World Journal on Educational Technology

Volume 14, Issue 1, (2022) 80-92

www.wj-et.eu

The effect of game technology on the development of preschool children with speech disorders

Gaukhar Ibatova [1*] , Abai Kazakh National Pedagogical University, Almaty, Kazakhstan, https://orcid.org/0000-0002-8772-1956,

Aigerim Makhmetova [2] , Abai Kazakh National Pedagogical University, Almaty, Kazakhstan https://orcid.org/0000-0002-1734-0154

Saule Basarbaevna Zhoraeyeva [3] **,** Candidate of pedagogical, associate Professor,Auyezov University , Tauke hana 5, Shymkent, Kasakhstan, https://orcid.org/ 0000-0001-6742-6899

Bibinur Amiresheva [4] , Abai Kazakh National Pedagogical University, Almaty, Kazakhstan, https://orcid.org/0000-0002-3612-3163

Nyshanova Saltanat Tinibekovna [5], Candidate of pedagogical sciences, Associate professor, Khoja Akhmet Yassawi International Kazakh-Turkish university, Turkistan, Kazakhstan,; Address: B. Sattarkhanov Ave 29, Turkistan city, Kazakhstan, https://orcid.org/0000-0003-3455-0775

Akmaral Satova [6*] , Abai Kazakh National Pedagogical University, Almaty, Kazakhstan,

Suggested Citation:

Ibatova, G., Makhmetova, A., Zhoraeyeva, S. B., Amiresheva, B., Tinibekovna, N. S., & Satova, A., (2022). The effect of game technology on the development of preschool children with speech disorders. *World Journal on Educational Technology: Current Issues*. *14*(1), 79-92. https://doi.org/10.18844/wjet.v14i1.6639

Received from;July 08, 2021 revised from August 18, 2021; accepted from October 12, 2021;
Selection and peer review under responsibility of Prof. Dr. Servet Bayram, Yeditepe University, Turkey.

Abstract

The purpose of the article was to analyze the psychological and pedagogical conditions of word-formation skills for Kazakh-speaking preschool children with speech disorders on the basis of learning theories and contemporary approaches. To achieve the set aim, we have studied psychophysiological peculiarities of preschool children with speech disorder. We have allocated the most significant learning theories and approaches, which promote the assimilation of word-formation. We have come to understand that the indicators of speech development of many modern Kazakh-speaking preschoolers do not correspond to the age norm, which is influenced by word-formation operations. For Kazakh-speaking preschool children with speech disorders it is rather difficult to distinguish elementary forms as the original word, consisting of a stem and a derivative by including diminutive-affectionate suffixes. The driving forces of word-formation development of Kazakh-speaking preschoolers with speech disorders are contradictions that arise in connection with the development of a number of its needs. It should be pointed out that game technology is considered as the most powerful pedagogical condition in the development of Kazakh-speaking preschool children with speech disorders.

Keywords: Kazakh-speaking preschool children, psychological and pedagogical conditions, learning theories, approaches, word-formation, speech games

[*] ADDRESS OF CORRESPONDENCE: Gaukhar Ibatova, Abai Kazakh National Pedagogical University, Almaty, Kazakhstan.
Email address: ibatova_g@mail.ru

1. Introduction

Psychologists prove that maturation is achieved to 60% when the child starts speaking and then slows down progressively. The most favorable period appears to be between two and five years old. During that period, there is an interaction of maturation and self-programmed learning. At the age of five, the brain is sufficiently developed to tag general principles with rules of exceptions. Passage from coordination to subordination takes place. The child moves progressively from word-formation to organized, coherent and cohesive speech (Altunkaya, 2018; Apaydin Cirik & Aksoy, 2020). At the age of eight, the child is able to cope up abstractly with the language and to acquire quickly without difficulty the concepts and corresponding vocabulary. Motivation plays a big place in any work or learning. The word "motivation" is quite commonly used, but its nature is only confusedly perceived. Motivation arises out of need or interest; it is sustained by external factors and is easily subject to variations. In its manifestation, it is the will to learn.

Among pre-school children the exposure to language would be only through activities, and the motivation would depend on the interest those activities generate (Ciobanu, 2018). In this case, it should be mentioned sensitivity of preschool and schoolchildren to mastering the language in general. This period lasts differently, but it is the age from four to eight. The language acquisition during this age is more flexible, rather than at later ages. The child picks us language simply by listening attentively to the language spoken to him or around him. Parents want their child to understand what they say to him and they use for the purpose a simplified language known as caretaker's speech or baby talk. In the first stage, he seems to be interested only in what is spoken to him. Later he shows interest in the talk going about around him (Farahani & Kaleybar, 2019). The language heard by the child is stored and remains latent for some time in the brain; it is put to actual use slowly, first for understanding. With the years, a person gradually loses this ability; the sensitivity to perception of sound and the ability to imitate them is gradually gets lower, short-term memory also gets worse (Deacu, Kilyeni & Barbulescu, 2018).

There are number of principles regarding growth, which should be understood, by teachers and others who work with children. Although growth is continuous, it may be somewhat more rapid at certain stages than at others. The fact of continuity of growth, however, makes it possible to project curves and to make predictions regarding future growth with some degree of accuracy. It should be pointed out that except biological need of child; every child in our society possesses certain social or personality needs (Bayley, 1940). These latter needs are sometimes referred to as sociogenic or learned needs. Among the important personality needs are the following: needs for status – every child wants recognition and attention. He craves the esteem of his teachers, parents and needs; need for security – children desire regularity and stability in their lives. Too much uncertainty as to how they stand in their group or excessive anxiety as to whether they will pass or fail a course creates a very unwholesome condition from them; need for affection – everyone desires love. The good teacher is one who genuinely likes his pupils (Celik & Yavuz, 2018).

Children begin to talk when they are about fifteen months of age. Although there is a positive relationship between onset of talking and later development, the correlation is far from being perfect. Any parent who attempts to predict his child's future mental ability from the age at which he began to talk is likely to make a very serious error. According to psychologists the child, before he knows the meaning of words, even before he is able to realize they could have a meaning, is interested by the sound combination of words. Each word has for him its features, which he is able to recognize; words have life for children. The special relation of the child with words explains his interest in poetry, which is sought to be satisfied by lullabies and various sorts of traditional poetical compositions accompanying children plays. The language heard by the child is stored and remains latent for some time in the brain; it is put to actual use slowly, first for understanding (Deacu, Kilyeni & Barbulescu, 2018). This starts at about 12 months. The child is then able to recognize a known voice or familiar sounds indicating certain facts concerning him, like the preparation of his food. His hearing system gets sharper and sharper everyday. Between 12 – 18 months, the child is able to follow simple commands

and responds to interdictions. Ninety percent of the comprehension ability is attained at the age of three.

The American psychologist Eric. M. Lenneberg describes the process: between the ages of two and three years, language emerges by an interaction of maturation and self-programmed learning. Between the ages of three and the early teens, the possibility for primary language acquisition continues to be good. The individual appears to be most sensitive to stimuli at this time and to preserve some innate flexibility for the "organization of brain functions" to carry out the complex integration of sub process necessary for the smooth elaboration of speech and language (Farahani & Kaleybar, 2019). Though parents are aware that the child understands what he is told or what is going about around him, they do not press him to speak except on rare occasions like greeting visitors or thanking them for the present offered, or when the child weeps and the parents are eager to know the reason in order to console him effectively. When pressed to speak, the child remains resolutely silent; the parents impute caprice to him, but the truth is otherwise. Speech by its very nature is a spontaneous act, which cannot be obtained by external pressure. For the child to speak he should be willing to say something and be able to say it (Lenneberg, 1967; Mohammed, 2020).

1.1 Learning Theories and Approaches

Educational researchers claim many theories to explain how people acquire, organize and deploy knowledge. Obviously, many researchers have attempted to define the concept of learning and no single definition can be said to be conclusive or correct. We would like to point out some significant learning theories, which promote the assimilation of word-formation by Kazakh-speaking preschoolers with speech disorders (Zakopoulou, 2016). The most important mainstream is behaviorism. Behaviorism is a theory of human learning that only focuses on objectively observable behaviors and discounts mental activities.

Behavior theorists define learning as nothing more than the acquisition of new behavior. It should be pointed out that behaviorism impacts learning in the way that this theory is relatively simple to understand because it relies only on observable behavior and describes several universal laws of behavior (Karasheva et al., 2021). As psychologists claim, the principles of behaviorism can be useful in facilitating learning within the classroom. While behavioral therapists and special education teachers apply behavioral learning principles to address individuals, teachers in regular classrooms may use the same principles to help manage the behavior of many learners. For instance, teachers may set up group contingencies (a standard reinforcement given to a group) for following certain rules of conduct. One common means of applying group contingencies that some teachers find useful is the token economy (Ayllon & Azrin, 1968). In this system, signs serve as conditioned reinforces that can later be exchanged for objects or privileges. Signs are earned for good conduct selected by the teacher for strengthening (Ayllon & Azrin,1965). To sum up, basic strategies of language learning within the scope of behaviorist theory are imitation, reinforcement and rewarding. However, researchers have demonstrated that learners' imitation of structures show evidence of almost no innovation. Since students do not imitate such structures like words, phrases, clauses and sentences at the same rate they will naturally learn at different rates. However, it must be admitted that imitation is very useful in the acquisition of word-formation.

Cognitivism as a theory of learning process occurs inside the learner's mind. It has the own history about how it happens or the development of it. The development of cognitive learning theory is famous with the term "cognitive revolution". Cognitivism, like behaviorism, emphasizes the role of environmental conditions in facilitating learning. Instructional explanations, demonstrations, illustrative examples are considered to be instrumental in guiding of learning. The cognitive approach is focused on mental activities of the learner that lead up to a response and acknowledges the processes of mental planning, goal setting and organizational strategies (Lilienfeld, Lynn, Namy & Woolf, 2010). Cognitive theories say that environmental "cues" and instructional components cannot account for all the learning that results from an instructional situation. Additional key elements include

the way that learners attend to code, transform, rehearse, store and retrieve information. There are such principles of cognitivism as sensation, perception, attention, encoding and memory. Sensation shows how the stimuli derived from external stimuli are registered in sensory before it is being sent to the following process. Perception shows the process of interpretation, which can be seen through our sense. It consists of pattern recognition, object recognition, bottom up or top down processing, and conscious perception. Attention is important to determine the conscious awareness. The way to encode the information can be done in the form of schema. In this case, to encode the information in the form of experience can be conducted through two ways. They are bottom up and top-down ways.

Memory is the ability to keep and retain the information in our mind. It consists of short-term memory, long-term memory and sensory. Short-term memory consists of limited amount of data and short duration. It is also known as the working memory because it consists of some functions. They are rehearsal (repetition), coding, decision-making, and retrieval. Long-term memory can hold a huge amount of information-facts, data, and rules for how to use and process them and the information can be maintained for long period. It means that long-term memory consists of very large amount of data and very long duration. The way to keep the information can be maintained in this type of memory is by using cues. Cognitive theories include the theory of Jean Piaget.

Jean Piaget, who began to develop his ideas in the first half of the twentieth century, was one of the famous psychologists. He referred to active learning. He suggested that students construct knowledge for themselves by actively making sense of their environment. According to Jean Piaget, this is the process of assimilation. The student is assimilating information to fit his or her own interpretation of the world and existing ways of thinking. Later, the student will have to adapt or change his or her way of thinking to accommodate this new idea. Jean Piaget refers to this process as accommodation. Assimilation and accommodation describe two sides of the learning (Piaget, 1977). Such interaction between the environment and student's existing knowledge is ongoing and throughout the years is added to the growing knowledge base. In this way, students are active constructors of their knowledge of the world.

Jean Piaget (1977) developed his famous framework suggesting that there are four universal stages of development. Piaget (1977) and his colleagues constructed tasks and conducted experiments based on this theory and produced a detailed description of the four stages (sensory-motor stage, pre-operational stage, concrete operational stage and formal operational).

Social constructivism is associated with the ideas of Lev Vygotsky. He explored the role of culture and social context. He turned teachers' attention to powerful effect of the social context. Lev Vygotsky was interested in the learning potential of the individual, recognizing the fact that all students were unique learners. He was interested to explore what individual were capable of achieving with the help and support of a more knowledgeable partner. Accordingly, the famous concept was born, the Zone of Proximal Development. This concept describes the difference of the "zone" between the current knowledge of the student and the potential knowledge achievable with some help from a more knowledgeable peer or adult (Vygotsky, 1932). Such help is provided in a systematic manner, it is often referred to scaffolding. Scaffolding is essentially an instructional strategy, which ensures that the student can gain confidence and take control of the task or parts of the task as soon as he or she is willing and able to. At the same time, he or she is offered immediate, meaningful support whenever stuck.

The language acquisition plays a key role in theories mentioned before. Students learn new language forms in meaningful contexts so listening to the teacher is essential both for modeling pronunciation and for providing opportunities for understanding new input from context. They also need opportunities to join in and interact with the teacher and with each other. Teachers will need to think about how they can best scaffold student's early language production in their Kazakh language classes, what word-formation techniques they will use to elicit language from their learners, and how they can encourage them to use language meaningfully with each other.

In the academic context, humanism or humanistic learning theory is referred to the school of Humanistic Psychology. The works of Carl Rogers and Abraham Maslow accelerated the development of it in the early seventies. According to Carl Roger, the learners ought to be considered as clients and the teachers as counselors, who addressed the needs of the learners. Curran believed that by this method, the anxiety or fear of making a fool of oneself would be lowered. Another important goal of this approach is to perceive a teacher as an empathetic helping agent in the learning process and not as a threat (Benjafield, 2010). Humanism would concentrate on the development of the student's self-concept. When he feels good and confident about himself, it shows a positive beginning. Only when a learner's self-esteem is raised, he realizes his responsibilities in the learning process. Teachers should realize that their responsibility does not stop in just imparting knowledge to the learners, but also in facilitating them toward self-motivation (Agranovich et al., 2019). A humanistic approach in teaching not only helps learners easily learn things but also develops their personality in various ways. They easily solve problems in life situations, have good reasoning capabilities and are self-developed with free will and cooperation.

However, today, thanks to the various research done in the field of education, teaching with humanism not only inculcated values in learners, but also enabled them to grasp their subjects easily in a natural way (Abdullah, 2021). Teachers will have to use their best judgment in deciding about the most suitable learning theory to fit their learners in different contexts. By incorporating variety into everyday practice, teachers can make their lessons full of stimulation for all learner types and intelligences.

Several approaches within the frame of learning theories will help us to see how far they influence on word-formation ability. Communicative approach starts from a theory of language as communication and originated because of change in the British language teaching tradition dating from the late 1960s. The desirable goal here is a communicative competence that presupposes correct and adequate use of linguistic system (Belinskaya et al., 2020). Thus, learning occurs through interaction between students and teacher. The range of exercises and activities compatible with a communicative approach is unlimited. Exercises enable learners to attain the communicative objectives of the curriculum, engage learners in communication, and require the use of such communicative processes as information sharing, negotiation of meaning, and interaction. A variety of games, role-plays, simulations, and task-based activities have been prepared to support classes. Many proponents of communicative language teaching have advocated the use of "authentic" materials in the classroom. These might include language-based realia, such as signs, magazines, advertisements, and newspapers, or graphic and visual sources (Carolyn, 2006).

The functional analysis of the communicative approach identifies the models of communication. Jacobson's model occupies an intermediary position between the linguistic, pragmatic and socio-psychological approaches to modeling communication (Karanfil, 2020). The complex nature of this model is based on the six-component scheme of communication. According to Jacobson, the six components fulfill six communicative functions: the emotive (addresser), referential and poetic (context, message), phatic and metalingual (contact, code) and conative (addressee) (Jacobson, 1960). Lotman's psychological-culturological model postulates that an essential requirement for the generation of new knowledge during communication is the presence of dissimilar codes since if both sides possess the same information then there is no exchange of information and thus, by definition, no communication actually takes place) (Lotman, 2000).

The main reason, supporting the importance of lingua-cultural approach is that language is not an autonomous construct but social practice created by the structures and forces of the social institutions within which we live and function. Culture and communication are inseparable because culture not only dictates who talks to whom, about what, and how the communication proceeds, it also helps to determine how people encode messages, the meanings they have for messages, and the conditions and circumstances under which various messages may or may not be sent, noticed, or interpreted. Culture is the foundation of communication (Karanfil, 2020). This approach will help future

language personality to understand the fact that all people exhibit culturally conditioned behaviors and social variables such as age, sex, social class, and place of residence influence the ways in which people speak and behave. It will help to increase their awareness of the cultural connotations of words and phrases in the target language, to develop the necessary skills to locate and organize information about the target culture. Finally, it stimulates students' intellectual curiosity about the target culture and encourages empathy towards its people. At any rate, the foreign language classroom should become a 'cultural island', where the accent will be on 'cultural experience' rather than 'cultural awareness'. From the first day, teachers are expected to bring in the class posters, pictures, maps, and other realia in order to help students develop 'a mental image' of the culture.

The person-centered approach was developed from the concepts of humanistic learning theory. The humanistic approach views people as capable and autonomous, with the ability to resolve their difficulties, realize their potential, and change their lives in positive ways (Rogers, Lyon & Tausch, 2013). Person-centered education, with a counseling-originated model, embraces a constructivist learner-centered model. Learner-centered model aims to make teachers more sensible to their learners' need as the students undertake a more participatory and a more active role in language learning. The attention switches from teaching language form to teaching function in accordance with the learners' needs. Hence, the individuality of every learner, their learning styles, and multiple intelligences begin to be acknowledged by the educators. Likewise, the traditional teaching manner, in the learner-centered approach, the teacher has the role of knower and active organizer. Learning in learner-centered model is a non-linear, recursive, continuous, complex, relational, and natural, which is enhanced in contexts where learners have supportive relationships, have a sense of ownership and control over the learning process, and can learn with and from each other in safe and trusting learning environments.

2. Methods and Materials

The research followed a qualitative method where the researchers drew data from previous literature. The data collected from the secondary sources were reviewed and the researchers expressed their opinions in a form of discussion.

3. Findings

Preschool childhood is a period of active development of social space. A preschooler discovers the world of human relationships and learns their specifics through communication with adults, with peers, through play relationships (Hammoudi, 2021). In childhood, the foundation is laid for further development; there is familiarization with knowledge about the world around us, the formation of moral and ethical norms and the assimilation of generally significant values. In preschool age, the content and motives of communication change, communication skills and abilities are acquired, therefore, one of the components of psychological readiness is communication. The social framework, gender, age and individual characteristics, subject-practical activities, organization of educational work, and the specifics of the communication space determine the communicative competence of preschool children.

To form a speech skill means to provide the necessary conditions for a preschooler to correctly construct and implement a statement. In order for communication to be full-fledged, it is necessary to use speech skills to express thoughts, feelings, intentions and experiences; if this is not the case, then speech activity will only be partially formed (Karanfil, 2020). In the preschool years of the child's development, the first connections and relationships are established, which form a new individual. It is true as the period of preschool childhood is the period of actual formation of psychological mechanisms of the individual that it is so important.

Now, the indicators of speech development of many modern preschoolers do not correspond to the age norm, which is influenced by word-formation operations. Suffixation is a widely used word formation in Kazakh language as agglutinative one. Suffixes have definite functions in word formation. Suffixes add a specific meaning and a new word category. We can say that the derivatives in the Kazakh

language are formed in accordance with the word formation rules and have a nominative function. In other words, the derivatives were formed, as there was a need for a secondary naming of new objects and phenomena. For Kazakh preschool children with speech disorders it is rather difficult to distinguish such elementary forms as the original word, consisting of a stem and a derivative formed from it by including diminutive-affectionate suffixes: in most cases, preschoolers do not distinguish these morphemic elements by ear (Zakopoulou, 2016).

The impossibility of differentiating between the original word and the word form, including diminutive-affectionate suffixes, does not correlate with the traditional ideas of speech ontogeny about a sufficiently early ability to isolate these suffixes and to distinguish the objects themselves. At the same time, the addition of a lexical marker in the form of the word "small" to the speech instruction made it possible to differentiate words and objects. It testifies the fact that children with speech disorders extremely complicates the process of morphemic division of words and the establishment of new semantic relationships (Zakopoulou, 2016).

The lack of orientation towards a morpheme as a discrete sign can be explained by the irrelevance of this task within the zone of proximal development, since there is reason to think that for these children the most significant task is to accumulate ready-made words for their subsequent connection into elementary speech utterances. We can say that these children are at the level of mastering the lexeme syntax. It is known that the assimilation of the lexical and morphological meaning of words occurs in different ways. While learning the word as a linguistic sign, its lexical meaning, the child sequentially masters relations of a different order (Belinskaya et al., 2020). Initially, at the stage of syntagmatic grammar, these relations are established in the sequence: denotatum - word – designatum (subject) - (sound) - (concept), which corresponds to the child's assignment of the lexical meaning of the word and can be represented in the form of the well-known semantic triangle. Mastering the lexical meaning of a word is possible only if the child has mastered a certain method of generalization. This way, as shown in Sokhin's (2008) study ,the word is represented as an image. During the recognizing of words, all the components of the indicated triangle are changed significantly, since a new denotation appears.

The assimilation of the morphological meaning of a word presupposes not only a restructuring of the existing relations, but also a change in the type of dominant relations, dominant connections between the vertices of the triangle, which requires the allocation of a morpheme as an independent discrete sign. It becomes clear that the assimilating of lexical meaning of a word proceeds in the direction "from the sound (name) to the object," to mastering the new morphemic structure of the word and operations of comparison of words similar by sound. When assimilating a new type of relationship, the child gets an opportunity to establish the identity of situations and word forms, the changes in the object with the same changes in the word form.

Zhinkin (1998) noted that a word is recognized, characterized by the constancy of the phonemic composition. As a rule, such words in the limited communication practice of children with speech disorders are the initial ones, which is a motivating form of the word, the recognition of which does not require complex analytical operations. This tendency towards understanding elementary word forms turns out to be very natural for preschoolers with speech disorders, since the urgent tasks of communication require the accumulation of the basic lexemes necessary for constructing sentences. Since the basic words in our work were motivating words that were equal in their model to the root part, we can talk about the formation in preschoolers with speech disorders the orientation on root, which transfers the main meaning (Zakopoulou, 2016). At the same time, this fact testifies the lack of orientation towards other elements of the word, to suffixes. The dominance of the meaning of the root part creates conditions under which the word-building elements are not isolated as autonomous signs and are not opposed to each other. However, in the normative act of perception, the selection of a morpheme is based on disjunctive oppositions of forms, which is ensured by a strictly regulated nervous restructuring, which creates the possibility of transition from a continuous iconic code to a discrete code, which in turn, forms the linguistic rules necessary for independent transformations in

speech and language (Shakhnarovich, 1974). Apparently, it can be stated that preschoolers with speech disorders have not sufficiently formed a nervous restructuring of such a plan, which explains the impossibility of isolating a morpheme as a discrete sign.

The possibility of isolating the morpheme element as a discrete sign is largely dependent on development of cognitive processes of children with speech disorders (SaÄŸÄ±roÄŸlu & Uzunboylu, 2018). Decoding of speech information presupposes a certain amount of short-term random-access memory, which keeps sequentially all its elements until the latter arrives. Evaluating the process of auditory perception from this point of view, we have noted difficulties in memorizing nouns presented through hearing. We also discovered difficulties in memorizing their linear sequence, which were caused by insufficient analytical speech and auditory activity (Bagila et al., 2019).

We sometimes observed similar phenomena in the process of specifying a situation that is, choosing the desired object from a number of proposed ones. It is necessary to say about the arbitrary organization of such a choice, which manifests the fact that all the presented pictures in the child's visual perception are sometimes combined into a single simultaneous image, the essence of which is determined by the dominance of the same image. So, for example, when there was an assignment to select pictures for the words "mushroom-fungus; mushroom-picker; mycelium", . Ayaulym put together pictures without regard to the order of the given words, focusing only on the presence of a repeating object in all images. This kind of enumeration of various options, naturally, increased the latency period, which did not lead to an unambiguous decision.

The data obtained in the course of completing the task for verifying adjectives indicate a lower level of formation among preschoolers with speech disorders the word-formation orientations based on the material of this part of speech in relation to nouns (SaÄŸÄ±roÄŸlu & Uzunboylu, 2018). We noted a phenomenon that was absent in the previous task, a sufficiently large number of refusals to perform the proposed tests. The lack of choice is also confirmed by the shortness of the period required for children to make a decision. This is also evidenced by the fact that children established absolute identity between the two proposed variants of adjectives as conventional formations.

Difficulties in carrying out analytical speech operations to isolate derivational affixes of verbs and adjectives are due, firstly, to the later appearance of verb vocabulary in the speech of children with speech pathology, and, secondly, to the merging of the verb with the visual image of the object itself (the so-called phenomenon of subject fetishism). A detailed analysis of the results of orienting activities on the third task made it possible to establish the fact of the repetition of those difficulties that we observed when performing the task on the material of adjectives. Thus, a large percentage of responses were refusals to perform verification actions. Initially, we assumed that the refusals were connected with verb pairs in which morphological elements provided a minimal semantic break. However, further qualitative analysis forced us to abandon such an assumption, since refusals were encountered in cases of presentation of verb strings with a minimal semantic shift.

Thus, taking into account described difficulties; we can say that performed tasks were the results of a rigid stereotype in the assimilation of single words (initial forms) or random guessing, while the isolation of word-formation affixes on the material of various parts of speech was not available for a number of reasons. It is necessary to single out the unwillingness of the nervous switching from the iconic (figurative), continuous code to the discrete code, which makes it possible to single out affixes as discrete signs that change the sound outline of words and iconic image to the word semantic changes. As a second reason, it is necessary to point out the lack of formation of cognitive processes, which are prerequisites in relation to the development of speech word-formation operations.

Analysis showed significant differences in mastering the primary word-formation operation to isolate the morphemic elements of words by preschoolers with normal and impaired speech development (Yesnazar, Japbarov, Zhorabekova, Nuralieva &. Elmira, 2020). In preschoolers with speech disorders, the conditions for mastering word formation are not fully formed: the accumulation of a primary vocabulary and the formation of phonological recognition operations for sound word

complexes (SaÄŸÄ±roÄŸlu & Uzunboylu, 2018). In addition, the development of prerequisite cognitive processes turned out to be insufficient with the focus on the motivational sphere of both speech and cognitive activity; in the volume of visual and auditory memory, memory for a linear verbal row, situation specification operations. The tasks made it possible to reveal the emerging dynamics in the development of the operation in isolating morpheme elements, proceeding in the direction from the initial isolation of the root to isolated cases of morphemes through their binary opposition. The lack of morphological analysis in preschoolers with speech disorders is manifested in the fact that the sign character of a particular morpheme is rigidly tied to its definite semantic meaning. Preschoolers with speech disorders recognized the word-formation prefixes of verbs best of all, which is explained by the inclusion of these words in the phrase.

The subject of the second part of research was to identify the ability of children to transform a syntagma into a curtailed derivative unit. Based on the modern syntactic theory of word formation, this method of "folding" a predicative word combination turned out to be the most widespread in a speech utterance. This point of view is consistent with the opinion accepted in the linguistic literature that the overwhelming majority of derivative words are formed within one way of word formation according to typical samples, and not according to individual models. In this regard, this test was aimed at determining the degree of word-formation types in children with speech disorders. At the same time, the word-formative type meant not only the scheme of constructing words, but also the unity of derived units according to a number of signs: the presence of a semantic relationship with producing words; the generality of the way of education. According to a number of authors, a formal indicator of the assimilation of a derivational type by the method of folding the predicative syntagma is not only the fulfillment of the above conditions, but also the consideration of "the system of inflections of a derivative word during substantiation, as well as the fixed order of components.

To estimate the degree of correctness of the fulfillment of the specified criteria, we considered the ability to adequately find a motivating one in the proposed predicative series. The child's ability to select a word-formation element in long-term memory that corresponds to the semantics of the proposed derived unit; an ability to combine this element and the reference part of the generating word into a new morpheme structure.

When conducting a qualitative analysis, we relied on the data obtained in similar tasks by A.M. Shakhnarovich (1974) and his collaborators. The successful performance of each of the above operations was assessed by one point, thus, three points assessed the normative version of the word produced by the child in total. The results of a quantitative analysis of the data showed a lower degree of formation of skills to produce the derived units in comparison with the skills of isolating and recognizing word-formation elements from audible speech. N.I. Zhinkin, pointing to the infinity of speech and speech dynamics, determines speech as a consequence of integration "in various configurations, multilevel relations", accompanied by the formation of a certain semantic space. According to a number of authors, in order to build an integral concept of a morpheme that fulfills the necessary structural grammatical role, it is necessary to find the differences of elements and ways of combining them into an integral whole. At the same time, the entire hierarchical integration of speech levels is based on the property of the word: each word is significant in itself, in its constant composition and in its semantic function.

Based on the available literature data, the second series of experimental tasks motivated such a strategy of children's speech behavior, in which it was possible to reveal the nature of the correlation of the presented situation with the selection of an adequate morpheme for it and the inclusion of this element in a certain linear sequence. The nature of children's responses when performing the second series of experimental tasks made it possible to identify the following levels of formation of integrative skills in the studied preschoolers and the corresponding boundaries of the P value**:**

I level - level of unformed integrative operations.

Scope P - P = 0-0, 3

II level - the level of initial horizontal (syntagmatic) integration.

Scope P - P = 0, 31 - 0, 8

III level - the level of formation of sufficient integrative skills.

Scope P - P = 0, 81 – 1, 0

The leveled distribution of answers is presented in Table 1 (as a percentage from the highest to the lowest level).

Part of speech	Nouns		Adjectives		Verbs	
Levels	SD	norm	SD	norm	SD	norm
III	8.5	60	10	85	30	90
II	64.1	40	66.7	15	61.7	10
I	27.4	-	23.3	-	8.3	-

Level I is characterized by the actual absence of an integrative word-formation skill, when the child does not attempt to select a morpheme element from long-term memory and synthesize it with the reference part of the motivating word. Qualitative analysis of speech production of preschoolers with speech disorders, attributed to this level, shows, basically, a limited opportunity for children to perform word-building integrative actions.

4. Discussion

Speech games can be recommended as one of the most effective teaching and learning techniques. Preschool children tend to play games in their real life and usually familiar with terms of structure, rules. It maximizes young learners motivation greatly, and increases positive feelings. At the same time, they improve children's self-confidence, because learners are not afraid of punishment or criticism while practicing the target language freely (Agranovich et al., 2019). Speech games encourage preschool children with speech disorders to direct their energy towards language learning by providing them meaningful contexts. Therefore, it is important not to see games as time fillers or tools designed for fun only, but integrate them into learning programs.

Preschool children have to express their utterances about topics in different situations without preparation. These situations should be connected with their education, games, everyday life. Conversation should consist of at least right constructed 2–3 phrases and completed with description (things, pictures) or narration (about family members, friends, pets, etc.). Particular attention has to be paid to the content of teaching sources. Teachers can choose materials, which can improve their cultural awareness: listening and speaking songs of Kazakh culture and guessing their meaning, listening stories and fairy tales, learning or playing traditional games. In this way, children can improve not only listening and speaking skills, but also understand mentality of people, while doing creative and fun activities.

In interactive method teacher's role is to direct learners activity, which include interactive exercises and tasks. Role-playing is one of the activities used in teaching innovative methods. They are made to improve the efficiency of teaching. Role-playing involves the preschool children with speech disorders into active work by positively influencing on their inner activity. This creates favorable conditions for cooperative work. Such atmosphere creates motivation, personal potentials of inner activity and helps to form practical skills and habits. During the role-playing such skills as creativity, getting out of the difficult situations, resourcefulness, self-managing are formed and improved. Role-playing has not only educational aim, but also has social aims because some life situations are modeled here for teaching. Learners should feel free themselves and this will help them to play their role perfectly.

Howard Gardner's multiple intelligence theory reminds teachers that there are many types of learners within any one class. Gardner's research indicates that teachers should aim to appeal to all the different learner types at some point during the course. It is particularly important to appeal to visual learners, as a very high proportion of learners have this type of intelligence. Flash cards can be bright and colorful and make a real impact on visual learners. Many of the activities outlined below will also appeal to kinesthetic learners.

For children with speech disorders, flash cards can be used in conjunction with word cards. These are simply cards that display the written word. Word cards should be introduced well after the pictorial cards so as not to interfere with correct pronunciation. Flash cards are a handy resource to have and can be useful at every stage of the class. They are a great way to present, practice and recycle vocabulary and when children become familiar with the activities, they can be given out to early-finishers to use in small groups.

5. Conclusion

The purpose of the article was to analyze the pedagogical conditions of preschool children development with speech disorders on the basement of learning theories and approaches existing nowadays. To achieve the set aim, we have studied psychophysiological peculiarities of preschool children with speech disorders. The driving forces of mental development of preschoolers are contradictions that arise in connection with the development of a number of its needs. The most important are: the need to communicate to absorb the social experience; the need for external impressions, resulting in the development of cognitive abilities. Interaction is deployed on the basis of increasing autonomy preschooler extending his acquaintance with reality. We have emphasized the learning theories such as constructivism, Piaget's stages of development, Vygotsky's theory of learning, humanism. If we briefly run over the key points, at preschool age there is an intensive development of all cognitive mental processes under the influence of training and education. Additionally, we have discussed why games might be used in teaching word-formation and tried to indicate clearly the dimensions that need to be taken into account in selecting and organizing games if they are to become an important part of teacher's repertoire.

The theoretical justification and practical development of the preschool children with speech disorders to assimilate Kazakh word-formation confirmed our hypothesis. Analysis showed significant differences in mastering the primary word-formation operation to isolate the morphemic elements of words by preschoolers with normal and impaired speech development. In preschoolers with speech disorders, the conditions for mastering word formation are not fully formed: the accumulation of a primary vocabulary and the formation of phonological recognition operations for sound word complexes. In addition, the development of prerequisite cognitive processes turned out to be insufficient with the focus on the motivational sphere of both speech and cognitive activity; in the volume of visual and auditory memory, memory for a linear verbal row, situation specification operations (Bagila et al., 2019). The tasks made it possible to reveal the emerging dynamics in the development of the operation in isolating morpheme elements, proceeding in the direction from the initial isolation of the root to isolated cases of morphemes through their binary opposition. The lack of morphological analysis in preschoolers with speech disorders is manifested in the fact that the sign character of a particular morpheme is rigidly tied to its definite semantic meaning. Preschoolers with speech disorders recognized the word-formation prefixes of verbs best of all, which is explained by the inclusion of these words in the phrase.

Overall, it should be concluded that, game technology is considered to be the most powerful tool in the development of any human being (Tashkenbayevna et al.,2018) . It is undeniable that it is the greatest asset the teachers, instructor or parents possess. As far as children are concerned, they have a really great need to be always motivated in order to learn effectively, quickly, and a teacher usually directs his children. It is always reported that, the process of teaching through the variety of games is considered to be the most effective and productive way. Therefore, it is clear that,

games put the fun back into learning, and playing is what children do naturally, so a smart teacher capitalizes on what children want to do. A teacher also has a selection of games and songs ready so that activities can be changed every five to fifteen minutes depending on the age group of the preschool children with speech disorder. It is also widely said that, games can be used to teach vocabulary and expressions.

The types of activities mentioned above do not just concentrate on linguistic skills, but provide development of the whole child too. Furthermore, it is important that, all the children in the group are involved, from the shyest to the most outspoken and particular care is being taken that no one is left out. Moreover, it is clear that, there are many opportunities for development of social skills through different forms of interaction: pair work, group work and whole class. Seeing the actions, hearing the words and acting out movements all make the lessons enjoyable and richer ones. Many scientists hold the view that, young learners experience at an early age can be associated as a lot of fun and they become more confident in their everyday life. That is of vital importance and can be very helpful later when they learn at a higher level and when they communicate to other people. The use of the communicative, game methods, as well as cooperation, contributes to the activation and intensification of the learning process, increases the internal motivation to learn and allows developing the personal qualities of preschool children with speech disorders.

REFERENCES

Abdullah, N. J. K. (2021). Social justice issues in education and management of student development in Nigeria. Contemporary Educational Researches Journal, 11(3), 116–129. https://doi.org/10.18844/cerj.v11i3.5904

Agranovich, Y., Amirova, A., Ageyeva, L., Lebedeva, L., Aldibekova, S., & Uaidullakyzy, E. (2019). The Formation of Self-Organizational Skills of Student's Academic Activity on the Basis of 'Time Management'Technology. *International Journal of Emerging Technologies in Learning (iJET)*, *14*(22), 95-110. https://www.learntechlib.org/p/217144/

Altunkaya, H. (2018). Speech anxiety in guidance and psychological counselling department students. Cypriot Journal of Educational Sciences, 13(3), 328–339. https://doi.org/10.18844/cjes.v13i3.3764

Apaydin Cirik, V., & Aksoy, B. (2020). Painful procedures experienced by preterm newborns and evidence-based non-pharmacological methods. International Journal of Emerging Trends in Health Sciences, 4(1), 27–35. https://doi.org/10.18844/ijeths

Ayllon T, Azrin NH. (1965). The measurement and reinforcement of behavior of psychotics. J Exp Anal Behav. 1965 Nov; 8(6): P.357–383

Bagila, S., Kok, A., Zhumabaeva, A., Suleimenova, Z., Riskulbekova, A., & Uaidullakyzy, E. (2019). Teaching Primary School Pupils Through Audio-Visual Means. *International Journal of Emerging Technologies in Learning (iJET)*, *14*(22), 122-140. https://www.learntechlib.org/p/217147/

Bayley, N. (1940). Studies in the development of young children. Berkeley: University of California Press", p. 95

Belinskaya, E., Martsinkovskaya, T., Orestova, V., Kiseleva, E., & Kriger, E. (2020). Dynamics of sociocultural and linguistic identity in the process of socialisation in a multicultural society. Global Journal of Sociology: Current Issues, 10(1), 15–22. https://doi.org/10.18844/gjs.v10i1.4752

Benjafield, John G. (2010). A History of Psychology: Third Edition. Don Mills, ON: Oxford University Press. P. 357–362.

Carolyn M. Evertson, (2006). Handbook of Classroom Management: Research Practice and Contemporary Issues. – Lawrence Erlbaum Associates, 2006, p.32

Ibatova, G., Makhmetova, A., Zhoraeyeva, S. B., Amiresheva, B., Tinibekovna, N. S., & Satova, A., (2022). The effect of game technology on the development of preschool children with speech disorders. *World Journal on Educational Technology: Current Issues*. *14*(1), 79-92. https://doi.org/10.18844/wjet.v14i1.6639

Celik, G. Y., & Yavuz, F. (2018). Integrating a process-based challenging lesson plan framework into the syllabus for gifted EFL learners. International Journal of Innovative Research in Education, 5(3), 62–73. https://doi.org/10.18844/ijire.v5i3.3951

Ciobanu, N. R. (2018). Language and language disorders. New Trends and Issues Proceedings on Humanities and Social Sciences, 5(1), 200–207. https://doi.org/10.18844/prosoc.v5i1.3473

Deacu, A., Kilyeni, S., & Barbulescu, C. (2018). Correction techniques for language disorders. International Journal of Learning and Teaching, 10(3), 292–299. https://doi.org/10.18844/ijlt.v10i3.1039

Farahani, M. V., & Kaleybar, N. M. (2019). Embracing an improved technique of analyzing Persian translations: A case study of waiting for Godot. International Journal of Current Innovations in Interdisiplinary Scientific Studies, 3(2), 16-27. https://un-pub.eu/ojs/index.php/IJ-CISS/article/view/5281

Hammoudi, K. . (2021). The urban Tlemcenian glottal stop in a prospective coma due to contact and accommodation: A cross-sectional investigation. International Journal of New Trends in Social Sciences, 5(1), 28–45. https://doi.org/10.18844/ijntss.v5i1.6104

Jacobson, R. (1960)., "Linguistics and Poetics", in T. Sebeok, ed., *Style in Language*, Cambridge, MA: M.I.T. Press, 1960, pp. 350-377.

Karanfil, F. (2020). Ethnography of communication: An analysis of Turkish education minister's speechon innovations. Global Journal of Foreign Language Teaching, 10(3), 191–197. https://doi.org/10.18844/gjflt.v10i3.5073

Karasheva, Z., Amirova, A., Ageyeva, L., Jazdykbayeva, M., Uaidullakyzy, E. (2021). Preparation of future specialists for the formation of educational communication skills for elementary school children. World Journal on Educational Technology: Current Issues, 2021, 13(3), стр. 467–484. https://www.un-pub.eu/ojs/index.php/wjet/article/view/5954

Lenneberg, E. (1967). Biological Foundations of Language. New York: John Wiley & Sons.- 1967.

Lilienfeld, S., Lynn, S. J., Namy, L., Woolf, N. (2010). Psychology: A Framework for Everyday Thinking, Pearson, P. 24–28

Lotman M. A (2000). Semiotic theory of Culture. Indiana University Press, 2000

Mohammed, A. B. (2020). Comparative analysis of clustering techniques in the internet of things. Global Journal of Information Technology: Emerging Technologies, 10(2), 106–112. https://doi.org/10.18844/gjit.v10i2.4746

Piaget, J. (1977). The role of action in the development of thinking. In Knowledge and development (P. 17–42). Springer US.

Rogers, C., Lyon, H., & Tausch, R. (2013). On becoming an effective teacher: Person-centered teaching, psychology, philosophy, and dialogues with Carl R. Rogers and Harold Lyon. Routledge. https://www.adpca.org/wp-content/uploads/2020/12/21_6.pdf

SaÄŸÄ±roÄŸlu, N., & Uzunboylu, H. (2018). Analysis of the published articles related to autism in Turkey: A model proposal for students: TÃ¼rkiyede yayÄ±nlanan otizimle ilgili makalelerin incelenmesi: Ã¶ÄŸrencilere yÃ¶nelik bir model Ã¶nerisi. International Journal of Special Education and Information Technologies, 4(1), 14–23. https://doi.org/10.18844/jeset.v4i1.4105

Shakhnarovich A.M. (1974). About problem of psychological and linguistic analysis of children's speech: Synopsis of dissertation for being a candidate of philological science.—N4., 1974.— 18 c.

Sokhin F.A.(2008). Psychological and pedagogical basics of speech development of preschoolers: Teaching manual, published by: Publishing House NPO MODEK, 2008

Tashkenbayevna, N., Kenesbaev, S. M., Zhailauova, M. K., Elmira, U., Nurzhanova, S. A., & Stambekova, A. S. (2018). Possibilities of the Subject 'Information and Communication Technologies' in Accustoming Primary School Students to Research Activities. *International Journal of Interactive Mobile Technologies (iJIM)*, *12*(6), 35-46. https://core.ac.uk/download/pdf/270196599.pdf

Vygotsky, L.S. (1932). Thought and Language Chapter 6: The Development of Scientific Concepts in Childhood.

Ibatova, G., Makhmetova, A., Zhoraeyeva, S. B., Amiresheva, B., Tinibekovna, N. S., & Satova, A., (2022). The effect of game technology on the development of preschool children with speech disorders. *World Journal on Educational Technology: Current Issues*. *14*(1), 79-92. https://doi.org/10.18844/wjet.v14i1.6639

Yesnazar, A., Japbarov, A., Zhorabekova, A., Nuralieva, A., Elmira U. (2020). Determination of primary school children's speech skills in interdisciplinary communication in learning environments. World Journal on Educational Technology: Current Issues, 2020, 12(4), стр. 373-388. https://www.un-pub.eu/ojs/index.php/wjet/article/view/5190

Zakopoulou, V., & G., G. (2016). Specific learning difficulties, delinquency and mental disorders: (Dis)abilities and ghosts. Global Journal of Psychology Research: New Trends and Issues, 6(1), 35–45. https://doi.org/10.18844/gjpr.v6i1.565

Zhinkin N.I. (1998). Language Speech. Creativity. — M.: Labirint, 1998. — 366 с.