Development of autonomous learning skills and the use of multimedia technologies in English classroom

In recent years, multimedia technologies have greatly influenced the conceptions of language teaching and learning, especially the change of the student and teacher’s roles. Consequently, today learners' autonomy is a high priority in the new education system. This study aims to investigate the effectiveness of multimedia technologies in developing students’ autonomy and functional literacy in reading in English classrooms. The data were collected through questionnaires and observation conducted with the teaching staff of rural schools. In addition, to understand teachers’ perspectives, experience, and practice a series of seminars were organized and conducted with the teaching staff. Teachers were encouraged to nurture their students' autonomy by creating reading tasks and uploading their materials on the multimedia learning platform during the practical part of the seminars. The findings of this study showed that using multimedia technologies can open a new path for fostering students' autonomous learning abilities as well as functional literacy. Furthermore, the seminars served as valuable forums for educators to exchange insights and best practices, fostering a collaborative environment conducive to pedagogical innovation. The findings underscored the importance of providing educators with ongoing support and resources to effectively integrate multimedia tools into their teaching practices.

Keywords: students’ autonomy, reading literacy, functional literacy, multimedia technologies, skills, learning platform, reading tasks, English classroom.

Introduction

Over the past decades, multimedia technologies used to develop students' autonomy have been considered a significant issue in the field of education. These technologies are regarded as a new teaching mode that provides access to a vast variety of information, enhances, and varies the learning process, enriches classroom activities, and increases students' interest and motivation in learning [1]. In recent years, new technologies have brought a revolution in foreign language teaching forcing teachers to adapt quickly to new pedagogical concepts and modes of delivery of teaching, whether they like it or not [2]. The use of multimedia technologies certainly ensures the continuity of the student learning process and curriculum delivery anywhere and anytime.

Nowadays reading literacy plays a crucial role in improving students’ functional literacy. Reading serves as the primary method for acquiring knowledge because it involves the comprehension and assimilation of vast quantities of written text. In addition, reading plays a vital role in English teaching and learning. According to PISA, reading is defined as the ability not just to understand, use, and reflect on written texts to achieve one's goals, but also to develop one's knowledge and potential, and to participate effectively in society. In other words, reading literacy is about our ability to analyze, interpret, and evaluate information taken from different sources whether they are newspaper articles, magazines, leaflets, or medicine instructions. Thus, reading literacy serves as the foundation for further academic achievement of students and contributes to their cognitive development and performance in other subject areas. In addition, according to international studies that assess reading literacy, Kazakhstani students showed relatively low results compared to the OECD average [3]. Therefore, it is important to cultivate students' reading literacy by emphasizing their active role in the learning process [4]. Raising students’ interest and motivation in reading through using multimedia modes is expected to bring great changes in students’ overall academic performance and learning autonomy.

Most international studies on reading skills have revealed that students struggle mostly with comprehending lengthy texts, dealing with abstract and counterintuitive concepts, and formulating conclusions [3]. These issues in turn have a significant impact on their further academic career, individual growth, and participation in most areas of their adult life. Moreover, one of the main tasks of the state in the field of education
is to reduce the gap in the results of Kazakhstani students in international studies based on PISA results [4]. Thus, it is necessary to consider how students’ learning autonomy in reading can be improved through multimedia technologies. Additionally, studies mostly concentrate on developing reading tasks and uploading them on multimedia platforms so students can train their elementary reading skills rather than advanced ones. However, according to the applied theoretical concept of this study, students produce knowledge and form meaning based on their previous experience. Therefore, this study also attempts to find out students’ reading skills development through the strategy-oriented multimedia program that considers students’ previous experience.

Moreover, according to cognitive and constructivist learning when students manipulate technology to improve their language competency, they assume self-responsibility [5]. In this way, multimedia technology can also assist language learners in developing their autonomy in the learning process. Thus, learners must have opportunities to improve their reading skills by using different learning strategies through multimedia technologies and reflecting on their learning process, which can in turn develop metacognitive skills to encourage their learning autonomy. Multimedia technology refers to a set of different content forms such as texts, audio materials, graphics, and animations or videos that help facilitate students’ learning and comprehension of different complex concepts. Groβ and Wolff [6] designed a multimedia program that is skill- and strategy-oriented and aimed to promote university students’ reading skills. However, their study seems to be short of qualitative analysis methods as interviews with teachers and students who can reflect on their experience of learning through developed multimedia tools. Siregar et al. developed a multimedia tool with the inquiry learning model to train elementary students’ reading skills [7]. They found that decoding plays an essential part in reading. Han [8] explored the advantages of multimedia-aided English reading instruction compared to traditional instruction and described the challenges in promoting the application of multimedia to English reading instruction. Given the drawbacks of the previous studies, this experimental study will attempt to examine in development of students’ autonomy in reading through the use of multimedia technologies in English lessons. Thus, developing a multimedia tool that is strategy-oriented and provides tasks organized according to pre-, while-, and post-reading stages will enable teachers to integrate various sources to teach students different reading strategies, namely, predicting, guessing the word meaning from context, highlighting, annotating the text and other.

Today traditional ideas about language teachers’ roles have changed due to the inevitable necessity for teaching students to become autonomous learners which has brought new perspectives to the teaching profession. Autonomous learning can be defined as occurring when teachers create an environment that allows learners to actively participate in their own learning process, empowering them to become self-directed learners [8]. A learner can take control and responsibility over one’s learning process. Additionally, autonomy in learning is associated with critical self-evaluation and self-determination of a student [9]. This means that learners act as the main characters who have to make all decisions and implement them in their learning. In other words, students act independently both cognitively and behaviorally. Moreover, learning autonomy refers to the capacity to take charge of one’s learning which includes planning, materials selection, self-assessment, and monitoring learning progress [10]. In its broadest sense, it is learners’ capacity to learners’ intervene in their learning process through critical reflection, decision-making, and independent actions [11]. In this way, studies on learning autonomy indicate that a learner's autonomy is about taking an active or proactive role in the learning process through choosing and setting learning goals, organizing, and carrying the learning process, and evaluating the extent and success of one’s learning.

There are two complementary views on learner autonomy about its aims and objectives: narrow and broad views of learner autonomy [11–13]. According to the narrow view of learner autonomy, it enables students to learn how to learn by equipping them with the necessary tools and training them to use appropriate strategies to achieve learning objectives. In contrast to this, the broad view treats learning autonomy as a means to an end, the end being learning to liberate. In addition to this, Kumaravadivelu [13] highlights the important points regarding what is not learning autonomy. The first point is that autonomy cannot be treated equally with independence as learners usually learn to work cooperatively with their teachers, peers, and the educational system. Additionally, autonomy is not context-free because it depends on factors such as learners’ personality and motivation, language learning needs and wants, and the educational environment. Autonomy is not about a steady state of students, depending on the situation students can be autonomous or not as at certain stages of their learning students prefer to look for teacher direction.

Terms like “capacity”, “self-evaluation”, “self-assessment” and others that the definition of learning autonomy includes emphasizing the importance of the individuality of each learner as their needs, skills, capac-
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ities, and ultimate achievements. That is why there are different forms of autonomy depending on the age of a learner, their level of knowledge and skills, learning progress, and other factors. According to Nunan’s autonomous language learning model regarding stages of development, there are five forms or levels of autonomy: awareness, involvement, intervention, creation, and transcendence [14]. This model is close to the stages of a learning process where learners at the awareness stage need to be aware of the pedagogical goals and content and identify preferred learning styles and strategies. At the next stage, students can choose among a variety of goals and select suitable tasks to perform. The intervention stage includes learners’ ability to modify and adapt the goals, tasks, and content. The creation stage is characterized by learners’ ability to create their objectives, goals, and tasks. Finally, students connect their knowledge gained at school with their real-life experiences.

In the context of Asia, autonomy is classified according to the Littlewood model into proactive and reactive [15]. Proactive autonomy includes students’ ability to set the direction of learning and monitor and self-evaluate their progress. On the other hand, reactive autonomy is viewed as a type of autonomy where students take charge of their learning after initial guidance has been provided. Students with reactive autonomy act independently by organizing resources and materials to achieve the goals suggested by a teacher. This classification confirms that some additional social and cultural constraints should be taken into consideration. Benson proposed a somewhat similar three-stage model consisting of autonomy as a communicator, as a learner, and as a person [16]. Language acquisition is about a person’s ability to communicate and interact successfully with other people in particular situations through the proper implementation of language strategies. Autonomy as a learner is about the ability to choose suitable strategies to participate in different learning activities whether it is outside or inside the classroom. In the online environment, 11 factors promote learning autonomy: access, facilitation, self-selection, a lack of face-to-face contact, media choices, peer learning and dialogue, peer review, negotiated learning activities, self-evaluation, performance evaluation, and reflection [17, 18]. It is clear from these classifications that learning autonomy can take different forms and include several stages as well as depend on cultural, social, and other additional factors.

Methods and materials

The purpose of the present article is to report on seminars aimed to provide English language teachers with methodological support on how to improve students’ reading skills effectively and develop their learning autonomy in reading through the use of multimedia technologies. During seminars teachers were provided with knowledge about international studies (such as PISA, TESOL, and PIRLS) and Kazakhstani students’ performance in reading, learning strategies, and types of tasks, as well as teachers were also involved in the practical part which includes designing reading tasks according to stages: pre-reading, while reading and post-reading. Teachers’ attitudes and reactions toward the seminar-long effort are reported here, along with requirements for other teachers to succeed in such an attempt themselves.

There were a total of 60 in-service teachers of English language with ages varying from 24 to 56 years old who participated in the seminars. Among them, 5 were males and 55 were females, they had between five and 20 years of experience in teaching English at schools. All the seminars were conducted in English.

All participants were informed about the study’s aim and objectives and completed a pre-training questionnaire. The questionnaire was designed to find out more about in-service teachers’ interests, experience, and needs. After this stage, teachers participated in 3 days of seminars to share their experience on reading literacy, teaching methods, and strategies in reading as well as creating reading tasks using multimedia technologies. In this way, in-service teachers were allowed to engage in developing and teaching reading gradually, step by step. Then, the post-questionnaire was distributed to teachers to know their opinions on the effectiveness of using multimedia technologies in the development of students’ autonomy in reading.

The seminar was designed based on the information collected in the pre-training questionnaire and included the following structure:

- Introduction on the importance of reading literacy in education via OECD videos;
- Introduction to a variety of reading tasks, reading strategies, and challenges students encounter while completing these tasks;
- Instruction on using multimedia technologies to enhance students’ reading literacy;
- Tips on creating tasks by students’ level.

To ensure that the seminar remained on topic all theoretical materials and practical activities were included in the workbook specifically designed for this seminar.
Results and Discussion

According to pre-training questionnaire results most of the participants were interested in learning more about methods and strategies in teaching reading skills (70 %), the implementation of the educational program and its peculiarities (50 %), reading literacy multimedia tools to enhance teaching and learning (40 %), the level of Kazakhstani students’ reading skills in PISA and PIRLS (20 %) and other (10 %) (Fig. 1). Among other responses were lesson planning, classroom management, assessment, differentiation, and communicative approach.

![Bar chart showing teachers' interests and expectations](image1)

Figure 1. Teachers' interests and expectations

In addition, only 15 % of these in-service teachers reported that they have taken professional development courses or training (Fig. 2). That is why it is crucial to provide methodological support for these teachers in terms of teaching and learning as well as using modern technologies in English classrooms.

![Bar chart showing teachers' professional development](image2)

Figure 2. Teachers' professional development

Other questions were related to teachers’ age, gender, and teaching experience. Around 50 teachers possess 0–5 years of teaching experience, while approximately 20 educators have 6–10 years of teaching experience (Fig. 3). Furthermore, only 10 teachers out of 60 possess a greater level of experience.
During seminars, in-service teachers worked according to the workbook written and designed by specialists of the Center of Educational Programs. This workbook contained theoretical materials for enhancing teachers’ understanding of reading literacy and providing them with practical tips, and strategies for teaching reading and developing students’ autonomy.

The final stage of seminars involved the creation of reading tasks by teachers in terms of different stages of reading: pre-reading, while-reading, and post-reading. Participants encountered a variety of challenges as working with multimedia tools, uploading their materials, adapting texts about students' levels, and others. While observing many experienced teachers lacked confidence in using multimedia technology as they used traditional ways of teaching.

After 3-day seminars, the effectiveness of created reading tasks was accessed through a survey conducted with teachers (Table). The findings of the following study indicated that 60 teachers, agreed 10 teachers (16.7 %) strongly agreed, 30 (50 %) teachers agreed, and 14 (23.3 %) teachers were neutral that the use of multimedia technologies to improve students’ reading skills and develop their learning autonomy in reading is effective. However, from the total number of 60 teachers, 10 teachers (16.7 %) strongly agree, and 26 (43.3 %) teachers agreed that designing such tasks as well as uploading them on the multimedia platform is quite time-consuming. Also, 6 teachers (10 %) strongly agreed, and 11 (18.3 %) teachers agreed that they experienced other challenges during implementation as access to the internet, technical problems, lack of confidence, and other problems.

Table

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<th>Teachers’ perceptions</th>
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Overall, the majority of in-service teachers state that using multimedia technologies to improve students’ reading literacy and autonomy can be a useful and effective way but on the other hand they suppose that it is time-consuming. Some teachers still experienced some problems connected to modern technologies and adaptation of authentic texts to their students’ language level.
Conclusions

The data from the findings revealed that teachers in rural areas are reluctant to use multimedia technologies in their classrooms. Most of them agreed on the effectiveness of designing and using such materials although the majority of participants highlighted problems with lacking experience and knowledge. Therefore, it is crucial to conduct further research on improving the reading skills of students from rural schools. Additionally, it will be helpful to find out about students' perspectives and attitudes toward multimedia technologies aimed to improve learners’ reading literacy and autonomy. From the findings of this study, it is suggested that in-service teachers from rural schools need additional methodological support before implementing strategies and designing tasks aimed at developing students' reading skills.

References


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Развитие навыков автономного обучения и использование мультимедийных средств на уроках английского языка

В последние годы мультимедийные технологии оказали значительное влияние на концепции преподавания языков, особенно на изменение роли ученика и учителя. Следовательно, сегодня автономия учащихся имеет первостепенное значение в новой системе образования. Целью данного исследования является изучение эффективности мультимедийных технологий в развитии самостоятельности учащихся и функциональной грамотности при чтении на уроках английского языка. Данные были собраны с помощью анкетирования и наблюдения, проведенного с преподавательским составом сельских школ. Кроме того, для понимания перспектив, опыта и практики учителей была организована и проведена серия семинаров с преподавательским составом. Во время практической части семинаров учителя имели возможность участвовать в создании заданий по развитию читательской грамотности и автономности учащихся и загрузке своих материалов на мультимедийную учебную платформу. Результаты этого исследования показывают, что использование мультимедийных технологий может открыть новый путь для развития автономных способностей учащихся к обучению, а также функциональной грамотности. Кроме того, семинары стали для преподавателей ценным местом для обмена идеями и передовым опытом, способствуя созданию атмосферы сотрудничества, необходимой для педагогических инноваций. Результаты подчеркнули важность обеспечения преподавателями постоянной поддержки и ресурсов для эффективной интеграции мультимедийных инструментов в их практику преподавания.

Ключевые слова: автономия, грамотность, функциональная грамотность, мультимедийные технологии, навыки, учебная платформа, задания по чтению, уроки английского языка.

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