



Syntactic Competence in EFL Teacher Education and English Studies Programmes

Michaela Sepešiová

Faculty of Arts, University of Prešov in Prešov, Slovakia

Abstract

This study investigates syntactic competence in two groups of EFL university students in Eastern Slovakia: pre-service teachers enrolled in a teacher education programme ($n = 209$) and students majoring in English Language and Anglophone Cultures ($n = 109$). The aim is to examine differences in syntactic accuracy and complexity and to observe developmental changes between mid-course and final testing over three academic years. The data were collected from institutionally developed mid-course and final written examinations designed to assess grammatical accuracy, sentence transformation skills, clause structure, and the use of complex subordinate constructions. Quantitative analysis included overall accuracy scores, error frequency, and selected measures of syntactic complexity such as mean length of T-unit and subordination ratio. Independent and paired samples tests were used to compare groups and measure development over time. The findings indicate that English Studies students demonstrate greater structural variety and higher use of subordinate clauses, while pre-service teachers achieve slightly higher accuracy in controlled grammatical tasks. Both groups show descriptive improvement between mid-course and final testing, although difficulties persist in clause embedding and tense consistency. The results suggest that curricular orientation influences syntactic development and highlight the need for a more systematic integration of advanced syntax within EFL teacher education.

Keywords: clause embedding, grammatical accuracy, longitudinal assessment, subordination ratio, university curriculum

1 Introduction

Developing advanced language proficiency is a primary objective of university-level English programmes. While vocabulary growth and communicative fluency are often regarded as visible indicators of progress, syntactic competence remains equally important. Advanced learners are expected not only to produce grammatically accurate language but also to express increasingly complex ideas through sophisticated sentence structures, particularly in academic writing.

Traditionally, grammatical accuracy has received considerable attention in EFL instruction. Learners are trained to apply grammatical rules and minimise errors, making accuracy a common indicator of language proficiency. However, grammatical correctness alone does not necessarily reflect advanced language use. Learners may produce error-free texts while relying on relatively simple sentence patterns and avoiding more demanding syntactic constructions.

Consequently, researchers have increasingly emphasized syntactic complexity as an additional dimension of language development (Ortega, 2003; Housen & Kuiken, 2009). The ability to employ subordinate clauses, embed information, and construct more elaborate sentence structures is widely associated with higher levels of proficiency and academic literacy. Measures such as mean length of T-unit and subordination ratio have therefore become common indicators of syntactic development in second language research (Lu, 2010).

Although syntactic complexity has been extensively investigated in EFL writing, relatively little attention has been paid to how syntactic competence develops within different university programmes. This issue is particularly relevant in Slovak higher education, where students may pursue English through distinct curricular pathways. At the University of Prešov, future English teachers follow a programme combining language studies with pedagogical and methodological preparation, whereas students of English Language and Anglophone Cultures (ELAC) engage more intensively with linguistics, literature, and cultural studies. These differences may influence the development of grammatical accuracy and syntactic complexity in different ways.

The present longitudinal study compares two groups of university EFL learners at the University of Prešov: pre-service English teachers ($n = 209$) and ELAC students ($n = 109$). Drawing on data collected over three academic years (2021/22–2023/24), the study examines the development of grammatical accuracy (GA), subordination ratio (SR), and mean length of T-unit (MLT) using comparable mid-course and final written examinations.

The study addresses three research questions: (1) Are there statistically significant differences in syntactic accuracy and complexity between pre-service teachers and ELAC students? (2) How does syntactic competence develop over time within each group? and (3) Which syntactic features remain problematic despite extended instruction? By addressing these questions, the study seeks to contribute to current discussions on curriculum design, language pedagogy, and the preparation of future English language professionals.

2 Literature Review

2.1 Syntactic Competence: Accuracy and Complexity

Syntactic competence refers to the ability to produce grammatically acceptable and structurally appropriate language in a variety of communicative contexts. Within second language acquisition (SLA) research, it is commonly examined through two complementary dimensions: grammatical accuracy and syntactic complexity (Ortega, 2003; Norris & Ortega, 2009). Grammatical accuracy concerns the extent to which learner language conforms to target-language norms, whereas syntactic complexity reflects the range, sophistication, and elaboration of grammatical structures employed by learners.

The concept of syntactic competence originates from Chomsky's (1965) distinction between competence and performance. While competence represents knowledge of linguistic rules, performance refers to the actual use of language in communicative situations. Although later

theories expanded language proficiency to include communicative and sociolinguistic dimensions, syntactic competence remains a central component of successful language use. According to Celce-Murcia and Larsen-Freeman (1999), advanced language users must not only understand grammatical rules but also be able to manipulate increasingly complex structures appropriately.

Traditionally, grammatical accuracy has been regarded as a primary indicator of language proficiency. Consequently, many EFL programmes have focused heavily on error correction and the production of grammatically correct language. However, grammatical correctness alone does not necessarily reflect advanced proficiency. Learners may produce accurate language while relying on relatively simple sentence patterns and avoiding more demanding syntactic structures.

For this reason, researchers have increasingly emphasized syntactic complexity as an additional dimension of language development. Complexity measures provide insight into learners' ability to express ideas through sophisticated grammatical structures and to organise information effectively in discourse. Studies have demonstrated that greater syntactic complexity is associated with higher levels of proficiency and improved academic writing quality (Lu, 2010; Kyle & Crossley, 2018).

Although grammatical accuracy and syntactic complexity are closely related, they represent distinct dimensions of language development that may evolve at different rates (Larsen-Freeman, 2006). Examining both dimensions therefore provides a more comprehensive understanding of syntactic competence and learner development.

2.2 Measuring Syntactic Complexity in EFL Writing

The measurement of syntactic complexity has become an important area of SLA research, particularly in studies investigating advanced language proficiency and academic writing. While grammatical accuracy evaluates correctness, syntactic complexity captures the degree to which learners employ sophisticated grammatical structures and elaborate sentence patterns (Ortega, 2003).

One of the most widely used approaches to measuring syntactic complexity is T-unit analysis, originally proposed by Hunt (1965). A T-unit consists of one independent clause together with any subordinate clauses attached to it. Because it captures both sentence length and structural elaboration, T-unit analysis has become a standard method in studies of learner language.

Two measures derived from T-unit analysis are particularly relevant. Mean Length of T-unit (MLT) measures the average number of words contained in each T-unit and serves as an indicator of syntactic elaboration. Subordination Ratio (SR) measures the number of clauses per T-unit and reflects the extent to which learners use subordinate structures such as relative, complement, and adverbial clauses.

Previous research has confirmed the usefulness of these measures. Ortega (2003) reported that T-unit length and subordination consistently differentiate between proficiency levels, while Lu (2010) found that they effectively capture developmental differences among university EFL learners. Furthermore, Kyle and Crossley (2018) demonstrated strong associations between syntactic complexity measures and writing quality.

For the purposes of the present study, grammatical accuracy, mean length of T-unit, and subordination ratio were selected as indicators of syntactic competence. Together, these measures provide a comprehensive framework for examining both correctness and structural sophistication in learner writing.

2.3 Syntactic Development and Curricular Orientation in EFL Higher Education

The development of syntactic competence is influenced by numerous factors, including linguistic input, instructional practices, learner characteristics, and educational context. In university EFL settings, curricular orientation may play a particularly important role because different programmes emphasise different aspects of language learning and create distinct opportunities for language use.

Research suggests that grammatical accuracy and syntactic complexity do not necessarily develop simultaneously. Learners may achieve high levels of accuracy while relying on relatively simple structures, whereas attempts to use more complex language may temporarily reduce accuracy (Skehan, 1998). Consequently, both dimensions should be considered when examining syntactic development.

Studies have shown that explicit grammar instruction contributes positively to grammatical accuracy. Norris and Ortega (2000) concluded that form-focused instruction has significant effects on grammatical development, while Ellis (2006) argues that attention to linguistic form supports the acquisition and accurate use of grammatical structures. Educational programmes that emphasise grammar instruction may therefore promote higher levels of accuracy.

At the same time, syntactic complexity appears to benefit from extensive exposure to authentic language and cognitively demanding tasks. Academic reading, analytical writing, and engagement with disciplinary content encourage learners to encounter and use a broader range of grammatical structures (Bardovi-Harlig, 1992; Biber et al., 2016). Such experiences may foster greater structural variety and complexity in learner writing.

Recent research has continued to confirm the value of syntactic complexity measures for examining language development over time. Kyle et al. (2021) demonstrated that indices of syntactic complexity and sophistication effectively capture longitudinal development in L2 writing, highlighting their usefulness in studies investigating learner progress across extended periods of instruction.

These observations are particularly relevant when comparing teacher education programmes and English Studies programmes. Future English teachers typically receive extensive training in grammar, methodology, and language analysis, which may contribute to higher grammatical accuracy. In contrast, students of English Language and Anglophone Cultures engage more intensively with linguistics, literature, cultural studies, and academic writing, potentially fostering greater syntactic complexity.

Despite the theoretical importance of curricular orientation, relatively few studies have examined how different university programmes influence syntactic development over time. The present study addresses this gap by comparing pre-service English teachers and ELAC students at the University of Prešov and investigating the development of grammatical accuracy and syntactic complexity across multiple testing periods.

3 Methods

3.1 Participants

The study involved 318 university students enrolled in English-related programmes at the University of Prešov in eastern Slovakia. The participants were divided into two groups according to their field of study. The first group consisted of 209 pre-service teachers enrolled in a teacher education programme preparing future teachers of English language and

literature, while the second group comprised 109 students majoring in English Language and Anglophone Cultures (ELAC).

All participants were learners of English as a foreign language and studied under comparable institutional conditions. Data were collected from several student cohorts over three consecutive academic years (2021/22–2023/24) and were anonymised prior to analysis. Because the dataset combines successive cohorts, programme membership and testing occasion were treated as the primary comparison factors, while academic year/cohort was considered a potential source of between-cohort variation. The available dataset did not include an independent standardised baseline proficiency measure; this limitation is addressed explicitly below and should be considered when interpreting programme differences.

The two programmes differ in their curricular orientation. The teacher education programme places greater emphasis on pedagogical and methodological preparation as well as explicit grammar instruction, whereas the ELAC programme focuses more extensively on linguistics, literature, culture, and academic language use. These differences provided an opportunity to examine the potential influence of curricular orientation on syntactic development.

3.2 Research Design and Data Collection

The study used a repeated-assessment quantitative design. Students completed a mid-course and a final written examination within the same course cycle, while the three academic years (2021/22–2023/24) represented successive cohorts. The assessment was embedded in regular course evaluation rather than administered as an external proficiency test. The tasks therefore sampled grammatical and syntactic outcomes explicitly taught in the courses rather than general English proficiency.

Four task families contributed evidence of syntactic competence. Sentence-transformation tasks required learners to reformulate a prompt without changing its propositional meaning while producing a specified grammatical relationship. Typical targets included subordination, complementation, relative-clause formation, conditionals, and tense relationships. Grammatical-accuracy tasks required selection or production of a grammatically acceptable form in a constrained context, particularly tense, agreement, word order, complementation, and clause linkage. Error-identification/correction tasks required learners both to locate a problematic form and to supply an acceptable correction. Complex-sentence production/manipulation tasks required learners to combine, expand, or restructure clauses and supplied the written material from which clause and T-unit measures were derived.

Scoring was criterion-referenced to the target structure. Full credit was awarded when the required meaning was preserved and the target construction was realised without an error affecting the assessed feature. Where the original course rubric permitted partial credit, it was reserved for responses that demonstrated the intended relationship but contained a local error that did not invalidate the construction. No credit was awarded when the target construction was absent, the required meaning was not preserved, or the intended syntactic relationship was uninterpretable. For error-correction items, successful identification was distinguished from a fully successful repair where the course rubric permitted partial credit. Table 1 summarises the task specifications and scoring principles applied in the assessment.

Table 1: Task specification and scoring principles applied in the assessment.

Task family	Response required	Primary targets	Full credit	Partial credit	No credit
Sentence transformation	Reformulate; preserve meaning	Subordination, complementation, relatives, conditionals, tense relations	Meaning preserved; target structure accurate	Target relationship evident with a non-fatal local error, where allowed	Target absent, meaning changed, or relationship uninterpretable
Grammatical accuracy	Select/produce form in context	Tense, agreement, word order, complementation, subordination	Target form acceptable in context	Only where course rubric allowed	Incorrect form affecting target feature
Error identification/correction	Locate and repair error	Grammar/syntax error categories	Problem identified and acceptably corrected	Identification without complete repair, where allowed	Problem not identified or correction unacceptable
Complex-sentence production/manipulation	Combine, expand, restructure clauses	Embedding and complex clause relations	Required relation realised in a well-formed structure	Attempt evident with non-fatal local error, where allowed	Required relation absent or uninterpretable

Source: own processing

3.3 Measures of Syntactic Competence

Syntactic competence was operationalised through grammatical accuracy (GA) and syntactic complexity. GA was calculated as the percentage of available assessment credit obtained on responses for which grammatical acceptability of the target form was the scoring criterion. It should therefore be interpreted as a course-aligned grammatical-accuracy index, not as a general proficiency score.

The validity argument for GA is primarily content-based. The assessed structures corresponded to the grammatical domains explicitly taught in the courses: tense and tense relationships, agreement, word order, complementation, subordination, clause embedding, relative clauses, and conditional constructions. The assessment also sampled more than one response format, controlled target-form production, transformation, error correction, and manipulation of complex sentences, reducing dependence on a single task type. Finally, scoring focused on the accurate use of the target syntactic structures rather than on a general evaluation of writing quality. Accordingly, GA reflects grammatical accuracy in relation to the structures assessed in the course and should not be interpreted as a measure of overall English proficiency.

Scoring consistency was supported through predetermined answer keys, common assessment criteria, and consistent scoring principles across testing occasions. These procedures ensured that responses from both programme groups were evaluated according to the same criteria. Future studies may further strengthen scoring reliability by incorporating independent double marking and reporting inter-rater agreement.

For T-unit analysis, a T-unit was defined as one independent clause together with all subordinate clauses attached to or embedded within it (Hunt, 1965). Segmentation followed explicit syntactic rules: (a) coordinate independent clauses were treated as separate T-units when each contained its own subject–predicate structure; (b) coordinated predicates sharing one subject remained within a single T-unit; (c) relative, complement, and adverbial clauses remained within the T-unit containing the matrix clause; (d) embedded clauses were counted at each level for clause counts but did not initiate a new T-unit; (e) finite and non-finite dependent clauses functioning as complements or adjuncts were attached to the relevant matrix T-unit; (f) fragments lacking an independent clause were coded separately and excluded from the denominator of complete T-units; and (g) punctuation alone did not determine segmentation when syntactic structure indicated a single T-unit.

T-unit segmentation followed a predefined coding protocol based on Hunt (1965), with syntactic dependency rather than punctuation used as the primary criterion in ambiguous cases. The same operational rules were applied consistently across both programme groups and testing occasions, including rules for coordination, subordinate and embedded clauses, non-finite structures, and fragments. As independent double-coding was not conducted, an inter-rater agreement coefficient for T-unit boundaries is not available; this is acknowledged as a limitation of the study.

Mean length of T-unit (MLT) was calculated as the total number of words in analysable T-units divided by the number of T-units. Subordination ratio (SR) was calculated as the total number of clauses divided by the total number of T-units. A simple independent clause therefore yields an SR of 1.0, whereas a T-unit containing one matrix clause and one dependent clause yields an SR of 2.0.

3.4 Data Analysis

Statistical analysis was conducted in IBM SPSS Statistics. Descriptive statistics were calculated for grammatical accuracy (GA), subordination ratio (SR), and mean length of T-unit (MLT) at mid-course and final testing. Between-programme differences were examined using independent-samples *t*-tests, while changes between mid-course and final testing were assessed using paired-samples *t*-tests. Statistical significance was evaluated at $\alpha = .05$. Effect sizes were expressed as Cohen's *d*, and 95% confidence intervals were reported where they could be estimated from the available data.

Baseline comparability was considered within the constraints of the study design. Both groups studied English at the same institution, were assessed under comparable course conditions, and completed assessments at the same stages of instruction. However, no independent standardised entry-proficiency measure was available. Mid-course scores were therefore used to describe initial observed differences between the groups but were not treated as a true pre-programme baseline. Accordingly, between-programme differences are interpreted as programme-associated patterns rather than causal effects of curricular orientation.

The data were collected across three academic years (2021/22–2023/24), representing successive student cohorts rather than a single cohort followed continuously over three years. Potential variation between cohorts should therefore be considered when interpreting the findings.

4 Results

Descriptive results for grammatical accuracy (GA), subordination ratio (SR), and mean length of T-unit (MLT) are presented in Table 2. Both groups showed higher mean values at final testing than at mid-course testing. However, the two programmes differed in their performance profiles: pre-service teachers achieved higher grammatical accuracy, whereas ELAC students demonstrated greater syntactic complexity.

4.1 Grammatical Accuracy

Grammatical accuracy increased from 78.4% at mid-course to 85.9% at final testing among pre-service teachers and from 75.8% to 83.1% among ELAC students (Fig. 1). At final testing, pre-service teachers scored 2.8 percentage points higher than ELAC students. The between-programme difference was statistically significant ($p = .030$), corresponding approximately to $t(316) = 2.18$, with an estimated 95% confidence interval for the mean difference of [0.27, 5.33] percentage points and Cohen's $d \approx 0.26$. Thus, although statistically significant, the final difference in grammatical accuracy represented a small effect.

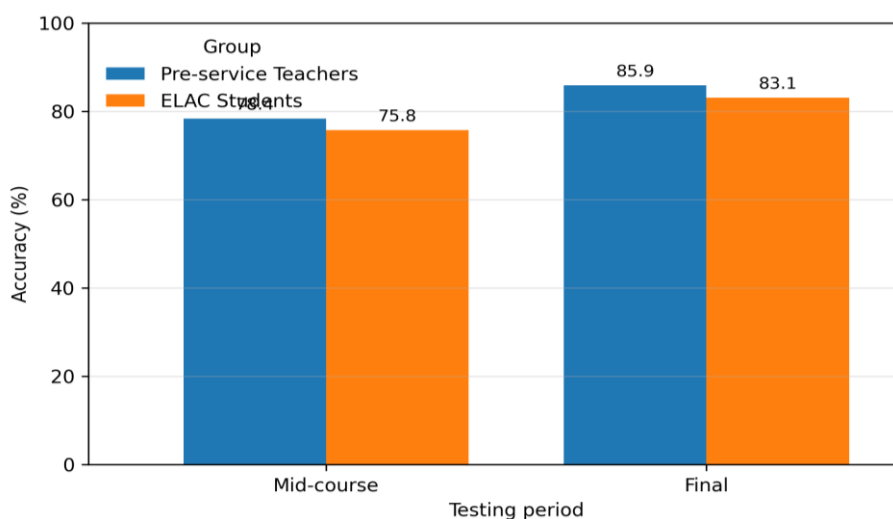


Figure 1: Grammatical Accuracy
Source: own processing

4.2 Syntactic Complexity: Subordination Ratio

ELAC students demonstrated higher subordination ratios at both testing points. The mean SR increased from 0.9 to 1.1 among pre-service teachers and from 1.1 to 1.4 among ELAC students (Fig. 2). At final testing, the difference between the programmes was statistically significant ($p < .001$), with ELAC students achieving a mean SR 0.3 points higher than pre-service teachers.

Because the exact test statistic and group-specific standard deviations were not available for this comparison, a unique Cohen's d and confidence interval could not be calculated. Given $df = 316$ and $p < .001$, however, the result corresponds to $|t| > 3.322$ and implies $|d| > 0.392$ under an equal-variance independent-samples framework. The difference therefore indicates at least a small-to-moderate effect favouring ELAC students.

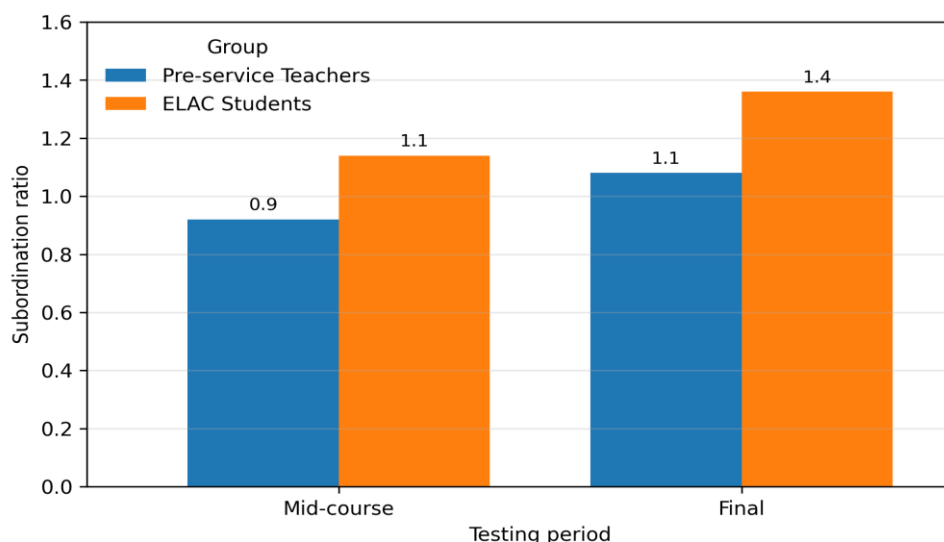


Figure 2: Subordination Ratio

Source: own processing

4.3 Syntactic Complexity: Mean Length of T-unit

A similar pattern was observed for mean length of T-unit. Pre-service teachers increased from 11.8 words per T-unit at mid-course to 13.4 words at final testing, whereas ELAC students increased from 13.2 to 15.9 words (Fig. 3). At final testing, ELAC students therefore produced T-units that were, on average, 2.5 words longer than those of pre-service teachers. The between-programme difference was statistically significant ($p < .001$). As with SR, the available aggregate data do not permit calculation of a unique effect size or confidence interval. With $df = 316$, $p < .001$ corresponds to $|t| > 3.322$ and implies $|d| > 0.392$ under an equal-variance independent-samples framework. The result therefore supports at least a small-to-moderate difference in syntactic elaboration favouring ELAC students.

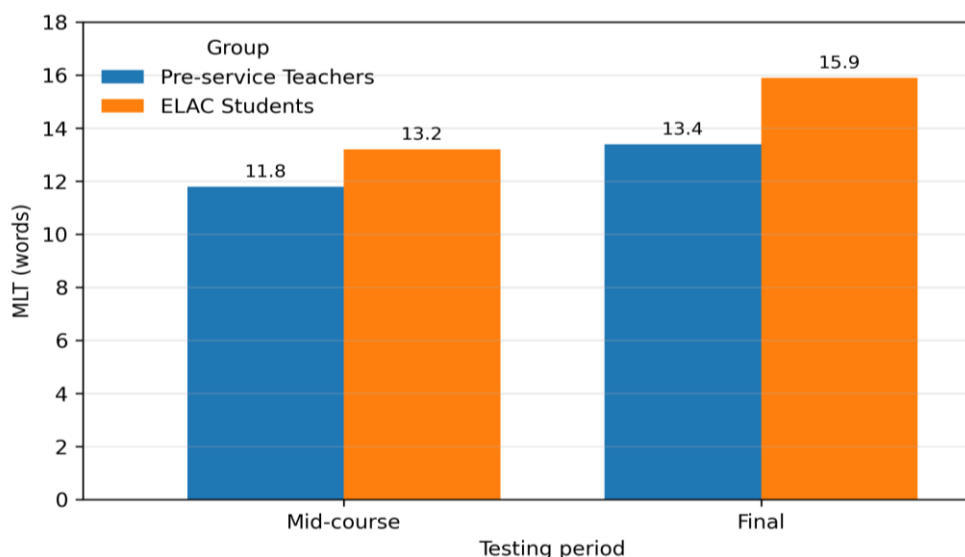


Figure 3: Mean Length of T-unit

Source: own processing.

4.4 Error Distribution

Despite the overall improvement in grammatical accuracy and syntactic complexity, difficulties persisted in several syntactic areas. Clause embedding accounted for the largest

proportion of identified errors (31%), followed by tense consistency (24%), relative clauses (18%), conditional constructions (15%), and subject–verb agreement (12%) (Table 1). Clause embedding and tense consistency together accounted for more than half of the observed errors, indicating that these areas remained particularly challenging.

Table 2: Distribution of Syntactic Errors

Error type	Percentage (%)
Clause embedding	31
Tense consistency	24
Relative clauses	18
Conditionals	15
Subject–verb agreement	12

Source: own processing

4.5 Descriptive and Inferential Results

Table 3 summarises the principal descriptive and inferential findings. The results show a consistent programme-related pattern at final testing: pre-service teachers achieved higher grammatical accuracy, while ELAC students achieved higher values for both measures of syntactic complexity.

Table 3: Descriptive and Inferential Results

Measure	Group	Mid-course M	Final M	Final difference	p	Effect estimate	95% CI
GA (%)	Pre-service	78.4	85.9	+2.8 pp vs ELAC	.030	$d \approx 0.26$	[0.27, 5.33] pp
GA (%)	ELAC	75.8	83.1	—	—	—	—
SR	Pre-service	0.9	1.1	−0.3 vs ELAC	< .001	$ d > 0.392$	—
SR	ELAC	1.1	1.4	—	—	—	—
MLT (words)	Pre-service	11.8	13.4	−2.5 vs ELAC	< .001	$ d > 0.392$	—
MLT (words)	ELAC	13.2	15.9	—	—	—	—

Source: own processing

Note. For GA, the confidence interval and effect size were estimated from the available group sizes, means, and reported two-sided p value. For SR and MLT, the reported $p < .001$ permits only a lower-bound estimate of the standardized effect.

5 Discussion

The findings indicate development in both grammatical accuracy and syntactic complexity between mid-course and final testing, while revealing distinct performance profiles across the two programmes. Pre-service teachers demonstrated a modest advantage in grammatical accuracy, whereas ELAC students achieved higher values for both subordination ratio (SR) and mean length of T-unit (MLT). These patterns suggest that different curricular orientations may be associated with different dimensions of syntactic development.

The higher grammatical accuracy observed among pre-service teachers may be related to the greater emphasis on explicit grammar instruction and language awareness within teacher education. This interpretation is consistent with research demonstrating the benefits of form-focused instruction for grammatical development (Ellis, 2006; Norris & Ortega, 2000). However, given the absence of an independent baseline proficiency measure, the observed difference should be interpreted as an association rather than a direct effect of programme orientation.

In contrast, ELAC students demonstrated greater syntactic complexity, reflected in higher SR and MLT values. Their more frequent use of subordinate structures and longer T-units may be associated with sustained engagement with linguistics, literature, academic discourse, and analytically demanding reading and writing. Such exposure may provide greater opportunities to encounter and produce structurally elaborate language.

Taken together, the results reinforce the distinction between grammatical accuracy and syntactic complexity as related but partially independent dimensions of language development. Improvement in one dimension does not necessarily imply equivalent development in the other, a pattern consistent with previous research (Larsen-Freeman, 2006; Skehan, 1998). Assessing syntactic competence exclusively through grammatical accuracy may therefore provide an incomplete representation of learner development.

Despite the overall improvement, difficulties persisted in several syntactic areas. Clause embedding (31%) and tense consistency (24%) accounted for the largest proportions of identified errors, followed by relative clauses, conditionals, and subject–verb agreement. The concentration of errors in embedding and tense relationships suggests that managing syntactic dependency across clauses remains challenging even at university level and warrants continued instructional attention.

5.1 Pedagogical Implications

The findings point to the need for instruction that develops grammatical accuracy and syntactic complexity in parallel. In particular, the frequency of errors in clause embedding and tense consistency identifies these areas as priorities for targeted intervention.

Clause embedding can be developed through progressive sentence-combining activities moving from coordination to relative, complement, and adverbial subordination. Guided clause-expansion tasks can require students to transform short propositions into increasingly complex academic sentences, while comparative editing activities can encourage them to evaluate alternative embedding structures and their effects on meaning and information organisation.

Tense consistency can be addressed through timeline-based reconstruction tasks, reported-speech and narrative transformations, and contrastive editing of learner sentences. Students may also benefit from short writing activities in which they identify temporal relationships before selecting and justifying tense forms across main and subordinate clauses.

More broadly, feedback and assessment should address both grammatical correctness and structural range. An exclusive focus on accuracy may encourage learners to avoid syntactically demanding constructions, whereas an integrated approach can support the production of language that is both accurate and structurally sophisticated. For teacher education in particular, advanced syntax instruction should provide future teachers not only with explicit grammatical knowledge but also with opportunities to analyse, produce, and explain complex syntactic relationships.

5.2 Limitations

Several limitations should be considered when interpreting the findings. First, the study was conducted within a single institutional context and used institutionally developed examinations rather than an external standardised proficiency measure. The absence of an independent entry-proficiency measure means that equivalence between the programme groups at baseline cannot be assumed.

Second, the data were collected from successive cohorts across three academic years rather than from a single cohort followed continuously over the entire period. Differences between academic years may therefore partly reflect variation in cohort composition or other year-specific factors.

Third, although predetermined assessment criteria and consistent T-unit segmentation rules were applied, independent double-rating and double-coding were not conducted. Consequently, empirical inter-rater agreement coefficients for scoring and T-unit segmentation are not available.

Finally, the analysis focused on written performance and therefore does not capture syntactic competence in spoken production. Future research should incorporate standardised baseline proficiency measures, independent double-coding of a proportion of the data, and both written and spoken measures of syntactic performance. Longitudinal designs using mixed-effects modelling could further account for repeated observations, programme differences, and cohort effects simultaneously.

Overall, the findings demonstrate that syntactic development is multidimensional. Pre-service teachers showed a modest advantage in grammatical accuracy, whereas ELAC students demonstrated greater syntactic complexity. Rather than indicating the superiority of one programme, these contrasting profiles highlight the importance of curricula that support both accurate grammatical performance and the development of structurally complex language.

6 Conclusion

The present study examined syntactic competence among pre-service teachers of English and students of English Language and Anglophone Cultures (ELAC), focusing on the development of grammatical accuracy and syntactic complexity across mid-course and final assessments.

Both groups showed improvement, although different performance profiles emerged. Pre-service teachers achieved slightly higher grammatical accuracy at final testing (85.9% vs. 83.1%), whereas ELAC students demonstrated greater syntactic complexity, with higher subordination ratios (1.4 vs. 1.1) and longer T-units (15.9 vs. 13.4 words). These findings reinforce the view that syntactic competence is multidimensional and that accuracy and complexity do not necessarily develop in parallel. At the same time, the differences should be interpreted as programme-associated patterns rather than direct effects of curricular orientation, particularly given the successive-cohort design and the absence of an independent baseline proficiency measure.

From a pedagogical perspective, the findings support a balanced approach combining explicit attention to grammatical accuracy with opportunities to produce increasingly complex syntax. The persistent difficulties with clause embedding and tense consistency further indicate areas in which targeted practice may be particularly beneficial.

The study is limited by its single-institution context, institutionally developed assessments, successive cohorts, absence of an external baseline measure, and focus on written performance. Future research should incorporate standardised entry-proficiency measures and inter-rater reliability procedures and could employ mixed-effects modelling to account more effectively for repeated observations and cohort variation.

Overall, the study demonstrates the importance of considering both accuracy and complexity when evaluating advanced EFL development. The contrasting profiles of the two groups highlight the value of curricula that support not only grammatically accurate language use but also the ability to produce structurally varied and sophisticated language.

Acknowledgment

This paper was supported by the Erasmus+ project DASS (KA220-SCH Cooperation Partnerships in School Education), Grant Agreement No. 2021-1-SK01-KA220-SCH-000024680, and by the KEGA 030PU-4/2024, Inovácia prístupu k cudzojazyčnému vzdelávaniu za účelom rozvoja prierezových gramotností ako podpora implementácie nového kurikula.

The author also wishes to thank the student participants whose cooperation and engagement across all three academic years made this research possible.

AI Use Statement

The author used ChatGPT (OpenAI) to assist with language editing, proofreading, and improving the clarity and organization of the manuscript. All scholarly content, analysis, interpretations, and conclusions were developed and verified by the author, who assumes full responsibility for the final version of the paper.

References

- Bardovi-Harlig, K. (1992). A second look at T-unit analysis: Reconsidering the sentence. *TESOL Quarterly*, 26(2), 390–395. <https://doi.org/10.2307/3587016>
- Biber, D., Gray, B., & Staples, S. (2016). *Investigating grammatical complexity in L2 English writing*. Cambridge University Press.
- Bulté, B., & Housen, A. (2012). Defining and operationalising L2 complexity. *Language Learning*, 62(1), 21–46. <https://doi.org/10.1075/llt.32.02bul>
- Celce-Murcia, M., & Larsen-Freeman, D. (1999). *The grammar book: An ESL/EFL teacher's course* (2nd ed.). Heinle & Heinle.
- Chomsky, N. (1965). *Aspects of the theory of syntax*. MIT Press. <https://doi.org/10.21236/AD0616323>
- Ellis, R. (2006). Current issues in the teaching of grammar: An SLA perspective. *TESOL Quarterly*, 40(1), 83–107. <https://doi.org/10.2307/40264512>
- Ellis, R., & Barkhuizen, G. (2005). *Analysing learner language*. Oxford University Press.
- Housen, A., & Kuiken, F. (2009). Complexity, accuracy, and fluency in second language acquisition. *Applied Linguistics*, 30(4), 461–473. <https://doi.org/10.1093/applin/amp048>

- Housen, A., Kuiken, F., & Vedder, I. (Eds.). (2012). *Dimensions of L2 performance and proficiency: Complexity, accuracy, and fluency in SLA*. John Benjamins Publishing Company. <https://doi.org/10.1075/llt.32>
- Hunt, K. W. (1965). *Grammatical structures written at three grade levels*. National Council of Teachers of English.
- Kyle, K., Crossley, S., & Verspoor, M. (2021). Measuring longitudinal writing development using indices of syntactic complexity and sophistication. *Studies in Second Language Acquisition*, 43(4), 781–812. <https://doi.org/10.1017/S0272263120000546>
- Kyle, K., & Crossley, S. A. (2018). Measuring syntactic complexity in L2 writing using fine-grained clausal and phrasal indices. *The Modern Language Journal*, 102(2), 333–349. <https://doi.org/10.1111/modl.12468>
- Larsen-Freeman, D. (2006). The emergence of complexity, fluency, and accuracy in the oral and written production of five Chinese learners of English. *Applied Linguistics*, 27(4), 590–619. <https://doi.org/10.1093/applin/aml022>
- Lu, X. (2010). Automatic analysis of syntactic complexity in second language writing. *International Journal of Corpus Linguistics*, 15(4), 474–496. <https://doi.org/10.1075/ijcl.15.4.02lu>
- Norris, J. M., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning*, 50(3), 417–528. <https://doi.org/10.1111/0023-8333.00136>
- Norris, J. M., & Ortega, L. (2009). Towards an organic approach to investigating CAF in instructed SLA: The case of complexity. *Applied Linguistics*, 30(4), 555–578. <https://doi.org/10.1093/applin/amp044>
- Ortega, L. (2003). Syntactic complexity measures and their relationship to L2 proficiency: A research synthesis of college-level L2 writing. *Applied Linguistics*, 24(4), 492–518. <https://doi.org/10.1093/applin/24.4.492>
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford University Press.
- Wolfe-Quintero, K., Inagaki, S., & Kim, H.-Y. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. University of Hawai'i, Second Language Teaching & Curriculum Center.