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RELEVANCE OF DIFFERENTIATED INSTRUCTIONS: AN E-LEARNING PERSPECTIVE

Every student learns in a different way, which is described and supported by the findings of researchers, educational psychologists, instructional designers, and teachers. The experience gave rise to the theory of differentiated instruction. The teacher in order to make the learning process beneficial for the learner should take into account the individual differences of the learner to modify the type of content delivered, the assessments being conducted, sequence of delivery of content and/or various other learner characteristics.

The purpose of the study is to describe a blended learning model and analyze its effectiveness in teaching the English language to students in "Information system" EP. The article discusses the concept of blended learning, its main components and effectiveness in educational process. It analyzes the advantages of blended learning used in teaching the English language, reveals its effectiveness in modern educational terms and conditions. The novelty of the research lies in designing an educational student-centered model aimed at the development of profession-oriented foreign language competence of students in "Information system" EP based on blended learning implementation.

In the paper an attempt has been taken to simplify the theory of differentiated instruction, giving inputs as to how it can be implemented both in a pure online and a blended learning mode.

Key words: Differentiated Instructions, blended learning, Individual Differences, Instructional Design, assessment.

INTRODUCTION

As stated by Tomlinson, «developing academically responsive classrooms is important for a country built on the twin values of equity and excellence». Educational institutions can achieve both of these values only to the degree that they can establish heterogeneous communities of learning built on high-quality curriculum and instruction that strive to maximize the capacity of each learner [1, 23].

Educational institutions have individual differences between students that can be seen in different situations. These differences exist as socio-economic, gender, opportunity, achievement etc. Such differences effect mental abilities. So teaching students by ignoring their status is called equality. Now equity is most prominent place in national and international education policies [2, 74].

Baye and Demeuse stated that education would be equitable when the outcomes of education would be free and independent from any factors like socio-economic status, gender, ethnic minority, disabilities, original disparities and many other factors [3, 65].

According to the ancient Chinese philosopher Confucius, in order to teach effectively, educators must respond to students' varying abilities, by teaching students at their particular readiness levels [4, 123].

Indeed, in any classroom, students exhibit a range of abilities and learning needs. It is the responsibility of the teacher to be prepared for these differences and tailor their curriculum and instruction to meet each student's needs, ensuring every chance of academic success for all students.

Differentiated instruction (DI) offers teachers a means to meet students' varying needs, as it recognizes the spectrum of differences among students, and enables teachers to attend to the specific learning styles of each student, by adjusting what they teach, and how they teach it. [5, 45]

At its core, DI is a responsive instructional approach that facilitates students' learning, according not only to their individual abilities, but to their interests. Through DI, teachers are able to identify students' starting points, rather than simply be limited by the curriculum [6, 25].

MAIN PART

The idea of differentiation is not new. Theories developed by John Dewey, Lev Vygotsky, Howard Gardner made significant contribution to the pedagogical views on the problem of differentiation. [7, 87] Contemporary pedagogical theories distinguish two types of differentiation: internal and external. External differentiation is putting learners in different classrooms. The learners are grouped together according to their capability levels, special educational interests and other characteristics. Internal differentiation takes place inside a classroom, modifying the content, the method of knowledge delivery and other processes [8, 12].

Tomlinson comments on the need for differentiation as follows: "In order to teach culturally and academically diverse populations effectively, educational institutions will have to move from standardized instruction to personalized instruction. Our best knowledge of effective teaching and learning suggests clearly that teacher responsiveness to race, gender, culture, readiness, experience, interest, and learning preferences results in increased student's motivation and achievement" [9, 254].

According to Tomlinson, teachers can implement differentiated instructions through four ways: 1) content, 2) process, 3) product, and 4) learning environment, while the learner is differentiated on the three grounds. They are readiness, interest and learning profile [10, 13].

Readiness for learning, exercise, and effect are the three principles that formed the laws of learning introduced by Edward Thorndike [11, 43].

According to Alwin R. Schindler readiness for learning demands some background related to the concepts that are being introduced and a sense of greater interest for the concept as a whole, which is reached through exercising. The principle of exercise in learning works on the simple notion that things that are practiced and repeated often are the ones that are remembered for a longer period of time than things which are done only once. The principle of effect is established on the emotional reaction of the student. Motivation is the direct outcome of effect. The principle of effect is that learning is strengthened when followed by a satisfied feeling, and that learning is weakened when followed with displeasure. Therefore, motivation has a close connection with the learner's interest, needs and style of learning making it one of the strongest influencers on achievement [12, 87].

Interest, one more criteria for differentiation in students is usually the criteria which is used for external differentiation under which they are externally streamed into groups so that students taking up the same course are grouped together. Learning profile is a complex attribute of the learner that is taken as whole or singular other characteristics which are listed earlier in this section.

Current knowledge level, is another important variable in the learning profile of the learner, there are certain studies wherein this variable is explored. The authors have conducted pilot studies and concluded that for improved learning there is a need for prior knowledge in the subject that leads to creation of interest and readiness in the learner, also the motivation to seek new knowledge in the domain takes place. Prior knowledge assessment is also beneficial for the teacher in order to differentiate the lessons for the learners so that the learners who are already equipped with the concepts do not feel bored in the class and the students who do not know any basic about it are left behind [13, 90]. The theories and principles supporting DI can be successfully implemented not only in off-line learning, but in on-line learning either. The following paragraph discusses theory and benefits of on-line DI learning.

One interesting aspect of differentiated e-learning is the introduction of customization and personalization into E-learning systems [14, 112]. In e-learning products, a variety of assessment approaches are being used for such diverse purposes as adaptive delivery of content, individualizing learning materials, dynamic feedback, cognitive characteristics and score reporting [15, 60]. If the

assessment approaches are being made to give instruction during the process of learning, then differentiating the challenge level, types of formats, representations and feedback might make a difference in how or how much the student learns [16, 34].

The paper presents 5 approaches as to how the E-learning scenario can be differentiated. Either one or more than one can be used in combination to provide differentiation. They are:

- "Diffuse" approach to differentiation, in which students receive the same content but have multiple opportunities for learning and can make sense of the content throughout the course;
- Self-directed approach, student is asked for feedback and the differentiation is provided accordingly;
- Naïve differentiation, in which the computer determines the path of differentiation, not the user, but that no real plan or overall strategy is in place;
- Boolean differentiation, in which the computers use types of Boolean logic, such as various types of rule-based frameworks or decision trees, to find how to adjust content for different students;
- Model-based differentiation, in which expert opinion is combined with a variety of data mining techniques to generate rules as to how content might be appropriately differentiated.

According to the classification, the diffusion approach does not match to the learner's needs but it can cater to larger groups of students with diverse needs. It serves like a portal trying to put together different media formats where students can access what they want. The self-regulated approach is dependent on the student where he selects and tries to access the system, the system shows them menus, and options. Naïve differentiation is just that a computer has to respond when the student takes an action. Boolean approaches work with different logical operators to generate some paths or help in problem solving and differentiate on the basis of some rules. The last approach uses data mining techniques like clustering, classification and other methods to predict and create a model of the student and then provide differentiated contents [17, 56].

Thus, differentiation is based on important learner characteristics, readiness, interest and learning profile. Interest, another important parameter is misinterpreted or not interpreted at all. The assumption that the student is interested in the concept is made by default and that is why he/she is taking or have to take the course, so it is assumed that the student is really interested in the concepts. Learner profiles in systems, which provide customization or personalized learning are usually made of the learning style, cognitive style or preferences of the learner [18, 114].

The learner profile that can be created by asking the students questions about their preferences and questionnaires are used for interpreting the learning style.

Summing up all mentioned above it should be concluded that

1) Differentiated instruction theory can be used in designing on-line lessons in order to create better problem-solving learning approaches by providing personalized feedback.

2) Different instructional designs and hybrid approaches can be created and evaluated to understand their usability and applicability at on-line lessons.

3) Access to open resources and more awareness of the data provided by the resources should be provided and form an inevitable part of an on-line lesson in order to make the learning process personalized [19, 74].

The DI and differentiated e-learning theories can be used to create a model for teaching the English language in a blended learning mode at non-linguistic Universities. The learners can take their time in moving along individual educational paths at a comfortable tempo, with enough time for analyzing and assessing the knowledge obtained.

The paper describes a methodological system implemented in teaching English to students in the Information Systems program at Sh.Ualikhanov University and presents results obtained within a semester.

In the paper there used theoretical methods (study and analysis of pedagogical, methodological literature, regulatory and legislative documentation in the research field);

theoretical analysis; empirical and sociological methods (questioning, interviewing); statistical method of mathematical data processing.

The above mentioned approaches and theories offer the following methodological system based on differentiated instructions. The entire process of learning a foreign language by students in «Information Systems» EP can be designed in accordance with the Dublin descriptors on the principle of moving from the simple assignments (understanding and application of knowledge) - to more complicated tasks (the acquisition of communication skills and the ability to self-education). Each of the five stages is characterized by the use of educational and internet technologies with the selection of tasks related to the goals and objectives of each specific stage. Each stage involves the development of all language aspects: reading, listening, writing and speaking.

A lesson can be divided into the following blocks: *information block* - the stage of acquisition and understanding of new knowledge; *application block* - the stage of applying new knowledge; *transformation block* - the stage of forming judgments; *communication block* - development of communication skills; *creative block* - the use of communication skills, development of self-learning skills and acquisition of in-depth knowledge. The structure of the proposed methodological system is given below.

A. THE STAGE OF ACQUISITION AND UNDERSTANDING OF NEW KNOWLEDGE.

This stage (information block) is presented with a piece of new material, the topic of which may be consistent with the material studied at the main professional course of the EP. After completing the tasks from the warming up activities subsection, there follows an assignment to read a text in scientific-journalistic style, with the obligatory before- and after-reading tasks on the proposed topic. Examples of exercises are given below.

1. Before reading the text, agree or disagree with the statements.

Web-based applications are in great demand nowadays. (true or false)

Mastering web programming is unimportant for undergraduate students in computer science. (true or false)

2. *Number the various factors that contribute to a successful web-programming. Check your with the information in the text*.

Text. Web-Programming

Nowadays, web-based applications are considerably popular in computer-based applications. Learning and mastering web programming environment, techniques, and methods are becoming necessary for undergraduate students in computer science. Traditional curriculum in computer science usually does not include web programming course. It is a great challenge to design and implement an effective course to teach web programming so that a computer science student can learn and master necessary knowledge and skills for efficiently developing interactive web-based database-driven applications.

After reading the text of the information block students may perform the following tasks.

1. Define the following words: curriculum, undergraduate students, database.

2. Fill in the blanks with the new words. Traditional … in computer science usually does not include web programming course.

3. Complete the following sentences: Traditional … in computer science usually does not include web programming course.

Reading texts in scientific-journalistic style prepares students for reading periodicals, professionally oriented texts as well as for the activities in academic sphere. The text is followed by a glossary consisting of 7-10 new words on the topic.

The information block may also include grammatical material necessary for understanding of the studied text. After a brief description of the grammatical material, there follow 7-10 exercises to reinforce the studied material.

Examples of exercises are given below.

1. Fill in the gaps with the correct form of the verb to be.

a) Web-based applications (to be) considerably popular

b) It (to be) a great challenge to design and implement an effective course in computer science.

2. Form the third-person singular by adding -s to the base form of the verb. Open the brackets using the Present Simple Tense.

a) Learning web programming (become) necessary for everyday life.

b) Traditional curriculum in computer science usually (not) include web programming course.

This section ends up with a link to an additional block of tasks and exercises for self-study similar to those performed during the lesson.

Thus, students who have not managed to study the material during the lesson have the opportunity to additionally work through the material at a convenient pace, in any place and repeat the process as many times as needed. This stage is accomplished by the mandatory assessment (either online during the self-study or in the classroom) under the teacher's supervision.

B. THE STAGE OF KNOWLEDGE APPLYING

This stage is a logical continuation of the previous stage and is aimed at applying the knowledge gained (application block). This block proposes to perform tasks and exercises on the studied grammatical and lexical material. Tasks may be the following:

1. Match each item to the correct statement

application	the subjects comprising a course of study in a school or college.
curriculum	software that runs on a web server, unlike computer-based software programs

2. C*hoose the right word from two or more alternatives*

efficiently	a) effectively b) fast c) in a new manner
environment	a) media b) software c) item

3. Write word combinations using the given words.

Web, environment, programming, design, curriculum, course etc.

4. Make up your own sentences using the new words and grammatical material.

The section also includes listening to audio material on the topic. An example of a dialogue is presented below.

A: Hello Rayan! How are you?

R: Hello, Andrew. I am fine. What about you?

A: I am fine too. I congratulate you on your brilliant result. Now tell me about your future plan of studies.

R: Oh, I see! In fact, I am at a loss to think of the further course.

I think I will study Information Technology. But some of my friends advise me to study Fashion Designing.

A: It is true that both of the courses are in great demand now. But, I think you should study in IT. The prospect of IT is bright now in home and abroad.

R: I also think so. Knowledge of IT is essential to cope with the modern world.

A: You are right. I think IT will give me a better career.

R: Now my decision is final. I will get admitted in IT. I appreciate your valuable suggestion

A: Thank you very much. See you again.

R: You are most welcome. Good bye.

The dialogue may be followed by the following tasks.

1. *Listen to the dialogue.*
2. *Role-play the dialogue.*
3. *Make up a similar dialogue using the new vocabulary and grammar.*

The block ends with a link to additional set of tasks for independent work, the implementation of which is supervised by the teacher.

C. THE STAGE OF MAKING JUDGMENTS is consistent with the transformation block, which may be represented by a small text in spoken, journalistic or belles-lettres style, allowing the students to learn the language used in everyday life.

Text. What is a web app

An interactive computer program, built with web technologies (HTML, CSS, JS), which stores (Database, Files) and manipulates data (CRUD), and is used by a team or single user to perform tasks over the internet. There is a lot of confusion around what exactly is a web app. For the purpose of this post, we feel our definition above simplifies what a web app is. If you're still unsure, we've included examples of what we believe are web apps, and what are not, below:

Ok, now we're on the same page, let's jump into prerequisites…

The text is supplemented with the tasks for preliminary reflections on the topic. For example, the text "What is a web app?" may be followed with the tasks presented below.

1. *Discuss an idiom | proverb or a statement.*
2. *Software engineer/Developer is not a 9–6 job.*
3. *Millions of graduates do IS Engineering aiming to get a Software engineer/Developer role but a large chunk of people are not getting job in this domain.*

An interactive computer program	an engineer is to understand some crucial things.
To make a data-centric web app from the bottom-up	is used by a team or single user to perform tasks over the internet.

The text is followed by a glossary necessary to study and understand the proposed text. Working in groups, games, case-study can be implemented during the stage. The part of the lesson ends up with a link to a source for self-study and implementation of exercises similar to those presented inside the block, with obligatory follow-up supervision by the teacher.

D. THE STAGE OF FORMING COMMUNICATION SKILLS is presented in the communication block section. This stage includes a short text followed by post-text assignments suggesting learners to form and express their own judgments on the topic and share them with groupmates and the teacher. The text may contain information about Kazakhstani realias on the subject observing socio-cultural element of the lesson.

Text. Digital Kazakhstan

Digital Kazakhstan is a program designed to accelerate the development pace of the Kazakh economy and improve the quality of our citizens' life. The projects of the program are directed to:

- Development, implementation of digital technologies in key sectors of the country's economy.
- Expanding the info communication infrastructure, which will provide Kazakhstan citizens with ubiquitous broadband Internet access and mobile communication 4G (in the future 5G).
- Improving the quality and increasing the number of public services provided online.

The examples of tasks to be performed after reading the text of the block are given below.

1. *Discuss the text with your groupmates by answering their questions.*
2. *Think of what you've read and share your opinion starting as follows:*

I think that… (I don't think that…) I didn't know that… and other tasks.

Thus, the stage is aimed at developing learners' critical thinking skills by posing problems and searching for their solutions. This contributes to achieving maximum involvement in the subject under study and helps develop self-study skills.

Additional tasks to the block are considered as tasks of increased complexity and may be offered to be completed both by the whole group and by the students who are successful and active in learning a foreign language.

The examples of tasks are given below.

1. *Imagine you are A, B or C participant of the dialogue and retell it as a monologue to your group;*
2. *Make a comparative table. Express your ideas. (In groups).*
3. *Prepare questions to interview one of your groupmates. Discuss web-programming in an interview.*

Tasks of this type are effective for the development of communication, speaking and listening skills, as well as the skills to ask questions.

E. THE STAGE OF FORMING LEARNING SKILLS is called creative block. This stage is implemented with performing exercises for the development of critical and creative thinking. Creation of students' own original ideas on the topic under study, the search for additional information, and its critical and creative rethinking are the main targets of the section.

For the development of creative thinking skills the following tasks can be suggested.

1. *"Extraordinary ways to use ordinary things"* is an exercise when the learners are asked to find unusual ways of using ordinary things in the context of the studied theme and share their ideas with the class. For instance, chair, hat, computer, pencil and so on.
2. *"Second half of a picture"* offers to guess what is depicted on the second half of a picture. The more unusual the images the more effective the activity.
3. *Brain storming* is one more effective way to develop creative thinking skills and create a comfortable atmosphere in the class.

So, the implementation of DI, presented by the described stages with the obligatory study of the section for self-work, takes into account the level of training, individual characteristics and educational needs of each student. The development of self-study skills ensures successful mastering of the studied material and forms professional foreign language competence.

The effectiveness of the methodological system based on differentiated instructions has been proved by the results of an experiment conducted with students in "Information Systems" EP at Sh. Ualikhanov Kokshetau University, the total number of students – 23, duration of the experiment – 1 semester. The first stage of the experiment was interviewing the learners and pre-assessment of their language proficiency. The interview made it possible to find out the personal and educational interests of the students. The English language placement test helped to establish the levels of students' language proficiency (A1,A2). Based on the data obtained a series of lessons was designed and tested. The example of one of them is presented below.

First of all, there was defined a set of facts and terms for each unit that were essential for the students to know to be literate and informed about the studied topics. The teacher listed skills for which she and the students were responsible as the study course progressed (Among important skills that students applied were using resources on grammar, vocabulary and other language aspects effectively in order to organize effective learning.) The teacher continually assessed the readiness for learning, interests, and learning profiles of her students and involved them in goal setting and decision making about their learning. (As the students' needs were understood more fully, the instructional framework and instructions were modified.) The assessment was implemented through tests and interviews.

Before the classroom activities, the students were offered to read two short texts and listen to a dialogue. One of the texts discussed the main principles of Web-programing as a writing application that run on a web server and can be used by many different people, the other one was about web-programming in Kazakhstan. The dialogue presented communication between two first

year students studying Information systems at a University. The themes of the texts were consistent with those discussed at the principle subjects of the semester. After each text and the dialogue the students were to perform short tests for understanding. Keys to the tests were available soon after its performance.

At the beginning of the information block of the lesson a problem-based question about web-programming was suggested for discussion. The students had an opportunity to share their thoughts and ideas based on the knowledge taken from the text. The students demonstrated their interest in the topic and were much involved in the whole process of discussion. After that there followed two exercises checking understanding of the self-studied material: a task offering to determine the correctness of suggested statements; and a task suggesting to number various factors contributing to successful web-programming (where 1 = most important). Most of the students demonstrated good understanding of the studied material and to those who were giving wrong answers the teacher briefly explained why their answers were not right.

The next stage of the lesson was studying a new portion of grammatical material. The theme of the lesson was the verb “to be” and “to have” and some cases of the Present Simple Tense use. After the explanations and examples given by the teacher, the students received the following tasks:

1. *Comment on the use of the Tense.*
2. *Fill in the gaps where necessary.*
3. *Form the right form of the verb to be.*

Similar exercises created as an additional tool for reinforcing the studied material of each lesson stage were suggested for self-study to all the students. Those students who did not coped with most of the tasks or with some of them during the lesson received additional recommendations from the teacher with the indication of tasks and exercises for obligatory performance. All the students passed self-testing after each set of exercises.

The next stage (the Application block) joined vocabulary and grammar exercises. The students were offered to:

1. *Match items to the correct statement from two columns.*
2. *Choose the right words from two or more alternatives.*
3. *Write word combinations using the given words.*

The students coped with the tasks pretty well and in a short period of time.

The next step of the block was listening to the dialogue and performing tasks and exercises after it. After listening, the students were offered to complete the dialogue about web modeling (between a client and a web-modeling agency) with the words in the box. The next task to role-play the dialogue added some good vibes to the lesson and gave the students an opportunity to demonstrate their artistic talents.

The following task was to make up a similar dialogue using the new vocabulary and grammar in pairs. Depending on their interests and experience the students could choose which role to play and define additional details of the conversation (like where the dialogue was happening, at want circumstances, what mood the participants had and so on). The task encouraged the students to work in cooperation, pool their knowledge, speaking and listening skills. After the performance, the students chose the best dialogue and shared more ideas on the topic. The home task was to memorize the dialogue.

Additional exercises to the studied block were offered for self-study to all the students. Therefore, the students who didn't fully understand the studied material or wished to gain more experience in performing some of the tasks of the lesson were additionally instructed by the teacher.

The Transformation block of the lesson was presented with a short text “What is a web app” The students were suggested to give as many associations with web-programming as they could. The teacher started the chain: web-programming – writing – coding – server – client… The students continued: money – new knowledge – happy life – computer – technologies and so on. The task helped to penetrate deeper into the topic suggested for study and create more notions and ideas on the theme. Moreover, the task became much fun and the source of pleasant atmosphere. After the

task, the students read the text and made oral translation of some of its parts. After reading the text the students did the tasks listed below.

1. *Combine the sentences on the left and right side of the columns to get related statements.*
2. *Make sentences using the words.*
3. *Expand the following sentences using the following pattern. Use new words and phrases.*

Each exercise was checked by the teacher with the participation of the whole class. Therefore, mistakes made by the students within the process were corrected and discussed. Additional exercises to the studied block were offered for self-study to all the students.

The Communication block presented by the text "Digital Kazakhstan" was presented for studying to the students. It was offered to discuss the text with their groupmates by asking and answering each other's questions. One more task was to think of what they had read and share their opinions starting as follows: I think that … I didn't know that … In my opinion … It is new for me that … I don't understand why …

The exercises of the block helped students to apply the new vocabulary and reinforce the grammatical material of the lesson. They trained skills of asking questions and listening to each other. The formulation of opinions and ideas on the suggested topic prepared the students for the Creative block study. At the end of the block the teacher indicated additional exercises for self-study and home task.

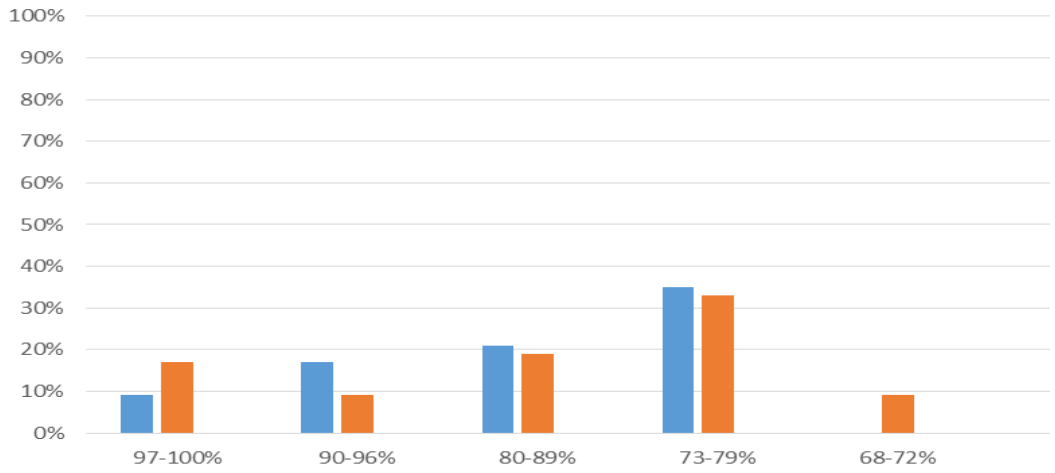
The creative block formed the final step of the lesson. The tasks of the lesson were aimed at developing critical and creative skills. Depending on the language proficiency the students received tasks to make a cluster map using the text and write an essay on the topic. Before performing the tasks, the teacher gave to the students detailed instructions on creating cluster maps and writing essay, so the students were pretty well prepared to do the tasks. The teacher suggested additional resources with the examples. For performing one more task, the whole group of the students was split into two subgroups. It was suggested to imagine the two subgroups had received an order for web-programming. The students were to perform the tasks listed below.

1. *Create an advertisement of their services.*
2. *Create a team to perform the job. Explain their choice.*
3. *Think over and speak on the expected results.*

Each step of the four suggested was to be critically discussed within the groups. It should be noted that the entire language unit took up four academic hours (50 min 4 times a week) so the students had enough time to perform their self-study tasks and exercises with obligatory self-testing process.

Thus, 17% students in the group had 97-100% performance, 21 % students – 90 - 96%, 35% students – 80-89%, 27% students – 73-79%. The group's results of the previous semester compared to those obtained after integrating the presented methodological system into the learning process proved the effectiveness of DI technology: 9% students had 97-100% performance, 19% students – 90 - 96%, 33% students – 80-89%, 30% students – 73-79%, 9% students – 68-72%.

The diagram below demonstrates the comparison of the results.



Comparison of the English language acquisition (the placement and the final test)

It indicates that with the implementation of the system the number of the students performing within 97-100% has grown, the number of students within the range of 90 - 96% has grown as well, 80-89% has become more, but 73-79% quality – has decreased with no students of 68-72% language acquisition quality.

Thus, the tendency of a better English language acquisition can be traced.

CONCLUSION

Thus, DI uses a broader range of resources comparing to the traditional system of teaching the English language. It contributes to the development of communicative and creative activities and focuses on the involvement of each student in the active learning process.

The goal of differentiated instruction is to assist each student in learning process to maximize the potential, growth and achievements of every individual by approaching each learner where students exist on the basis of their mental abilities. Differentiated instructions do not focus on individuals' deficiencies rather than on the strengths and uniqueness to maximize the achievements. Differentiated instructor keeps in view the students' differentiated background, knowledge, interests, choices, and likings for learning, readiness, language, reactions and responses. If differentiated instructions are properly planned, designed and applied with all learners' weak and strong points considered as product, all the students take more interest with their full potential and participation in learning process. Differentiated instructions in a classroom provide alternative ways to achieve learning goals for students of different backgrounds during the same time period, classroom and knowledge level.

The findings of the research have shown that differentiating instruction is an effective tool in fostering professional foreign language competence of students in "Information Systems" EP. The system designed based on DI technology can be suggested for implementation in EL teaching at Kazakhstani non-linguistic universities.

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Саралап оқыту технологиясының маңыздылығы: аралас оқыту және оның келешегі

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Әрбір білім алушы өзінің жеке ерекшелігіне, мүмкіндігіне қарай білімді әртүрлі қабылдайды екен, бұл зерттеушілердің, психологтардың, оқу материалдарын әзірлеушілер мен мұғалімдердің тұжырымдарында сипатталып, расталды. Бұл тәжірибе саралап оқыту теориясын құруға мүмкіндік берді. Мұғалім білім алушыға оқу процесін пайдалы ету үшін алдымен, олардың жеке ерекшеліктерін, ұсынып отырған оқу материалының

мазмұнын, бағалау әдістерін таңдап, білім алушылардың жеке ерекшеліктеріне сәйкес оқытылатын оқу материалының реттілігін анықтауы қажет.

Аталған зерттеудің мақсаты аралас оқыту моделін сипаттау және "Ақпараттық жүйелер" білім беру бағдарламасында оқитын студенттерге ағылшын тілін оқытуда оның тиімділігін талдау болып табылады. Мақалада "аралас оқыту" ұғымы, оның негізгі компоненттері және оқу үрдісіндегі тиімділігі қарастырылады. Ағылшын тілін оқытуда қолданылатын аралас оқытудың артықшылықтары анықталып, оның қазіргі оқыту жағдайындағы тиімді тұстары талданады. Зерттеудің жаңалығы аралас оқыту негізінде "Ақпараттық жүйелер" білім беру бағдарламасында оқитын студенттердің кәсіби-бағытталған шет тілдік құзыреттілігін дамытуға бағытталған білім беру моделін құру болып табылады.

Мақалада саралап оқыту теориясын дәстүрлі және аралас нұсқаларда қалай қолдануға болатынына тоқталдық, осыған дейін жинақталған деректерді сұрыптап, аталған мәселенің шешу жолдарын қарастырдық.

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Актуальность дифференцированного обучения: перспектива смешанного обучения

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Каждый учащийся приобретает знания в индивидуальной, свойственной только ему-ей манере, что описывается и подтверждается выводами исследователей, психологов, разработчиков учебных материалов и учителей. Данный опыт позволил создать теорию дифференцированного обучения. Учитель, имея целью сделать процесс обучения полезным для учащегося, должен учитывать их индивидуальные различия, чтобы подобрать предоставляемый контент, подобрать способы оценивания, определить последовательность изучаемого контента с учетом характеристик учащихся.

Целью настоящего исследования является описание модели смешанного обучения и анализ ее эффективности при обучении английскому языку студентов, обучающихся по образовательной программе «Информационные системы». В статье рассматривается понятие «смешанное обучение», его основные составляющие и эффективность в учебном процессе. Анализируются преимущества смешанного обучения, используемого при обучении английскому языку, раскрывается его эффективность в современных условиях обучения. Новизна исследования заключается в создании образовательной студентоцентрированной модели, направленной на развитие профессионально-ориентированной иноязычной компетенции студентов, обучающихся по образовательной программе «Информационные системы» на основе смешанного обучения.

В статье была предпринята попытка упростить теорию дифференцированного обучения, предоставив исходные данные о том, как его можно реализовать в традиционном и смешанном вариантах.

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