning-related emotions in multimedia learning: An application of control-value theory. *Learning and Instruction*, 58, 42-52. <https://doi.org/10.1016/j.learninstruc.2018.05.003>
- Urhahne, D., & Wijnia, L. (2023). Theories of motivation in education: An integrative framework. *Education Psychology Review*, 35, Article 45 <https://doi.org/10.1007/s10648-023-09767-9>
- Ushioda, E., & Dörnyei, Z. (2021). *Teaching and Researching Motivation* (3rd ed.). Routledge. <https://doi.org/10.4324/9781351006743>
- Vansteenkiste, M., Aelterman, N., De Muynck, G. J., Haerens, L., Patall, E., & Reeve, J. (2017). Fostering personal meaning and self-relevance: A self-determination theory perspective on internalization. *The Journal of Experimental Education*, 86(1), 30–49. <https://doi.org/10.1080/00220973.2017.1381067>

- Yu, B., & Wang, W. (2025). Using digital storytelling to promote language learning, digital skills and digital collaboration among English pre-service teachers. *System*, 129, Article 103577. <https://doi.org/10.1016/j.system.2024.103577>
- Zhang, K. (2025). Analysis of the learning motivation of Chinese foreign-language-major students. Pre-Print. <http://dx.doi.org/10.2139/ssrn.5081829>
- Zhong, J. (2024). The influence of foreign language learning motivation on foreign language learning. *Arts, Culture and Language*, 1(3). <https://doi.org/10.61173/7nyp8p88>
