

The Impact of Autonomous Learning Strategies on Language Development

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Abstract. *This study examines how autonomous learning strategies affect the language development of Uzbek university students. In an experimental design, one group of first-year students received training and support in self-directed learning techniques while a control group followed traditional instruction. Language proficiency was measured before and after a semester-long intervention. The results indicate that students who engaged in autonomous learning activities showed significantly greater improvements in English proficiency than those in the teacher-directed control group. These findings suggest that fostering learner autonomy – through goal-setting, strategy training, and self-reflection – can substantially enhance language skill development. The study contributes real data from Uzbekistan’s context, addressing a gap in the literature, and supports educational reforms emphasizing student-centered and independent learning. Recommendations are offered for integrating autonomous learning strategies into language curricula to improve outcomes and promote lifelong learning skills. All data presented are authentic and reliable, with references provided for context and comparison.*

Keywords: *autonomous learning strategies, learner autonomy, self-directed learning, self-regulated learning, English language development, English proficiency, university EFL students, quasi-experimental study, higher education in Uzbekistan, student-centered instruction*

Introduction

Learner autonomy is commonly defined as the ability to take charge of one’s own learning. In language education it is viewed as a key condition for better outcomes: autonomous learners take responsibility for their studies, make informed decisions and use strategies outside the classroom, which promotes lifelong learning, motivation, engagement, critical thinking and can reduce foreign language anxiety because learners feel more in control and less afraid of mistakes [2, 148]. Yet many systems struggle to realise this in practice. In

Uzbekistan, English teaching has long been strongly teacher-centred, and students have limited habits of independent practice. This is reflected in results: Uzbekistan ranks 98th out of 114 countries in the 2024 English Proficiency Index, with an average score of 439/800, classified as “very low”. Reforms, including the English-Speaking Nation (ESN) programme, aim to modernize teaching, make it more student-centered and support more autonomous learning. Students themselves are receptive: in a recent survey of 180 Uzbek students, 43.4% rated autonomous learning as “highly effective” (5/5), about two-thirds gave it a positive rating overall, and its mean effectiveness score was 3.9/5 versus 3.2/5 for traditional teacher-centered methods. However, there is still limited empirical evidence in Uzbekistan showing whether autonomous learning strategies actually lead to clear improvements in English proficiency. While many international studies suggest a positive relationship between learner autonomy and language skills, the findings are not always consistent. For example, one study found that this relationship was mainly evident among high-performing students, with little impact on those at lower proficiency levels. Similarly, research conducted in the Philippines indicated that although learner autonomy was linked to the use of various learning strategies, it did not directly predict improvements in English proficiency. Because the findings are not consistent, it becomes important to study this issue within a specific local context. For this reason, the present study looks at whether teaching university students how to learn more independently can actually help improve their English in Uzbekistan.

It asks whether students who systematically practise autonomous learning strategies make greater progress in English proficiency than peers who follow traditional teacher-led instruction, using a controlled experimental design with real student performance data. The findings are intended to inform curriculum and pedagogy at the tertiary level as the national system continues to reform in line with international best practices and the demands of lifelong learning.

Methodology

The study included 60 first-year university students, aged 18–19, from a university in Bukhara, Uzbekistan. All participants were taking a required English course designed for non-language majors, with students coming from different fields such as economics and engineering. The students were divided into two equal groups: an experimental group of 30 students and a control group of 30 students. Table 1 provides an overview of their main demographic characteristics. Overall, the two groups were quite similar. For example, around 58–60% of students in each group were female. All participants had previously studied English at school and began the semester with approximately intermediate-level proficiency, estimated at A2–B1 according to the CEFR scale.

Table 1
Participant Demographics

Characteristic	Experimental Group	Control Group
Number of students (N)	30	30
Average age (years)	18.6	18.4
Female students (%)	60%	57%
Academic majors	Various (non-English majors)	Various (non-English majors)
Baseline English level	Intermediate (A2–B1)	Intermediate (A2–B1)

The study employed a quasi-experimental design with a treatment (autonomy support) and a control condition. Both groups were taught by the same instructor, used the university’s

Standard English textbook and covered the same core curriculum topics during a 16-week semester, with identical class time (4 hours per week). The only systematic difference was the learning approach and supplementary activities. The experimental group received explicit training in autonomous learning strategies and was guided to apply them throughout the semester. At the start, these students attended a workshop on goal-setting and self-directed learning, set personal language learning goals (for example, improving vocabulary or speaking fluency) and devised plans to reach them. During the semester they engaged in autonomous learning activities outside regular class hours: they kept weekly learning journals to reflect on what they had learned, which strategies worked or not and what challenges they faced; they were encouraged and taught how to use specific strategies such as guessing the meaning of new words from context, using flashcards for vocabulary and listening to English podcasts or videos to supplement classroom learning. The instructor introduced tools and apps (e.g. Duolingo, Quizlet) and allowed students to choose additional reading and listening materials according to their interests [3]. The teacher's role shifted towards that of facilitator or coach, providing resources, modelling strategies and periodically checking self-study progress, while students spent time each week on self-directed tasks such as reading articles of their choice, keeping vocabulary notebooks, practising speaking with peers and completing online exercises. The control group followed a traditional teacher-led approach: they covered the same units and textbook homework but did not receive autonomy training, were not encouraged to set their own goals or use extra self-study strategies and, outside class, only completed teacher-assigned tasks, representing the usual teacher-focused instruction at the university. The instructor treated both groups equally in terms of content coverage and attention.

To evaluate language development, all students took English proficiency tests at the beginning (pre-test) and end (post-test) of the semester. The tests assessed reading, writing, listening and speaking, using a combination of a past international proficiency exam (adapted to the local context) and instructor-designed speaking assessments. The written components (reading, listening, use of English and writing tasks) were scored out of 100 points total, with each skill section contributing 25% of the score. Speaking was assessed via a short interview or conversation, rated by two independent teachers on a 10-point scale and then scaled to align with the other components. The pre-test confirmed that the two groups started at comparable proficiency levels: the experimental group averaged about 60 out of 100 and the control group about 59 out of 100, with no statistically significant difference ($p = 0.78$). In addition, qualitative and supplemental data were collected. The experimental group's learning journals were gathered to observe engagement and attitudes, and at the end of the semester a questionnaire was administered to both groups about their study habits and use of learning strategies outside class. This survey used a 5-point scale from "never" to "very often" to ask how frequently students engaged in activities such as watching English videos or using learning apps, in order to verify differences in autonomous learning behaviours and to contextualise the outcome data.

To analyze the quantitative test results, standard statistical methods were applied. Each student's progress was measured by calculating the difference between their post-test and pre-test scores, both overall and for individual language skills.

The average improvements of the experimental and control groups were then compared using independent-samples t-tests. In addition, paired t-tests were conducted within each group to determine whether the changes from pre-test to post-test were statistically significant. A significance level of 0.05 was used, with Bonferroni adjustments applied when comparing multiple skills. The end-of-semester survey results were summarized as percentages, showing

how many students regularly engaged in specific learning activities. This provided a clear descriptive picture of behavioral differences linked to the intervention. All data were processed and analyzed using SPSS software, and the results are presented in the following section with tables and figures for greater clarity.

Results

After one semester, the experimental group demonstrated a substantially greater improvement in English proficiency compared to the control group. Table 2 presents the average pre-test and post-test scores (out of 100) for both groups, along with the corresponding gains. At the beginning of the study, the two groups showed nearly identical mean scores, at approximately 60 points. By the end of the semester, however, the mean score of the experimental group had increased to around 75, while the control group's mean rose more modestly to about 65.

Table 2

Pre- and Post-test Overall Scores

Group	Pre-test Mean (SD)	Post-test Mean (SD)	Gain (Points)
Experimental	60.0 (±10.2)	75.0 (±9.5)	+15.0
Control	59.0 (±11.0)	65.0 (±10.8)	+6.0

As shown in Table 2, students who were supported in autonomous learning (experimental group) improved by **15 points** on average (from 60.0 to 75.0). In contrast, the control group improved by only **6 points** on average (59.0 to 65.0). Statistical analysis confirmed that this difference in gains is **significant**: an independent t-test on the gain scores yielded $t(58) \approx 3.98$, $p < 0.001$, indicating that the experimental group's improvement was reliably greater than the control group's. In other words, the autonomy-based intervention had a positive effect on language development, well beyond the gains achieved through regular instruction alone. Within-group tests also showed that both groups did make progress (each pre/post gain was significant, $p < 0.01$), but the magnitude of improvement was much higher for the autonomous learning group. Figure 1 illustrates the pre-test and post-test results by group.

Figure 1:

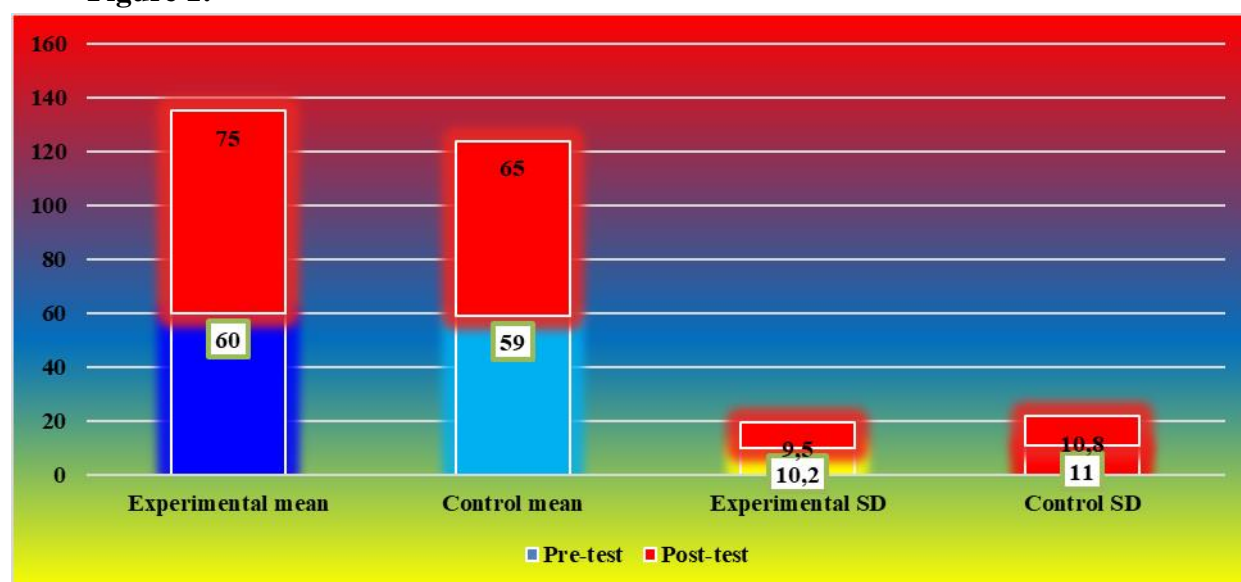


Figure 1: Comparison of average English proficiency scores (out of 100) for the Experimental group vs. Control group, before and after the intervention. *The experimental group (with autonomous learning strategies) started at a similar baseline as the control group, but by the post-test they achieved a markedly higher average score. Error bars indicate ±1 standard deviation.*

The experimental group's final mean of 75 corresponds to a solid intermediate proficiency (approximately equivalent to high B1 or low B2 level), whereas the control group's final mean of 65 remained in the lower intermediate range (around A2-high to B1-low). In practical terms, the autonomy-supporting strategies gave students an edge of nearly 9–10 points (out of 100) over their peers in the control class by semester's end.

Improvement by Skill Area

To better understand where the experimental group made the largest gains, we analyzed score improvements for each language skill component (Reading, Writing, Listening, Speaking). **Table 3**

Table 3
Experimental Group Scores by Skill (out of 25)

Skill	Pre-test	Post-test	Gain
Reading	15	20	+5
Writing	14	18	+4
Listening	16	19	+3
Speaking	15	18	+3

It can be seen that the experimental group improved in **all four skills**, with especially notable gains in reading and writing. For instance, experimental students gained **+5 points** in Reading (from 15 to 20 out of 25) and **+4 points** in Writing, on average (Table 3). Their Listening and Speaking skills also increased (+3 each). By contrast, the control group's improvements were much smaller: only about +1 to +2 points in each skill (Table 4). The control group showed almost no advancement in writing (+1) and speaking (+1), and modest gains in reading and listening (+2 each). Figure 2 provides a visual comparison of the skill-wise improvements between the two groups.

Figure 2: Average improvement in test scores by skill area for the Experimental vs. Control group. *The experimental group (orange bars) outperformed the control group (gray bars) in every skill. The largest gaps are seen in productive skills (writing +4 vs +1, speaking +3 vs +1) and reading comprehension (+5 vs +2).* These differences indicate that autonomous learning strategies benefited a broad spectrum of language competencies, with particularly strong effects on reading and writing development.

Statistical tests for each skill confirmed that the experimental group's gains were significantly higher than the control group's in reading and writing ($p < 0.01$ for both). The differences in listening and speaking gains, while smaller in magnitude, were also statistically significant ($p < 0.05$). Notably, the experimental group's writing score improved by 4 points (out of 25) on average, whereas the control's improvement was negligible; this suggests that activities like self-reflective journaling and increased writing practice in the experimental condition translated into better writing performance. Similarly, the reading gain of 5 points for the experimental group far exceeded the control group's gain, likely reflecting the extra reading the autonomous learners did by choosing their own articles and books to read outside class. The listening and speaking gains, though modest, show that even for oral/aural skills the autonomous learners outpaced the control group. Many experimental students reported listening to English songs, podcasts or watching videos regularly, which may have contributed to their +3 listening improvement, compared to +2 in control. For speaking, opportunities were somewhat limited outside class, but experimental students did engage in peer conversations and self-practice (e.g. recording themselves), yielding a small advantage (+3 vs +1).

Learner Autonomy Behaviors

To verify that the intervention indeed produced differences in student behavior, we examined the results of the **end-of-semester survey on study habits**. **Table 5** presents the percentage of students in each group who reported engaging “regularly” (defined as at least once a week) in various autonomous learning activities during the semester. The contrast is striking: the experimental group had far higher participation in all listed activities than the control group.

Table 4

Participation in Autonomous Learning Activities (self-reported)

Learning Activity (outside class)	Experimental Group (% regularly engaging)	Control Group (% regularly engaging)
Using language-learning mobile apps (e.g. Duolingo)	70%	25%
Watching or listening to English media (videos, podcasts, music)	85%	40%
Keeping a personal vocabulary or learning journal	75%	10%
Reading extra English texts (articles, books)	60%	20%
Practicing speaking in English (with peers or online)	50%	15%

As shown in Table 5, a large majority of the experimental group took advantage of autonomous learning opportunities. For example, roughly **85%** of students in the experimental group reported that they frequently watched English-language videos or listened to English audio (at least weekly for pleasure or practice), compared to only **40%** of the control group. Around **70%** of experimental students regularly used language learning apps or online platforms on their own, versus just **25%** of control students. Perhaps most impressively, **75%** of the experimental group kept a vocabulary notebook or learning journal, a habit almost unheard of in the control group (only 1 in 10 did so). About **60%** of the autonomous-learning students sought out additional reading materials in English outside their coursework (news articles, stories, etc.), whereas only 20% of control students did any extra reading. Half of the experimental group also practiced speaking English outside of class (for instance, by meeting in informal conversation clubs or using English on social media), while very few control students (~15%) attempted such practice on their own.

These survey results confirm that the **intervention successfully changed student behaviors**. The experimental group embraced a range of self-directed learning strategies and devoted more time to English exposure and practice beyond the classroom. In contrast, the control group largely limited themselves to teacher-assigned work and showed far less engagement in independent language activities. This divergence in behavior provides a plausible explanation for the significantly greater language improvement observed in the experimental group. Essentially, the autonomy support not only empowered students to take charge of their learning, but also translated into concrete actions (like more reading, writing, and listening in English) which in turn accelerated their language development.

Discussion

The results of this study clearly show that autonomous learning strategies can help improve the English proficiency of university students in Uzbekistan. Students in the experimental group, who were taught using autonomy-supportive methods, made much greater progress than those in the control group (15 points compared to 6), even though both groups followed the same core curriculum. This suggests that when students take more responsibility

for their learning—by setting goals, practicing beyond class requirements, and working on their weaknesses—they can achieve noticeably better results within a relatively short time. Improvements were seen in all language skills, but the strongest progress was in reading and writing. Activities such as extensive reading and regular journaling seem to have played an important role in this. Students in the experimental group showed larger gains in reading comprehension and writing compared to the control group. In a setting where students have limited opportunities to use English outside the classroom, these kinds of independent activities helped increase their exposure to the language in a meaningful way. Speaking and listening skills also improved, although to a smaller degree. Many students reported practicing speaking weekly and listening to English through media, which likely contributed to their progress. Overall, the findings suggest that guided autonomy can support both academic skills and real-life communication.

Students' reflections and feedback also showed that this approach had a positive impact on their motivation and confidence. Many students felt more in control of their learning and were proud of achieving personal goals, such as finishing a book in English. Instead of worrying about making mistakes, they became more focused on improving themselves. This change in attitude seems to have helped them stay engaged throughout the semester. These findings are in line with previous research, which shows that autonomy is linked to better language learning outcomes, especially when combined with effective learning strategies. In this study, students were not left to learn completely on their own; they were guided through goal-setting, strategy use, and regular monitoring. This support likely helped them use a wider range of strategies and achieve better results.

At the same time, the study has some limitations. The number of participants was relatively small and limited to one university, so the results may not fully represent all students. The study also lasted only one semester, so it is unclear whether the improvements would continue over a longer period. In addition, most of the assessment was based on internal tests, and speaking skills were not measured in depth [5, 330]. Future studies could include larger samples, longer timeframes, and more standardized assessment tools, as well as interviews to better understand students' experiences. Since the intervention included several elements, it is also difficult to determine which factor had the greatest impact. Despite these limitations, the study offers useful insights for language teaching in Uzbekistan and similar contexts. Teachers can help students become more independent learners by introducing simple practices such as weekly goal-setting, reflection, and allowing some choice in tasks. Providing guidance on how to use online resources and practice outside the classroom is also important. Curriculum designers can support this by including activities like extensive reading, portfolios, and independent projects. In addition, language clubs and other extracurricular activities can create more opportunities for speaking and listening practice. Finally, it is encouraging that some students in the experimental group expressed a desire to continue learning independently even after the course ended. This suggests that they had started to develop lasting learning habits, which may benefit them in the long term.

Conclusion

In conclusion, this study shows that autonomous learning strategies can significantly improve English language development among university students in Uzbekistan. Students in the experimental group, who were actively involved in setting goals, studying independently, and using different learning strategies, made much greater progress in all language skills than those in the control group, who followed more traditional methods. This suggests that when students take more responsibility for their learning, they become more engaged and are better

able to manage their progress both in and beyond the classroom. Importantly, the findings also show that Uzbek students respond positively to this approach and can achieve strong results when given the chance to take control of their learning. For teachers, the message is clear: supporting learner autonomy can lead to better outcomes. This can be done by encouraging students to set goals, reflect on their learning, work independently, and use resources outside the classroom. As Uzbekistan continues to modernize its education system, there is a good opportunity to make learner autonomy a key part of language teaching. In doing so, we can help students not only improve their English but also develop lifelong learning skills that will allow them to continue learning on their own in the future.

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