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THE METHODOLOGY OF DELAYED INTERACTION TECHNIQUES APPLICATION IN L2 ASYNCHRONOUS LEARNING AND TEACHING

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ABSTRACT

In the new global education, online learning and teaching have become central issues for different methodology development. This paper examines the ways for asynchronous foreign language teaching mode.

*The **purpose** of this study is to define specific techniques that are applicable to asynchronous interaction in the process of foreign language learning and teaching. The aim of this paper is also to work out the methodology for their use.*

Methodology. *For this study, a number of research methods were used. The previous studies' analysis was used for the examination of the recent findings. A qualitative case-study experiment was used to investigate personal teachers and students' experience with delayed interaction techniques (DIT) use in the process of Foreign Language (FL) Methodology teaching and learning that is a component of FL teachers training course in the department of foreign languages of Pavlo Tychna Uman State Pedagogical University in Ukraine. The methodological approach offered an effective way of compiling delayed interaction technique stages. Data were gathered from the students' feedback survey that was used as a qualitative method. The online software of the Voyant tool, one of the more practical ways for survey results visualization was applied.*

Results. *One of the main findings of the current study is a clarification of the delayed interaction technique notion, which is suggested as a definition in the context of the current study issue. The second finding is developing the*

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methodology of using DIT in a second language (L2) asynchronous learning and teaching mode of studying. The methodology includes seven steps for DIT application.

Conclusions. *This study has found that generally, interaction is possible to use even asynchronously in conditions that prevent immediate interaction. The results of this study have no limitations for application according to educational institutions, and learners' age of L2 level. However, for effective DIT applications, it is necessary for teachers and students to have enough digital skills, internet and gadgets access. Further work needs to be done to examine more online resources such as software, apps, and tools for using them in asynchronous L2 learning and teaching.*

KEYWORDS: *Delayed Interaction Technique, Asynchronous Mode, Methodology, Digital Tools, Online Software, Interactive Activities.*

INTRODUCTION

In recent years mankind has changed social life globally. The COVID-2019 pandemic gradually influenced different fields of people's activities such as communication, routine, work and education. Pandemic limitations and other preventive measures became the main causes that have rapidly changed the way of teaching and learning. Students and teachers developed their digital skills and adapted to the new conditions with benefits and drawbacks. Online education has replaced the face-to-face mode of studying for more than two years and in some countries, students are still studying distantly.

In Ukraine, the problem of remote education is increasingly recognised as a serious, especially after Russian armed aggression against Ukraine. Before the Russia's large-scale invasion, during the COVID-2019 pandemic, Ukrainian teachers have already learned how to work distantly in general, using apps for video meetings with students and other online resources. The majority of them have changed their ways and approaches and taught students effectively. All the participants had the possibility to work online according to the timetable using

the Internet, gadgets and in a place that was suitable to study.

In the new Ukrainian reality, since February 24, 2022, many teachers and students cannot work synchronically online as they used to do because of different reasons. They are as follows: absence of Internet connection and access, lack of electricity, moving the other place of living, destroyed houses and schools, frequent air alerts, and threat to life in the whole country and especially in the part of Ukraine under Russian occupation. The main challenge for teachers and students during the Russian-Ukrainian war is to continue the educational process but stay safe. A primary concern of education in Ukraine now is the safety of all the participants in the educational process.

The issue of specific methodology application for asynchronous distance learning and teaching has received considerable critical attention in general and for L2 (second language) learning in particular. Asynchronous L2 learning and teaching is a major area of interest within the methodology approach for distance mode of studying. Our previous studies of L2 distance teaching and learning peculiarities Bezliudnyi, O., Komar, O.,

Kolisnichenko, A., & Kapeliushna, T. (2022), Kolisnichenko A. (2022) showed the importance of further investigation concerned with interaction techniques application (Kostikova I., Gulich, O.) in the asynchronous mode of studying.

Recent developments in the field of L2 methodology have led to a renewed interest in synchronic and asynchronous L2 learning and teaching. Interaction in and beyond the L2 classroom is defined as a key factor in mastering the language, raising motivation and involving learners in process of foreign language acquisition. A number of Ukrainian researchers Komar, O. & Komar, O. (2018), Komar, O. (2020), Horbanova, O., Holiak, V., Shcherbitska, V., & Kulko, V. (2022) have shown an increased interest in SLL (second language learning) interaction technologies investigating.

The issue of online interaction in L2 learning was widely investigated by many foreign researchers Abe, M. (2021), Tao, J., & Gao, X. (2022), Owens, W. (2022) and others. These studies have indicated a great number of methods that are applicable to online L2 learning and some of them have found more appropriate ways of their use. These methods are considered to become efficient for synchronic online L2 learning and many of them contain interactive technologies. It can be possible because of the possibility to use of a communicative approach during online lessons. There is a difficulty with working in small groups but with the help of breakout rooms, it became possible to manage the interaction between students.

A number of authors have reported analyses of trends in synchronic and asynchronous online interaction in L2 learning. For example, Canals et al. (2020) carried out an exploratory study and implemented a new type of delayed immediate corrective feedback (DICF) and

analyzed second language learners' and teachers' perceptions regarding its effectiveness and usefulness. The results of this investigation showed that teachers and learners responded positively to DICF. The feedback is a kind of interaction between teacher and student that can be delayed or immediate, oral or written, verbal or non-verbal. But this paper will focus on delayed interaction in a broader meaning.

In another study, Dziubata Z. (2020) analysed the forms of online teaching and the requirements for their implementation. The author reported that the methods and materials for synchronous and asynchronous distance learning classes should be different from each other and traditional face-to-face mode. Dziuibata concludes that the approach must be significantly redefined. This view is important for our study as shows the need to develop a specific methodology for the asynchronous mode of learning.

One more study by Fakhher Ajabshir, Z. (2019) caused our interest as it investigates the effect of computer-mediated communication in comparison with traditional face-to-face instruction. This research also examined the differential impacts of synchronous and asynchronous CMC modes on pragmalinguistic and sociopragmatic competencies. In the same vein, Pratiwi et al. (2021) in their paper note the importance of synchronous and asynchronous methods for distance English learning. Detailed examination of the reasons for the current teaching and learning process problems indicated the methods used in synchronous and asynchronous modes. Together, these studies outline that the methods for interaction can vary according to the L2 learning modes.

Almost every paper that has been written on education during the COVID-2019 pandemic includes a section relating to online learning. Similarly, Bergdahl Nina (2020) identified 12 elements in second-language online learning designs (LDs) that were aimed to engage learners and support online learning. Bergdahl's study states that identifying local elements may be helpful to support professional development, as well as to reframe teachers' digital practices post-pandemic time. The case study that investigates the growth of reflective thinking skills in pre-service English language teachers made by Mumford, S., & Dikilitaş, K. (2020) also caused our scientific interest.

The most important result of their research highlighted the importance of online learning implications and the difficulties in social online interaction management. The studies presented thus far provide evidence that the problem of online distance technologies is widely studied. Many of them indicated the importance of choosing specific methods for different modes of learning (Kostikova, I., Holubnycha, L.). Despite this, very few studies have investigated interaction during synchronic online lessons and are even less concerned about asynchronous interaction in L2 learning.

This paper attempts to show that interaction can be delayed and work effectively for L2 practising in asynchronous mode learning. The aims of this study are to define the notion of delayed interaction in the context of L2 learning and to develop the methodology for using it as a technology for the asynchronous mode of studying. The purpose of this research is to share experiences of using this technology in different educational institutions.

So far, very little is known about the notion of delayed interaction. To Summarize this

part of the paper, I attempt to give a definition of this term in the context of using it in L2 learning methodology discourse. Interaction in methodology is deeply connected with the name of Long who first proposed the second language acquisition interaction hypothesis. Long M. (1981) also gave a clear definition of interaction: "By interaction is meant the functions served by those forms, such as expansion, repetition, and clarification" (p. 259).

These forms are deeply connected with face-to-face or partially with synchronic online communication. In asynchronous mode, the forms should be changed that is the reason for modifying interaction and making it delayed. This indicates a need to define the notion of a delayed interaction technique that is possible to use asynchronously. It is necessary here to clarify exactly what is meant by DIT. *So, in the context of this research, the delayed interaction technique is the asynchronous communicative practice or activity designed for students by means of online resources that is postponed in time.*

METHODOLOGY

The use of a qualitative case study is a well-established approach in personal experience investigation. This work takes the form of a case study that is based on the subject of Foreign Language Methodology as a component of the FL teacher training course in the department of foreign languages of Pavlo Tychyna Uman State Pedagogical University in Ukraine.

The methodological approach taken in this study is a mixed methodology based on compiling delayed interaction technique stages. A qualitative method was used in this investigation to collect and describe the data of survey results. The Voyant Tool was used for survey results visualization. We also took analysis

methods to define the notions of new terms and ways for developing the methodology of the delayed interaction technique.

Participants: The delayed interaction techniques were suggested for 30 students-sophomores who studied the subject of Foreign Language Methodology in the Department of Foreign Languages as a technology for learning. They also took part in a survey containing questions about this issue.

Procedure. The research was designed according to the investigation structure and consists of adherent stages.

Stage 1. Planning the lessons with delayed interaction techniques application;

Stage 2. Delayed interaction techniques design according to the curricular requirements;

Stage 3. Selecting digital tools for delayed interaction techniques application;

Stage 4. Data collecting and analysis using a survey for giving feedback on a course;

Stage 5. Developing the methodology for using asynchronous delayed interaction techniques.

In the first stage, the distance online lessons plan with delayed interaction techniques application was worked out. During the experiment, my students and I had synchronic and asynchronous modes the choice of which depended on the conditions we had at the time of the lesson. For effective work, I compiled two plans that were not very different. The main difference between them was using interactive activities.

The FL Methodology course that is the result of the British Council Project “New generation school teacher” is mostly based on practical interactive lessons. The traditional, face-to-face lesson had the following plan: Introduction, Reflection

Activity or Lead-in, Mini lecture or Definition activity, 2-4 Discussion activities including reading texts with following discussion or watching educational videos about the topic, Reflection, Summarizing, Assigning follow-up task. The structure was not different for online distance lessons and most activities were suitable for synchronic online lessons as there were enough possibilities for interaction.

Speaking about the asynchronous distance lessons, the plan of it used without changes but some methods and techniques were different as were not possible to do, for example, immediate discussion or work in groups for definition compiling etc. The activities that required immediate discussion were replaced by activities with delayed discussion involving students to share their thoughts and opinions in writing them later using online resources available for it. A number of online resources were used for creating posters, definitions, projects, etc. So, the structure of the asynchronous lesson was without changes but some activities were planned with delayed interaction techniques using as was required.

During the second stage, the delayed interaction techniques were designed according to the curricular requirements. The topics included in units of the FL Methodology curriculum have different objectives and relevantly the activities have been chosen according to defined objectives. In this study, we pay attention to the interactive activities that we classified into some groups: Reflection, Discussion, and Creation. Reflection activities were designed as question-answers and discussion was in the form of taking position activities or solving problems of case studies.

Students were given clear instructions in which I suggested a question or more with following sharing a personal experience or

their thoughts about the issue of a curricular topic using appropriate digital resources. Creating activities were designed including clear video instruction, case-study analysis, creating a project/poster/definition, sharing the links on the digital tools that were used for the activity, and evaluating them by other students using the chosen tool.

The most challenging stage was selecting digital tools for delayed interaction

techniques application. The online resources required for delayed interaction activities should be in constant access, giving the possibility to create posts with students' personal ideas. Online software Mentimeter and Google App Jamboard worked efficiently for reflection activities. The most suitable slide types for reflection activities in Mentimeter are Word cloud (Figure 1) and Open-Ended ones (Figure 2)

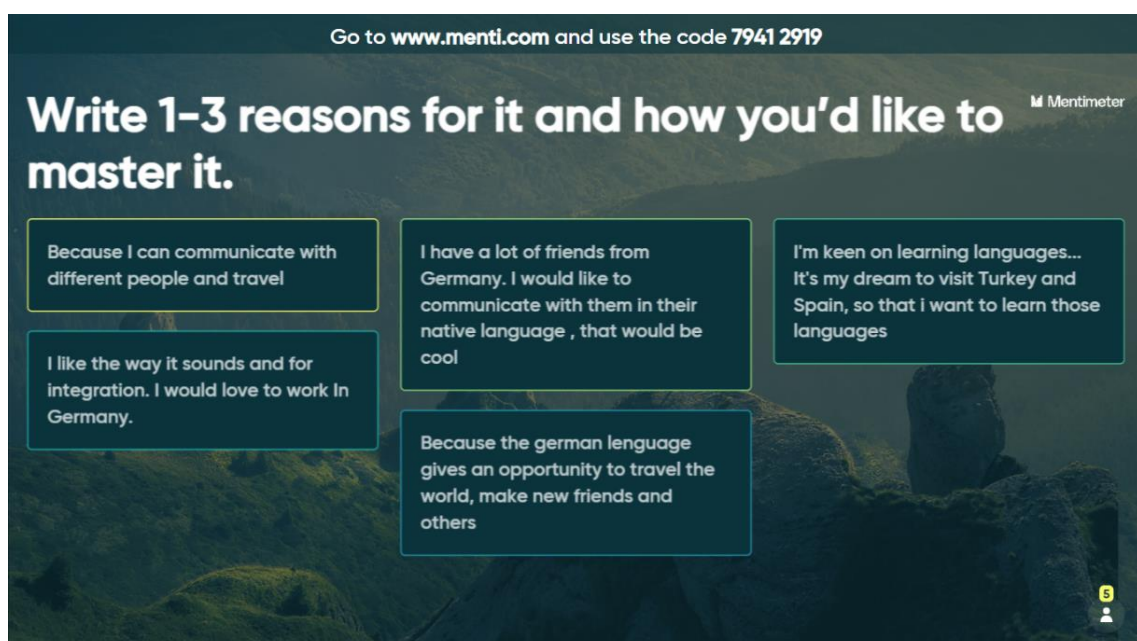
Figure 1

Delayed interactive activity. Reflection. Word cloud



Figure 2

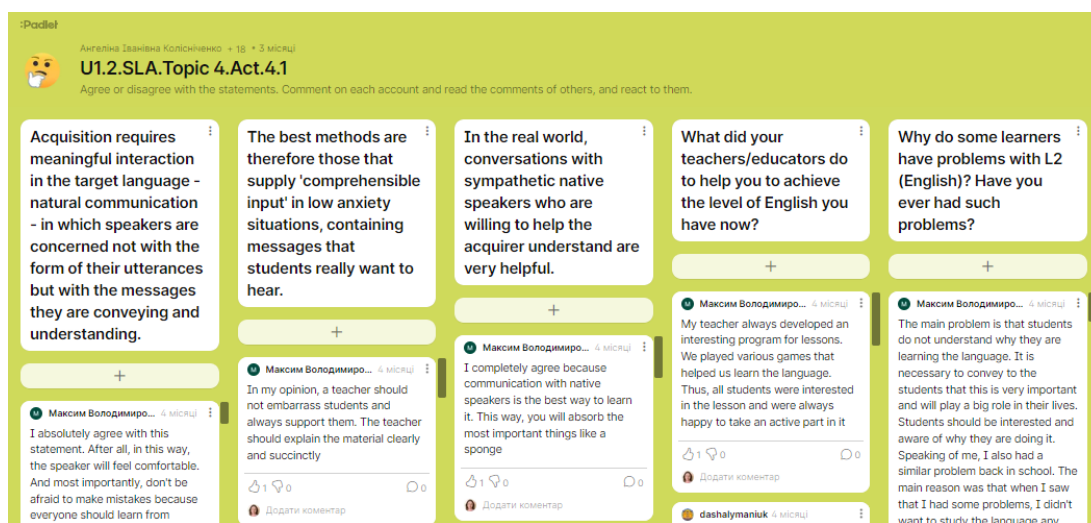
Delayed interactive activity. Reflection. Open Ended slide type



Discussion delayed interactive activities required not only posts searing but possibilities for other students' posts' reactions and comments. The most suitable software for these purposes is Padlet and Google Chat App. The platform of Padlet allows to create a board that can be easily used by teacher and students and interact with each other by writing

posts or giving feedback on other posts. According to the possibilities of Padlet students can do it any time: during synchronic online or traditional offline lessons but it the extremely important to mention that students can do the task later, after the lesson so, can be used for delayed interactive activities. The example is given below in figure 3.

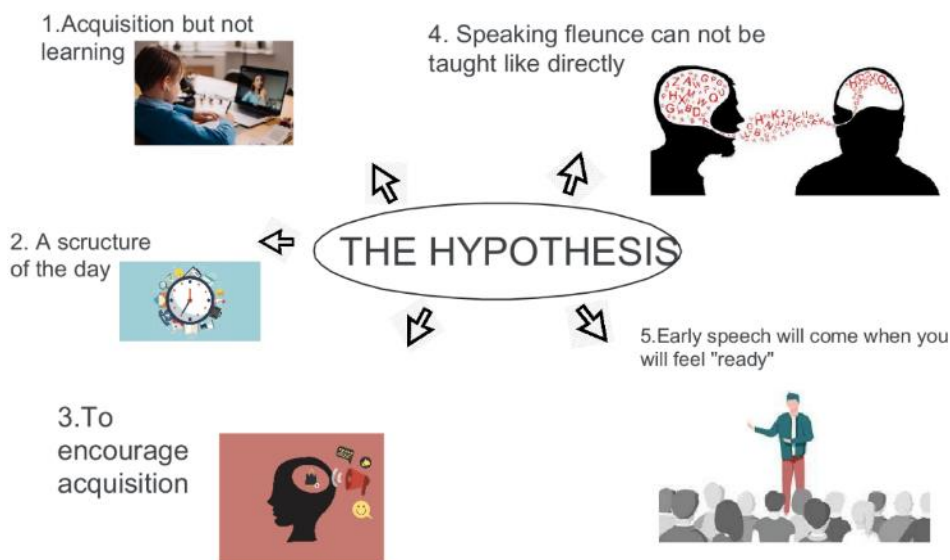
Figure 3
Delayed interactive activity. Discussion. Padlet wall



For creation activities, students were suggested Jam board Google App. This is an online board that gives the possibility to create a poster, work out the definition or drag objects to match or find relevance etc. This board can be created by teachers

or by students and all the learners who work in small groups or all together can take part in creating the process by having shared access. One of the posters is presented in figure 4.

Figure 4.
Delayed interactive activity. Creation. Jam board poster.



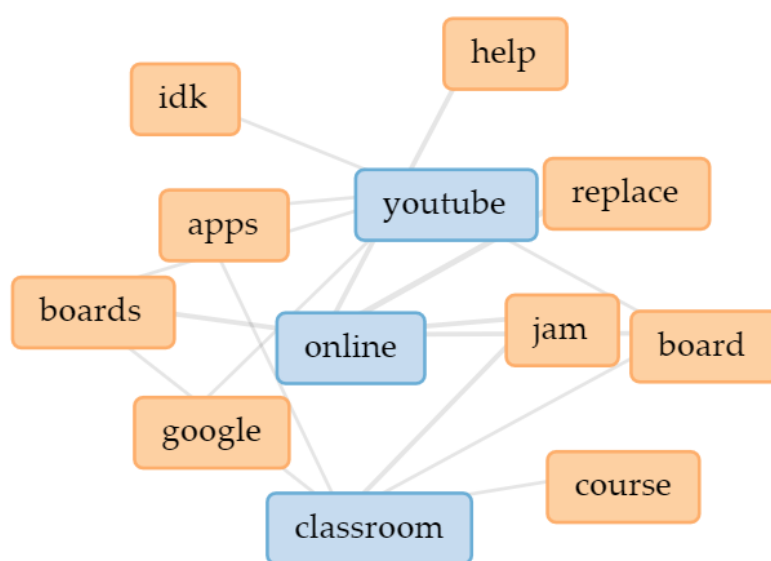
RESULTS

Stages 5 and 6 of the research will be described in this part of the paper. Stage 5 aimed to analyze the effectiveness of using the delayed interaction technique and collect data using the results of the Methodology course feedback survey. The survey was given to students for the Methodology course evaluation during the first semester. One of the questions in this survey was about the digital

technologies they used during the online asynchronous mode. The aim of this question was to discover students' opinions about online software for distance learning and its effectiveness for them. The result of the respondents' answers was received with the help of the Voyant Tool and showed the links between the main terms expressed in the answers. See figure 5.

Figure 5

Scheme of links between the notions expressed by respondents (Voyant Tool, 2023)



After the entire analysis of the respondents' answers, we can conclude that the most effective resources for asynchronous learning are online software Google Classroom and YouTube and for delayed interaction students consider the Jam board and online apps more efficient for their distance studying.

The work on the experiment and students' feedback gave the possibility to develop the methodology for using asynchronous delayed interaction techniques for distance foreign language learning. The methodology contains the following steps.

1. The first step is asynchronous FL lesson planning. While making this plan teacher should take into

consideration curriculum requirements, topic objectives and outcomes. It is also necessary to concern the asynchronous distance mode peculiarities.

2. Material adaptation. Materials adaptation means that activity types and tasks should be chosen in order learners can do them individually and distantly. Electronic tools such as PowerPoint presentations or Prezi etc. should be also changed according to the FL lesson plan.
3. DIT designing. After asynchronous FL planning and material adaptation, the next step is delayed interaction technique designing. Using the

curricular and asynchronous FL lesson requirements it is clear what type of delayed interaction activities should be included in the asynchronous FL lesson plan. According to the DIA type and their place in the plan, the tasks and instructions are compiled.

4. Digital technologies selection. Designed delayed interaction activity requires digital software that has accessibility and all the necessary tools for its efficient use.
5. Video instruction creation. This step is extremely important for asynchronous FL lessons the plan of which is close to the synchronic online lesson but requires DIT use. The main requirements for video creation were described in my previous research "Teacher's Facilitating of the Students' Learning Autonomy during the War via Video Aids: A Case Study of the English Methodology Teaching" (Kolishnichenko, 2022).
6. Setting deadline. The delayed interaction technique is postponed in time but it is important to limit the time period for doing the DI activity. Neglecting this requirement can cause students' procrastination and the activity will hardly reach its outcome.
7. The last step is the teacher's feedback which can summarize or support students' delayed interaction.

This methodology can be modified according to the DIT purposes, lessons objectives and outcomes.

DISCUSSION

Very little was found in the literature on the question of delayed interaction activity. The current study found that the interaction in the asynchronous mode of studying needs deep investigation. The

practical value of the current paper is defining the DIT notion and developing its methodology for application in asynchronous FL lessons. The results of the literature overview indicate that online software is considered as the only possible and effective for FL distance learning. The majority of studies proved the necessity of digital technologies used for asynchronous FL lessons. The present findings seem to be consistent with other research which found interaction possible as a technique for asynchronous mode. There are similarities between the current study and the feedback investigation described by Mumford, S., & Dikilitaş, K. (2020). They also proved the effectiveness of interaction during the hybrid course.

This finding has important implications for developing the methodology for FL asynchronous learning. The delayed interaction techniques described in this study can be widely used for FL teaching despite learners' age, level and limitations. This is an important issue for future research. In further studies, it might be possible to use more online resources and investigate their applicability to different learning modes

CONCLUSIONS

The present study was designed to determine the effect of delayed interaction technique use in the asynchronous mode of FL teaching and learning. The main goals of the current paper were to clarify the definition of the delayed interaction technique and describe the possibility of its application. This study has shown that it is possible to use interactive activities even in the asynchronous mode by using the appropriate and applicable for this specific mode online resources.

The investigation of online software has shown that their choice depends on

curricular requirements, FL lesson plans, interactive activities types and purposes. The next major finding was methodology development for using DIT as a technology for the asynchronous mode of FL studying. The DIT methodology developed as a

result of case study research used for this paper may be applied widely by FL teachers. More research is needed to better understand if DIT implementation is possible in the blended or face-to-face learning modes.

CONFLICT OF INTERESTS

There is no conflict of interest for this study.

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АНОТАЦІЯ / ABSTRACT [in Ukrainian]:

МЕТОДИКА ЗАСТОСУВАННЯ ТЕХНІК ВІДКЛАДЕНОЇ ВЗАЄМОДІЇ В АСИНХРОННОМУ НАВЧАННІ ТА ВИКЛАДАННІ ДРУГОЇ ІНОЗЕМНОЇ МОВИ

Онлайн-навчання та викладання у контексті розробки різних методик стало центральним питанням у новій глобальній освіті. У цій статті

розглядаються шляхи та можливості для навчання іноземної мови у асинхронного режимі.

Метою даного дослідження є визначення спеціальних прийомів, які вдало застосовуються для асинхронної взаємодії в процесі вивчення та викладання іноземної мови. Метою даної роботи також є розробка методології їх використання.

Методологія. Для цього дослідження було використано низку методів дослідження. Аналіз попередніх досліджень використовувався для дослідження останніх результатів. Якісний експеримент кейсів використовувався для дослідження особистого досвіду викладача та студентів щодо використання методів відкладеної взаємодії у процесі викладання та вивчення методики іноземної мови, яка є складовою курсу базової підготовки вчителів іноземних мов на факультеті іноземних мов Уманського державного педагогічного університету імені Павла Тичини в Україні. Методичний підхід запропонований як ефективний спосіб компіляції етапів технології відкладеної взаємодії. Дані були зібрані з опитування студентів, яке було використано як якісний метод. Було застосовано онлайн програмне забезпечення *Voyant Tool* з метою відображення та візуалізації результатів опитування.

Одним із головних **результатів** поточного дослідження є уточнення поняття техніки відкладеної взаємодії, яке пропонується як визначення в контексті поточної проблеми дослідження. Другий результат полягає в розробці методології використання техніки відкладеної взаємодії в асинхронному режимі навчання та викладання другої (іноземної) мови. Методологія включає сім кроків для ефективного застосування техніки відкладеної взаємодії.

Висновки. Це дослідження виявило, що загалом взаємодію можна використовувати навіть асинхронно в умовах, які перешкоджають миттєвій взаємодії. Результати цього дослідження не мають обмежень для застосування відповідно до навчальних закладів, віку учнів рівня володіння іноземною мовою. Однак для ефективного застосування техніки відкладеної взаємодії необхідно, щоб викладачі та студенти мали достатньо цифрових навичок, доступ до Інтернету та гаджетів. Необхідно провести подальшу роботу, щоб вивчити більше онлайн-ресурсів, таких як програмне забезпечення, додатки та інші інструменти для їх використання в асинхронному навчанні та викладанні другої мови.

КЛЮЧОВІ СЛОВА: техніка відкладеної взаємодії, асинхронний режим, методологія, цифрові інструменти, онлайн програмне забезпечення, інтерактивна діяльність.

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