

# Use of Moodle LMS-Based Tests for Enhancing Linguistic Competence of Students Majoring in Foreign Language Philology

Tetiana Kharchenko<sup>1,\*</sup>, Tetiana Semashko<sup>2</sup>, Ievgen Dolynskiy<sup>3</sup>, Liliia Bepala<sup>4</sup> & Tetiana Ivanova<sup>5</sup>

<sup>1</sup>Department of Romance Philology and Comparative-Typological Linguistics, Institute of Philology, Borys Grinchenko Kyiv University, Kyiv, Ukraine

<sup>2</sup>Department of Journalism and Language Communication, Faculty of Humanities and Education, National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine

<sup>3</sup>Department of Germanic Philology and Translation, Faculty of International Relations, Khmelnytskyi National University, Khmelnytskyi, Ukraine

<sup>4</sup>Department of Foreign Languages, Zaporizhzhia State Medical University, Zaporizhzhia, Ukraine

<sup>5</sup>Department of Foreign Languages Professional Communication, Faculty Linguistics and Translations, International Humanitarian University, Odesa, Ukraine

\*Correspondence: The Department of Romance Philology and Contrastive-and-Typological Linguistics, Institute of Philology, Borys Grinchenko Kyiv University, Kyiv, 04159, Ukraine. E-mail: tetiana\_kh498@ukr.net

Received: October 25, 2021

Accepted: November 10, 2021

Online Published: November 15, 2021

doi:10.5430/jct.v10n4p67

URL: <https://doi.org/10.5430/jct.v10n4p67>

## Abstract

The *purpose* of the study is to identify how the speech production component of the linguistic competence, which seems to be a deficiency of using the Moodle LMS in the language training, can be enhanced through the use of the voice-administered language tests. Ten Moodle-based voice-administered language tests were designed, piloted, and employed to influence the stages of speech production component and English language proficiency level both seen as an approach to enhancing the linguistic competence of students majoring in foreign language Philology. The tests assessed the components of linguistic competence such as cohesion and coherence, vocabulary (lexical resource), along with grammar, and accuracy. The course satisfaction survey was used to study the experimental group students' perceptions towards the use of voice-administered language tests to develop linguistic competence. It was found that the designed Moodle-based voice-administered language tests could be considered a feasible and reliable option to enhance the linguistic competence in the students majoring in Foreign Language Philology. The tests had influenced the stages of the speech production component and English language proficiency level, in general. They also improve students' cohesion and coherence, vocabulary (lexical resource), grammar, and accuracy that are seen as components of linguistic competence. Due to the intervention, there was a considerable shift in the EG students' English vocabulary profile. There was a movement to higher levels of proficiency in the use of vocabulary compared to the CG students whose growth was marginal, mostly in the B1 level. It was also found that the EG students were generally satisfied with the intervention, the design and content of the tests, and the effectiveness of the tests in developing linguistic competence.

**Keywords:** higher education, moodle LMS-based tests, linguistic competence, foreign language philology

## 1. Introduction

Enhancement of linguistic competence in those tertiary students, who are supposed to be information professionals, seems a debatable theoretical and practical problem (Tarango & Machin-Mastromatteo, 2017). This debate is driven by both limited and holistic views on the notion of 'communicative competence' that comprises linguistic, sociolinguistic, discourse, and strategic competences. From the perspective of the advocates of a limited view, linguistic competence is interpreted as the knowledge of grammar and vocabulary. From the holistic view, the above four competences are seen as indiscrete elements because the vocabulary and grammar can only be used appropriately in the situational context (Berns, 2019; Nordquist, 2019). Apart from those views, Castillo (2016)

associates linguistic competence with the ‘knowledge of speakers to speak’. These views challenge the practitioners in terms of what to teach and how to teach it (Castillo, 2016). Some of them use a competency-based approach, active learning methods and formalist stylistics, a step-wise context-based system to develop the linguistic competence, and development of students’ I-Language (Internal Language) which is extracted from the E-language (External Language) (Arak, 2016; Castillo, 2016; Haldankar, 2020; Kunanbayeva & Zhylytyrova, 2016; Woldemariam, 2015). The competency-based approach, in terms of enhancing linguistic competence, is used by the teachers to raise students’ awareness of their ability to solve communication problems through cognition and explanation of lingua-cultural reality (Kunanbayeva & Zhylytyrova, 2016). The active learning methods and formalist stylistics are employed to foster the competence under the study when delivering poetry, novel, drama, and short story (Woldemariam, 2015). The step-wise context-based system is supposed that the learner goes through the preparatory stage of fostering the linguistic competence that is followed by typical communication model-based skills training with a further move to the autonomous use of the language (Kunanbayeva & Zhylytyrova, 2016). The enhancement of the linguistic competence through the development of students’ I-Language, which is virtually grammar, is claimed to be of utmost importance and in the reality of linguistic education, it is paid the greatest teachers’ and students’ efforts (Arak, 2016). COVID-19 pandemic brought a new instructional challenge in a way the linguistic competence is trained, in particular of those who do the programme in Philology, because the learning process was almost instantly moved to the Moodle LMS which is limited in the instruments of training speaking skills seen as a component of the competence under the study. This situation created a gap for the study.

## 2. Literature Review

### 2.1 Linguistic Competence

In literature, the notion of linguistic competence is associated with two domains such as language - in some sources, it is the knowledge of grammar, written language along with their sociocultural contexts - and ability to use it adequately for oral and written discussions (Tarango & Machin-Mastromatteo, 2017). The term ‘linguistic competence’ is also used as a synonym to the communicative competence that is seen as language rule-governed behaviour determined by the use of those rules in certain contexts (Abdulrahman & Abu-Ayyash, 2019). According to the concept of ‘21<sup>st</sup> Century Skills and Competences’, linguistic competence is defined within the context of three dimensions such as information, communication, and social-related (Ananiadou & Claro, 2009). In language teaching, linguistic competence is associated with three components such as cohesion and coherence, vocabulary (lexical resource), accompanied by grammar, and accuracy (Abdulrahman & Abu-Ayyash, 2019; Varpe, 2013).

In terms of training, linguistic competence is supposed to be fostered as a transversal, multipurpose, and cross-culture phenomenon (Reyzábal, 2012). However, a common belief was found that a face-to-face learning environment best suits the development of communicative competence (Truong, 2021). It suggested that the foreign language-majored students were insufficiently trained through the use of computer-assisted learning during the pandemic. It also implied that there is a need for boosting the instructional capacity of the Moodle LMS in fostering linguistic competence in tertiary students majoring in Foreign Philology.

### 2.2 Linguistic Competence and Moodle LMS

Research in the field of language training showed that Moodle is mostly used to facilitate the development of the students’ reading comprehension, writing, and use of language and grammar skills (Bataineh & Mayyas, 2017). The use of the Moodle “Reader” plug-in module proved to be effective in developing extensive reading skills and boosting vocabulary (Alavi & Keyvanshekouh, 2012; Chavangklang et al., 2019). The use of the Moodle LMS was also found effective for teaching writing skills of tertiary students. Those skills are trained using Moodle quizzes and collaborative writing tasks assigned and assessed via Moodle. These benefit students by raising their awareness of language forms and constructing their knowledge of the language through cooperative learning (Fernando, 2020; Zhang & Zhu, 2018). The study of best practices of teaching grammar using Moodle LMS found that the TPaCK (Technological Pedagogical Content Knowledge) teaching model seems effective. This model integrates technological knowledge, pedagogical knowledge, and content knowledge. In terms of teaching grammar using Moodle, the model relies on designing the dichotomic questions followed by multiple-choice grammar questions so that the students answer them step-by-step (Plomteux, 2017). The Moodle plugin embeds to design gamified courses such game elements as leaderboard, avatar, and game progress are also increase the effectiveness of the online foreign language classes, in general (Gachkova & Somova, 2020). Although different tools of the Moodle LMS are applied to develop certain elements of linguistic competence in tertiary students, the study did not find the revealed best practice of the use of Moodle to enhance the linguistic competence in tertiary students majoring in Foreign

Philology, specifically its speech production component seen as a sequence of four stages such as conceptualisation, formulation, articulation, and self-monitoring (Coffman, 2021).

Therefore, the *purpose* of the study is to identify how the speech production component of the linguistic competence, which seems to be a deficiency of using the Moodle LMS in the language training, can be enhanced through the use of the voice-administered language tests.

The research questions were formulated as follows:

- a) to identify whether the designed Moodle-based voice-administered language test was a feasible and reliable option.
- b) to identify how the designed Moodle-based voice-administered language test influences the stages of speech production component and English language proficiency level, in general.
- c) to identify what the students' perceptions were towards the intervention.

### 3. Methodology

Ten Moodle-based voice-administered language tests were designed, piloted, and employed to influence the stages of speech production component and English language proficiency level both seen as an approach to enhancing the linguistic competence of students majoring in foreign language Philology. The tests assessed the components of linguistic competence such as cohesion and coherence, vocabulary (lexical resource), along with grammar, and accuracy (Abdulrahman & Abu-Ayyash, 2019; Varpe, 2013). The course satisfaction survey was used to study the experimental group students' perceptions towards the use of voice-administered language tests to develop linguistic competence.

#### 3.1 Research Design

The research was descriptive. It was designed as a flow of four phases such as, first, the language test design and validation (pilot study), second, the intervention using the quasi-experiment that combines the non-equivalent group and the pretest-posttest designs, third, the course satisfaction survey, and fourth, data analysing phase. The reason for choosing the combined type of quasi-experimental intervention was that it requires administering the pre-test and post-test in both the experimental group (EG) and control group (CG), and the EG students receive treatment, while the CG students do not (Price et al., 2015).

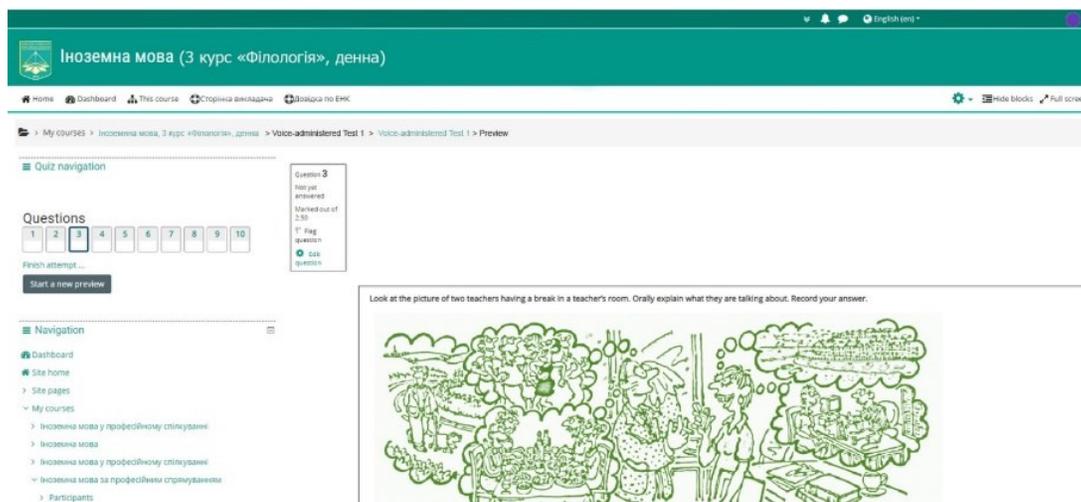
#### 3.2 Technical and Instructional Description of the Test

Technically, the Moodle-based voice-administered language test relied on the use of RecordRTC software which is a feature in the Atto editor Moodle plugin (Federico, 2020). Upon completion, the recording – which is virtually the answer to a test question – was embedded by the student in the text area directly they are currently editing. To do this, they were expected to be assigned the course creator role (or any other role with editing capabilities) in the system beforehand. Concerning assessment, the students could score 25 grades per test. In the pilot phase, the students' answers were assessed by twenty volunteering English Language teachers from the above universities (1 test per two teachers) who used a checklist (Appendix A). Overall, 10 tests were designed and piloted. In the intervention phase, the experimental group students were assessed by the research team members who used both assessment criteria and the *Text Inspector* online tool (Weblingua Limited & Cambridge University Press, 2021).

Instructionally, the voice-administered language test included 10 questions. The typical questions to the images were as follows:

*'Look at the picture for about 1 minute, then cover it and orally describe it in detail as much as it is possible. Record your answer'; 'Look at the picture that illustrates some situations and orally explain what is happening and how the issue can be resolved. Record your answer'; 'Read 10 sentences one at a time. Each sentence contains a mistake. Find the mistake, correct and explain it. Record your answer' (see Figure 1).*

The demo test is presented in Appendix B.



**Figure 1.** Illustration of the Voice-Administered Language Test

The demo test is presented in Appendix C.

The recorded data were transcribed and analysed using the *Text Inspector project*, specifically, utilising the listening analysis option that the software tool provides because listening seems to be the most relevant to speaking (Weblingua Limited & Cambridge University Press, 2021).

### 3.3 Sample

A random sampling method was employed in the pilot study. It involved 267 students of 5 universities in Ukraine that train students majoring in foreign languages (Philology). These universities were as follows: the National University of Life and Environmental Sciences of Ukraine (NULESU), Borys Grinchenko Kyiv University (BGKU), Vinnytsia State Pedagogical University (VSPU), Bohdan Khmelnytsky National University of Cherkasy (BKNUC), and Ternopil Volodymyr Hnatiuk National Pedagogical University (TVHNPU). The key requirement for the participants in the pilot study was their grade point average (GPA) which was expected to be greater than 3.00. This score meant sufficient academic efficiency.

The convenience sampling method was used to hire 32 students (23 females aged 20-22 and 9 males aged 21-23) majoring in Foreign Language Philology at Borys Grinchenko Kyiv University (BGKU). These students formed the experimental and control groups each consisting of 16 students. The sample size was decided to be 16 students because the processing of tests was time and effort-consuming though the software was used. Both groups were considered mutually homogeneous because students majored in the same specialism and represented the same institution.

### 3.4 Instruments

Ten piloted voice-administered language tests, the *Text Inspector project* (Weblingua Limited & Cambridge University Press, 2021), and the course satisfaction questionnaire were used as instruments for the study. The *jamovi project* (2021) computer software (Version 1.6) was used to process the statistical data yielded from the pilot study, intervention, and survey.

### 3.5 The Voice-Administered Language Test

Each test included 10 questions and each test consisted of an image of either a process, or illustration of a story, or an infographic-based explanation of some specialism-related concept (Language/Philology). The tests used the adopted photocopyable resources from Cunningham and Moor's (2005) *Cutting Edge: Intermediate. Teachers' book*.

### 3.6 The Text Inspector Project

The EVP (English Vocabulary Profile) tool and Metadiscourse markers tool for the Text Inspector were used to analyse the transcribed EG students' answers. Following that, the results were consolidated and analysed.

### 3.7 The Course Satisfaction Online Survey Questionnaire

The survey included 4 questions that covered the students' overall satisfaction, their satisfaction with the design of the tests and content, and their satisfaction with the effectiveness of the tests in developing linguistic competence. It used a 7-point Likert satisfaction scale. The values ranged from 1 meaning "Extremely dissatisfied" to 7 meaning "Extremely Satisfied".

### 3.8 Questions

1. How do you rate your satisfaction with the voice-administered language tests used to develop your linguistic competence?
2. How do you rate the design of the tests?
3. How do you rate the content of the tests?
4. How do you rate the change brought by tests to your spoken cohesion and coherence, vocabulary (lexical resource), along with grammar, and accuracy?

## 4. Results

The findings that were obtained through the use of the purposefully designed voice-administered language tests, showed that the latter had enhanced the linguistic competence and specifically, the speech production component and English language proficiency level, in general. The tests also addressed the issues related to the limit of instructional tools that can be used via the Moodle LMS to develop the speech production component of linguistic competence. The students were also satisfied with the design of the tests and content, and the effectiveness of the tests, in general.

To respond to the first research question, which was to identify whether the designed Moodle-based voice-administered language test was a feasible and reliable option, the tests were administered to the random sample in the pilot study. The assessment results of the students' answers - Test Reliability Statistics – assessed by the teachers are presented in Table 1.

**Table 1.** Test Reliability Statistics

Test	Mean	SD	Cronbach's $\alpha$	McDonald's $\omega$
Test 1	17.65	0.932	0.862	0.878
Test 2	16.95	0.474	0.885	0.897
Test 3	16.90	0.596	0.902	0.914
Test 4	16.30	0.483	0.916	0.922
Test 5	17.30	0.560	0.905	0.917
Test 6	17.00	0.632	0.871	0.883
Test 7	17.00	0.675	0.893	0.909
Test 8	17.10	0.803	0.874	0.886
Test 9	16.45	0.606	0.923	0.931
Test 10	17.30	0.549	0.903	0.912

As can be seen in Table 1, the values for the reliability coefficient of Cronbach's  $\alpha$  were greater than 0.8 and meant 'good' and 'excellent' reliability (Glen, 2021). The values for McDonald's  $\omega$  seen as an estimate of the general factor saturation of a test were also greater than 0.8 which also meant 'good reliability' (Dunn et al., 2013). Thus, both coefficients showed that that data were normally distributed. The Mean values suggest that students' speech production was satisfactory and meant that the tests were of sufficient difficulty for the students. The above data implied that the designed Moodle-based voice-administered language tests could be considered a feasible and reliable option to enhance linguistic competence.

### 4.1 Pretest-Posttest Results Yielded from the Intervention

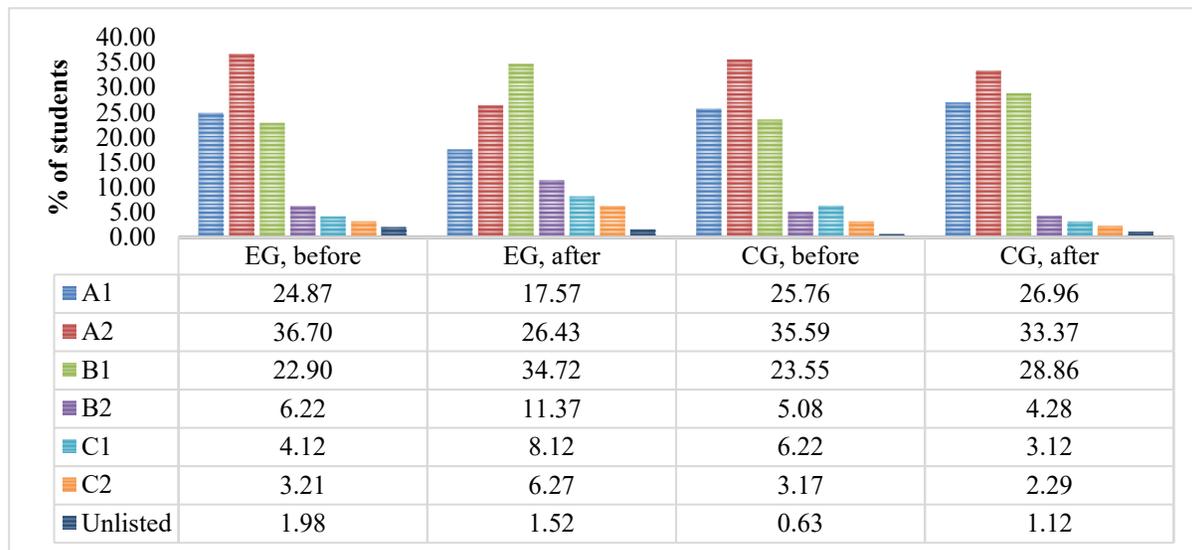
In the EG, Tests 1 and 2 were used as the pre-tests while Tests 3 to 10 were employed as post-tests. In the CG, Test 1 was used as the pre-test and Test 10 as a posttest. The descriptive statistics drawn from the test-based measurements are presented in Table 2.

**Table 2.** Descriptive Statistics Drawn from the Tests at Pre-and Post-Intervention Phases in EG and CG

Test	Pretest		Posttest		Pretest		Posttest	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Test 1	16.77	0.593	—	—	16.59	0.482	—	—
Test 2	17.69	0.332	—	—	—	—	—	—
Test 3	—	—	17.87	0.448	—	—	—	—
Test 4	—	—	18.05	0.469	—	—	—	—
Test 5	—	—	18.93	0.422	—	—	—	—
Test 6	—	—	19.37	0.538	—	—	—	—
Test 7	—	—	19.86	0.581	—	—	—	—
Test 8	—	—	20.08	0.496	—	—	—	—
Test 9	—	—	22.35	0.553	—	—	—	—
Test 10	—	—	22.74	0.654	—	—	17.44	0.493

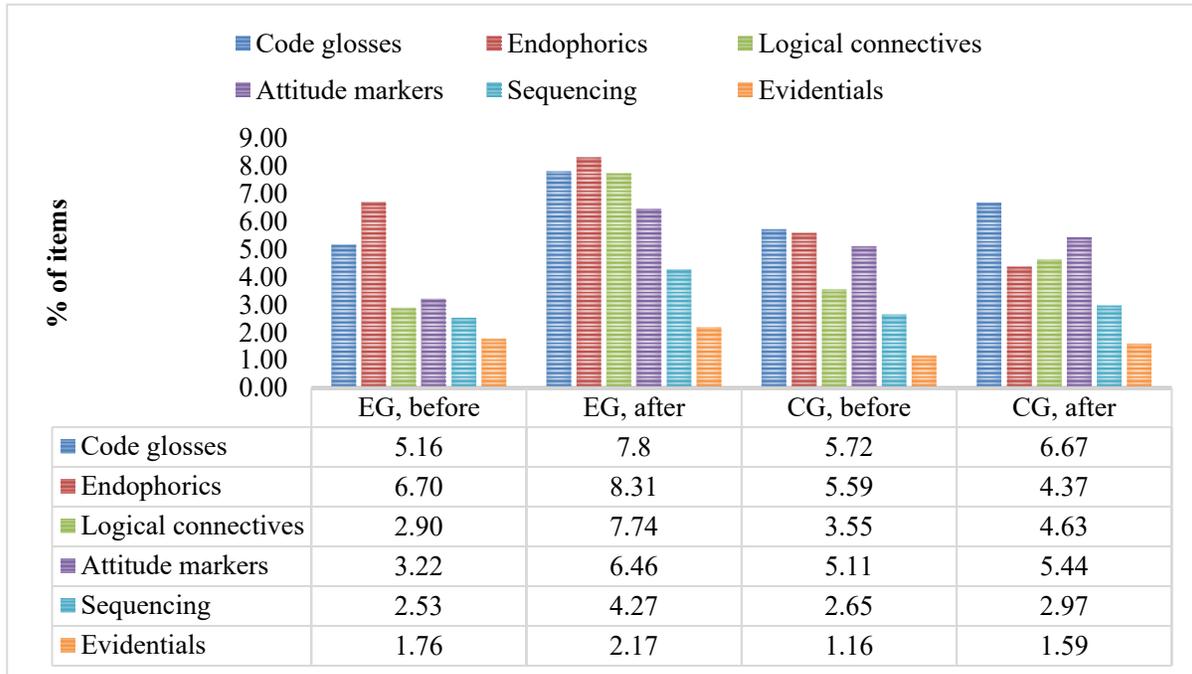
The mean values in Table 2 implied that the EG the students progressed in cohesion and coherence, vocabulary (lexical resource), grammar, and accuracy that were seen as components of linguistic competence. The difference in mean values for the EG students for Test 1 and Test 10 was —5.97, which was substantial compared to that difference in the CG,  $M_{dif} = 0.85$ . The results of the analysis of EG and CG students’ transcribed responses using the EVP tool are presented in Figure 2.

The results presented in Figure 2 showed that there was a considerable shift in the EG students' English vocabulary profile. There was a movement to higher levels of proficiency in the use of vocabulary (A1 was reduced by 7.3%, A2 was reduced by 10.27%, while B1 increased by 11.82%, B2 increased by 5.15%, C1 rose by 4.00 and C2 increased by 3.06%) compared to the CG students whose growth was marginal, mostly in B1 level with an increase of 5.31%.



**Figure 2.** The Results of the Analysis of EG and CG Students’ Responses Using the EVP Tool

The analysis based on the use of the Metadiscourse markers tool for the Text Inspector also showed improvement in cohesion and coherence of their spoken language (see Figure 3).



**Figure 3.** The Results of the Analysis of the Transcribed Students’ Responses Based on the Use of the Metadiscourse Markers Tool

The findings presented in Figure 3 also proved that the EG students improved the logic of their speech production. After the intervention, they used a greater proportion of the code glosses, endophorics, attitude markers, evidentials, and frame markers compared to the results of the CG students.

*4.2 Course Satisfaction Online Survey*

Seven randomly selected students from the experimental group were sent the online survey questionnaire to complete. The data yielded from the survey are presented in Table 3.

**Table 3.** Course Satisfaction Survey-Drawn Descriptive Statistics

	q1	q2	q3	q4
Mean	6.33	5.49	6.28	5.38
SD	0.148	0.037	0.118	0.549
Kurtosis	1.33	1.28	1.47	1.36
Std. error kurtosis	0.229	0.229	0.229	0.229

As can be noted in Table 3, the values for the Mean are screwed right. This indicated that the EG students were generally satisfied with the intervention, the design and content of the tests, and the effectiveness of the tests in developing linguistic competence. Their answers also indicated they considered their experience of participation in the tests-based intervention as positive.

Overall, the above data implied that the use of the voice-administered language tests influenced positively the speech production component of the linguistic competence, which seemed to be a deficiency of using the Moodle LMS in the language training.

**5. Discussion**

The study aimed to address three research questions as first, to identify whether the designed Moodle-based voice-administered language test was a feasible and reliable option, second, to identify how the designed

Moodle-based voice-administered language test influences the stages of speech production component and English language proficiency level, in general, third, to identify what the students' perceptions were towards the intervention. The novelty of the study is proved by the design and pilot study of ten voice-administered language tests and an instructional approach that uses the Moodle LMS embedded tools to enhance the speech production component of the linguistic competence in students majoring in Foreign Language Philology.

The study found that that the designed Moodle-based voice-administered language tests could be considered a feasible and reliable option to enhance linguistic competence. This was supported by the data from the pilot study. The values for the reliability coefficient of Cronbach's  $\alpha$  were greater than 0.8 and meant 'good' and 'excellent' reliability. The values for McDonald's  $\omega$  seen as an estimate of the general factor saturation of a test were also greater than 0.8 which also meant 'good reliability'. Therefore, both coefficients showed that that data were normally distributed. The Mean values suggested that students' speech production was satisfactory and meant that the tests were of sufficient difficulty for the students. The results yielded from the pretest-posttest measurements showed that the EG the students progressed in cohesion and coherence, vocabulary (lexical resource), grammar, and accuracy that were seen as components of linguistic competence. The difference in mean values for the EG students for Test 1 and Test 10 was  $-5.97$ , which was substantial compared to that difference in the CG,  $M_{dif} = 0.85$ . The results of the analysis of EG and CG students' transcribed responses using the EVP tool showed that there was a considerable shift in the EG students' English vocabulary profile. There was a movement to higher levels of proficiency in the use of vocabulary (A1 was reduced by 7.3%, A2 was reduced by 10.27%, while B1 increased by 11.82%, B2 increased by 5.15%, C1 rose by 4.00 and C2 increased by 3.06%) compared to the CG students whose growth was marginal, mostly in B1 level with an increase of 5.31%. The analysis based on the use of the Metadiscourse markers tool for the Text Inspector also showed improvement in cohesion and coherence of their spoken language. The data yielded from the course satisfaction survey (the Mean values) screwed right. This indicated that the EG students were generally satisfied with the intervention, the design and content of the tests, and the effectiveness of the tests in developing linguistic competence. Their answers also indicated they considered their experience of participation in the tests-based intervention as positive.

The findings agree with previous research. These go in line with Castillo (2016) who states that linguistic competence shows itself in speaking or the activity of speaking and is related to reality. Given the above, the competence is supposed to be trained through performing a speech act. The study develops findings of Maiier and Ustymenko (2018) in terms of the development of the pre-service teachers' methodological competence which is practically important for the students majoring in Foreign Language Philology. It agrees with Shalatska et al. (2020), who found that Moodle LMS can serve a dual purpose, first, for the in-class language teaching and second, for the distant self-studying. It can provide a convenient multitool learning environment for both teachers and students.

## 6. Conclusion

The designed Moodle-based voice-administered language tests could be considered a feasible and reliable option to enhance the linguistic competence in the students majoring in Foreign Language Philology. The tests were found to influence the stages of the speech production component and English language proficiency level, in general. They also improve students' cohesion and coherence, vocabulary (lexical resource), grammar, and accuracy are seen as components of linguistic competence. This was proved by the difference in mean values for the EG students for Test 1 and Test 10 which was much greater compared to that difference in the CG. Due to the intervention, there was a considerable shift in the EG students' English vocabulary profile. There was a movement to higher levels of proficiency in the use of vocabulary (A1 was reduced by 7.3%, A2 was reduced by 10.27%, while B1 increased by 11.82%, B2 increased by 5.15%, C1 rose by 4.00 and C2 increased by 3.06%) compared to the CG students whose growth was marginal, mostly in B1 level with an increase of 5.31%. The training based on the voice-administered language tests also helped students improve the cohesion and coherence of their spoken language. It was also found that the EG students were generally satisfied with the intervention, the design and content of the tests, and the effectiveness of the tests in developing linguistic competence. Their answers also indicated they considered their experience of participation in the tests-based intervention as positive. The study contributed to previous research in terms of the development of the pre-service teachers' methodological competence and creating a convenient multitool learning environment for both teachers and students.

## 7. Recommendations

The practitioners are expected to train the students to use the RecordRTC software and to deal with the students' hesitance in speaking and recording themselves simultaneously. The students need encouragement from the teachers to deal with their nerves.

## 8. Limitations of the Study

There were specified two limitations to the study such as the convenience sampling method and quasi-experimental research design because they are found to be vulnerable to selection bias (Grabbe, 2015; Saunders et al., 2012). However, these were used in the study because they required a targeted approach to sampling and research design.

## Acknowledgement

We express our gratefulness to the institutions that provided venues and facilitation and support for the pilot study. We are thankful to the students who participated in the pilot study and experiment, and who provided feedback via completing the course satisfaction online survey questionnaire.

## Conflicts of Interest

No conflicts of interest related to authors' affiliation, legal, financial, or commercial origin are reported by the research team members.

## References

- Abdulrahman, N. C., & Abu-Ayyash, E. A. S. (2019). Linguistic competence, communicative competence, and interactional competence. *International Journal of Computers and Technology*, 19, 7537-7552. <https://doi.org/10.24297/jal.v10i0.8530>
- Alavi, S., & Keyvanshekouh, A. (2012). Using the MoodleReader as an extensive reading tool and its effect on Iranian EFL students' incidental vocabulary learning. *English Language Teaching*, 5(6), 135-145. <https://doi.org/10.5539/elt.v5n6p135>
- Ananiadou, K., & Claro, M. (2009). *21st-century skills and competences for new millennium learners in OECD countries: OECD Education Working Papers No. 41*. OECD Library. <https://dx.doi.org/10.1787/218525261154>
- Arak, N. (2016). Chomsky's I-language and E-language. *Bulletin of Hiroshima Institute of Technology*, 51, 17-24.
- Bataineh, R. F., & Mayyas, M. B. (2017). The utility of blended learning in EFL reading and grammar: A case for Moodle. *Teaching English with Technology*, 17(3), 35-49.
- Berns, M. (2019). Chapter 37: World Englishes and communicative competence. In C. L. Nelson, Z. G. Proshina & D. R. Davis (Eds.), *The handbook of world Englishes* (2nd ed.) (pp. 674-685). Wiley Online Library. <https://doi.org/10.1002/9781119147282.ch37>
- Castillo, J. M. (2016). Studying linguistic competence: The problem. *Education and Linguistics Research*, 2(1), 85-97. <https://doi.org/10.5296/elr.v2i1.9157>
- Chavangklang, T., Chavangklang, P., Thiamhuanok, S., & Sathitdetkunchorn, P. (2019). Development of EFL university students' vocabulary size and reading comprehension using online multimedia-based extensive reading. *Advances in Language and Literary Studies*, 10(5), 146-151. <https://doi.org/10.7575/aiac.all.v.10n.5p.146>
- Coffman, S. (2021). *4 Stages of Speech Production*. SpencerCoffman. Retrieved from <https://spencercoffman.com/speech-production/>
- Grabbe, J. W. (2015). Implications of experimental versus quasi-experimental designs. In K. D. Strang (Ed.), *The Palgrave Handbook of Research Design in Business and Management* (pp. 141-152). Palgrave Macmillan. [https://doi.org/10.1057/9781137484956\\_10](https://doi.org/10.1057/9781137484956_10)
- Cunningham, S., & Moor, P. (2005). *Cutting Edge: Intermediate. Teachers' book* [Photocopiable resources]. Longman.

- Dunn, T. J., Baguley, T., & Brunsten, V. (2013). From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation. *British Journal of Psychology*, *105*(3), 295-441. <https://doi.org/10.1111/bjop.12046>
- Fernando, W. (2020). Moodle quizzes and their usability for formative assessment of academic writing. *Assessing Writing*, *46*, 100485. <https://doi.org/10.1016/j.asw.2020.100485>
- Federico, J. (2020). *RecordRTC TinyMCE*. Moodle. [https://moodle.org/plugins/tinytmce\\_recordrtc](https://moodle.org/plugins/tinytmce_recordrtc)
- Gachkova, M., & Somova, E. (2020). Moodle plug-ins for the design and development of gamified courses. In L. G. Chova, A. L. Martínez & C. I. Torres (Eds.), *Proceedings to the 14th International Technology, Education and Development Conference* (pp. 2187-2195). Valencia. <https://doi.org/10.21125/inted.2020.0676>
- Glen, S. (2021). *Cronbach's Alpha: Simple definition, use, and interpretation*. StatisticsHowTo.com. Retrieved from <https://www.statisticshowto.com/probability-and-statistics/statistics-definitions/cronbachs-alpha-spss/>
- Haldankar, R. (2020, August 5). *An Approach to Enhancing Linguistic Competence and Performance*. LinkedIn. Retrieved from <https://www.linkedin.com/pulse/approach-enhancing-linguistic-competence-performance-ritesh-haldankar>
- Kunanbayeva, S., & Zhylytyrova, Z. (2016). The development of professional foreign language competence for ESP students: Case of Kazakh National Agrarian University students. *International Journal of Environmental & Science Education*, *11*(14), 7262-7270.
- Maiier, N., & Ustymenko, O. (2018). Modern methods and technologies for developing pre-service foreign language and culture teachers' methodological competence. *Advanced Education*, *10*, 12-20. <https://doi.org/10.20535/2410-8286.133090>
- Nordquist, R. (2019, May 26). *Communicative competence definition, examples, and glossary*. ThoughtCo. Retrieved from <http://bitly.ws/dN3k>
- Plomteux, B. (2017). Dichotomic grammar? Use Moodle lessons! In L. G. Chova, A. L. Martínez & C. I. Torres (Eds.), *Proceedings to the 12th International Technology, Education and Development Conference* (pp. 1503-1509). Valencia. <https://doi.org/10.21125/inted.2018.0256>
- Price, P., Jhangiani, R., & Chiang, I. (2015). *Research Methods in Psychology* (2nd Canadian ed.). BCcampus. Retrieved from <https://opentextbc.ca/researchmethods/>
- Reyzábal, V. (2012). Las competencias comunicativas y lingüísticas, clave para la calidad educativa [Communicative and linguistic skills, key to educational quality]. *Ibero-American Journal on Quality, Efficacy and Change in Education / Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, *10*(4), 64-77.
- Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students* (6th ed.). Pearson Education Limited.
- Shalatska, H. M., Zotova-Sadylo, O. Yu., & Muzyka, I. O. (2020). *Moodle course in teaching the English language for specific purposes for masters in mechanical engineering*. Semantic Scholar. Retrieved from <https://www.semanticscholar.org/paper/Moodle-course-in-teaching-English-language-for-for-Shalatska-%D0%A8%D0%B0%D0%BB%D0%B0%D1%86%D1%8C%D0%BA%D0%B0/8b81d5dece633078713409b5721eeb3835a700c4>
- Tarango, J., & Machin-Mastromatteo, J. D. (2017). Chapter 3 - The new profile of information professionals as scientific production and communication managers: Identification of Competences. In J. Tarango & J. D. Machin-Mastromatteo (Eds.), *The role of information professionals in the knowledge economy* (pp. 71-101). Chandos Publishing. <https://doi.org/10.1016/B978-0-12-811222-9.00003-0>
- The jamovi project (2021). *Jamovi* (Version 1.6) [Computer Software]. Retrieved from <https://www.jamovi.org>
- Truong, H. N. (2021). Students' perception towards the use of Moodle-based LMS in learning speaking skills at tertiary level. *Advances in Social Science, Education and Humanities Research*, *533*, 128-134. <https://doi.org/10.2991/assehr.k.210226.016>
- Varpe, M. G. (2013). linguistic and communicative competence in English. *International Journal of English and Literature*, *3*(2), 11-14.
- Woldemariam, H. Z. (2015). Enhancing linguistic competence through a formalist stylistics approach. *Nawa Journal*

*of Language and Communication*, 9(2), 113-140.

Zhang, W., & Zhu, C. (2018). Comparing learning outcomes of blended learning and traditional face-to-face learning of university students in ESL courses. *International Journal on E-Learning*, 17(2), 251-73.

Weblingua Limited & Cambridge University Press (CUP) (2021). *Text Inspector project*. Textinspector. Retrieved from <https://textinspector.com/workflow>

## Appendix A

### A Checklist to Assess the Students' Answers in the Pilot Study

Table 4. A checklist to assess the students' answers in the pilot study

Scores for a question	Cohesion & Coherence	Vocabulary	Grammar and Accuracy
0 – 7	No liking words or signposts are used. Language organisation is difficult to follow. Sentence structures are simple and used repeatedly.	A student uses insufficient and irrelevant vocabulary.	The occurrence of frequent errors causes misunderstanding.
8 – 12	Shows fluency using simple speech, but avoids complex language structures that cause fluency problems. Uses few liking words and signposts.	A student often uses limited and irrelevant vocabulary.	The occurrence of errors sometimes causes misleading.
13 – 20	Often demonstrates confidence in using complex language structures. Uses a range of liking words, signposts, and discourse markers flexibly.	Uses a wide range of relevant vocabulary. Uses paraphrase relatively.	The occurrence of errors does not cause misleading. A student uses self-correction.
21 – 25	Speaks fluently though rarely repeating some structures or using self-correction. Develops the topic coherently using fully appropriate cohesive features.	Confidently, flexibly, precisely, and naturally uses vocabulary. Uses precisely, naturally, and accurately idiomatic expressions.	Delivers a 'native speaker-like speech'. Language structures are consistent and accurate.

## Appendix B

### Demo Test (Adopted from Cunningham and Moor (2005))

**Question 1.** Look at the card for about 1 minute, then cover it and orally retell the biography of a famous person in as much detail as possible. Record your answer.

**Name:** John Lennon

**Born:** 1940, Liverpool, England

**Died:** December 1980, aged 40.

He was shot outside his New York home by Mark Chapman.

**Famous for:** member of the Beatles, and then a solo songwriter. One of his songs (Imagine) was voted 'best song of the twentieth century'.

**Lived in:** Liverpool and New York.

**Family life:** married twice. His second wife was the musician and artist Yoko Ono.

**Interesting fact:** his first guitar cost him \$17.



**Question 2.** Look at the card for about 1 minute, then cover it and orally retell the biography of a famous person in as much detail as possible. Record your answer.

**Name:** Wolfgang Amadeus Mozart

**Born:** 1756, Salzburg, Austria.

**Died:** 1791, aged 35, of a typhoid fever.

**Famous for:** composer and musician.

He started composing music when he was five, and composed over 600 works during his short life.

**Lived in:** Vienna.

**Family life:** was married but had no children. Despite his talent, he never made any money and died a poor man.

**Interesting fact:** there is a film about his life.



*Task 2. Look at the picture of two teachers having a break in a teacher's room. Orally explain what they are talking about. Record your answer.*

**Question 3.** Look at the picture of two teachers having a break in a teacher's room. Orally explain what they are talking about. Record your answer.



**Question 4.** Use the prompts to predict life in the 2030s. Explain orally how this can be achieved. Record your answer.

### **FAMILIES AND CHILDREN**

#### **In the 2030s:**

- People – have smaller families?
- Parents – be able to choose the colour of their baby’s eyes?
- Parents – be able to choose their baby’s IQ?
- A lot more people – live to be over 100 years old?
- Fewer people – get married?
- Men – be able to have babies?
- Governments – make laws about how many children you can have?

#### **Your ideas about life in 2030s.**



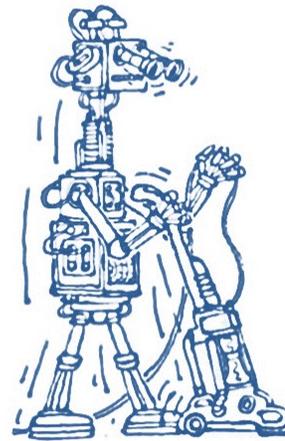
**Question 5.** Use the prompts to predict life in the 2030s. Explain orally how this can be achieved. Record your answer.

### **HOMES AND LIFESTYLES**

#### **In the 2030s:**

- Robots – do all the housework?
- People – still shop in supermarkets?
- People – have videophones in their homes?
- More people – be homeless?
- Cars – use water instead of petrol?
- Clothes – look completely different?
- Students – have robot teachers?

#### **Your ideas about life in 2030s.**



**Question 6.** Read the description of the situation that takes place in Shelbyville. Imagine that you are head of the local council and you are going to participate in the debate.

Your position relies on the below:

Unemployment is high in Shelbyville, and you have been trying to attract investment from outside the town for years. You are therefore in favour of the plan for the following reasons:

- *More jobs (what kind?)*
- *Attract people from nearby towns (benefit to Shelbyville?)*
- *Convenient (who for?)*
- *Supasaver will pay local taxes (what could spend money on?)*
- *Any other benefits you can think of*

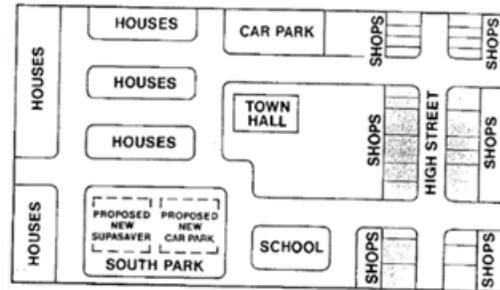
These are some arguments against the plan. Think how you can argue against them:

- *Near the school*
- *Increased traffic and pollution*
- *South Park is the only park in the town and is popular with local residents*

- *Other businesses in the town will suffer*

### Supasaver development to be debated today

The future of Shelbyville's proposed new supermarket will be decided today during a meeting at the Town Hall. The plan to build a Supasaver in South Park has caused a great deal of discussion since it was announced two month ago. Supporters of the project claim that it will lead to more jobs and greater choice, while opponents say that South Park is important to the town, and that a supermarket will be bad for other businesses in the area.



The meeting will be chaired by the head of the Town Planning Committee, and representatives from both sides of the local community will also be attending. With supporters and opponents of the plan both feeling confident of victory, there is sure to be a lively debate in the Town Hall this afternoon.

**Question 7.** Read the story below and orally suggest the different parts you are asked to. Record your answer.

*You and some friends have been invited to a party in a part of the city, which has quite a high crime rate. After a long discussion, the four of you decide that you do not fancy the walk through the park and you agree to get a mini cab there and back together. As you are getting closer to the house where the party is being held, you notice several large groups of people standing on the street corners. It is not clear exactly what they are doing but from their body language, they look quite suspicious. A minute later you see a man running with a handbag in his hand and a woman, who is shouting and screaming, running after him. No one around does anything and the man disappears into the darkness. Finally, you arrive at the party and things seem a little calmer. A man walks over and introduces himself. He continues talking to you and your friends.*

7a) Recollect the conversation you have.

*The man walks away and you then see your friend who invited you. He tells you some money and jewelry have been stolen. The money stolen was just over three hundred pounds in fifty-pound notes. He then describes a gold ring with the letters JP engraved on it. It was his grandfather's and had a great deal of sentimental value. You ask him about the other jewelry which he describes to you.*

**Question 8.** Read the story again and orally suggest part 8 below. Record your answer.

8) Describe the other jewelry.

*Your friend then asks you if you saw anyone coming from the hall which leads to the bedrooms. You remember while you were talking to the first man you met at the party that you saw someone walking out of the hall.*

**Question 9.** Read the story again and orally suggest parts 9 and 9a below. Record your answer.

9) Describe the man.

*You are not sure if the man was just trying to distract your attention while his accomplice was stealing the money and jewelry. Then a little later the man returns and once again engages you and your friends in conversation. After some time, you decide you do not feel very comfortable in this man's company and you and your friends decide to leave. However, he manages to persuade your friend Lisa to stay with him. It turns out they have communicated to each other before through a computer chat room.*

9a) Can you trust this man? What might happen to Lisa if you leave her with him? What do you do? Finish the story.

**Question 10.** Find 10 mistakes in the below passage and correct them. Provide your explanation. Record your answer.

1. 'We interrupt your usual schedule to bring you an important news. We are receiving
2. informations about a spaceship that has landed outside the White House. The large
3. ship seems to be made of glasses. Reports say that a short time ago aliens came out

4. of the craft. Eyes-witnesses described them as short and said their clothes was made
5. of metal and their hairs was bright green. Strangely, one of them appeared to be
6. wearing a jean. Much people said that they seemed to be friendly. The President of the
7. United States is currently holding a meeting with the visitors in the hope that we can
8. exchange knowledge. Police advice are to say indoors and under no circumstances
9. approach the spaceship. We will be back with another news as soon as we can. And
10. now, back to your usual programme, Gardening for Begginers.’

**Appendix C**

**Descriptive Statistics of the Piloted Tests**

Table 5. Descriptive statistics of the piloted tests (n = 267)

	Test 1		Test 2		Test 3		Test 4		Test 5		Test 6		Test 7		Test 8		Test 9		Test 10	
	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
Mean	18.1	17.2	17.6	16.3	16.6	17.2	15.8	16.8	17.9	16.7	17.2	16.8	16.6	17.4	17.0	17.2	16.0	16.9	18.0	16.6
Std error mean	0.415	0.450	0.549	0.399	0.650	0.543	0.409	0.558	0.569	0.551	0.688	0.576	0.674	0.677	0.626	0.980	0.581	0.631	0.506	0.592
Median	17.4	17.4	17.1	16.0	15.7	17.2	15.5	16.2	18.5	16.9	16.1	16.2	16.1	17.1	15.7	16.4	15.5	16.9	18.7	16.1
SD	1.55	1.68	2.06	1.49	2.43	2.03	1.53	2.09	2.13	2.06	2.58	2.15	2.52	2.53	2.34	3.67	2.18	2.36	1.89	2.21
Shapiro-Wilk W	0.904	0.974	0.915	0.933	0.923	0.971	0.956	0.968	0.982	0.918	0.951	0.940	0.947	0.984	0.915	0.964	0.958	0.936	0.928	0.915
Shapiro-Wilk p	0.031	0.026	0.088	0.041	0.045	0.095	0.027	0.040	0.063	0.208	0.023	0.016	0.013	0.066	0.008	0.035	0.029	0.372	0.107	0.188

Note: T= Teacher.

**Copyrights**

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).