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E-Learning: On the Issue of Organizational Effectiveness in the University Educational Process / E-learning: к вопросу эффективности организации образовательного процесса в вузе

Слепцова Марина Викторовна

ORCID: 0000-0001-5972-2874

кандидат педагогических наук

Начальник управления организации образовательной деятельности, Воронежский государственный педагогический университет

394043, Россия, Воронежская область, г. Воронеж, ул. Ленина, 86

79304014250@yandex.ru

Слепцова Надежда Александровна

ORCID: 0000-0001-8445-3944

студент, кафедра Общей физики, Воронежский государственный педагогический университет

394043, Россия, Воронежская область, г. Воронеж, ул. Ленина, 86

slepcovanadya03@yandex.ru

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Аннотация: Предметом исследования является количественная оценка эффективности образовательного процесса в форме E-learning относительно классических и дистанционных форм его организации на примере элективного курса «Физическая культура и спорт». Объектом исследования является новая форма организации

образовательного процесса в вузе – электронное обучение. Авторами рассматриваются особенности организации образовательного процесса в форме E-learning: постановка индивидуальной образовательной цели самим студентом, её формализация средствами виртуального образовательного пространства вуза, расчет индивидуальной образовательной траектории и её практическая реализация путем "проигрывания" студентом заданных педагогических ситуаций. Особое внимание уделено доказательству практической реализуемости в образовательном процессе основные положения известных педагогических концепций организации электронного обучения и получению количественных данных о реальной эффективности организации образовательного процесса в форме E-learning. Новизна проведенного авторами педагогического эксперимента заключается в том, что впервые элективный курс «Физическая культура и спорт» был в полном объеме реализован в форме электронного обучения, что позволило получить количественные значения параметров образовательного процесса (время достижения студентом индивидуальной образовательной цели, процент участников, гарантированно достигающих образовательной цели по отношению к общему количеству обучающихся и т.д.), доказывающих более высокую эффективность электронного обучения по сравнению с "классической" и "дистанционной" формами. Выявлен ряд негативных факторов, недостаточно освещаемых в теоретических исследованиях посвященных E-learning, но оказывающих серьезное влияние на эффективность образовательного процесса в указанной форме. Определены направления совершенствования образовательного процесса в форме E-learning для его реализации в образовательных учреждениях различного уровня.

Ключевые слова:

электронное обучение, педагогический эксперимент, индивидуальная образовательная цель, элективный курс, эффективность образовательного процесса, индивидуальная образовательная траектория, виртуальное образовательное пространство, педагогическая ситуация, образовательная ситуация, Всероссийский физкультурно-спортивный комплекс

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Introduction. "The scientific theory behind the learning process includes the development of such techniques and methods of organizing cognitive activity of students that ensure effective assimilation of knowledge and the development of skills and abilities" [1, p.67]. The search for new forms and methods of organizing educational activities has been conducted since the emergence of human society, but it has become especially relevant recently in the context of the digitalization of almost all areas of human activity [2–4]. "In developing and modernizing national educational systems, UNESCO assigns a key role to e-learning. E-learning technologies act as the most effective for minimizing the consequences of the education crisis, which consists in the formation of a completely new style of education" [5, p.85]. However, the practical application of e-learning technologies has not yet been adequately distributed in educational institutions at various levels. To date, only the general principles of building the educational e-learning process are known, as set out in the works of Andreev, A. A., Blinov, V. I. and Sleptsova M.V. [6–9]. However, no practically proven pedagogical technologies guarantee an increase in the effectiveness of the educational process at the university when organized in the form of e-learning. "The reasons point to a bias toward technical equipment and, as a result, insufficient

development of the theoretical and methodological foundations of e-learning" [5, p.89].

Thus, the development of pedagogical technology for the practical implementation of the provisions of the pedagogical concept of the organization of e-learning at a university and/or its individual elements, which allows to objectively prove a higher efficiency of the educational process in the form of e-learning compared to "classic," "distance learning," and other forms of organizing the educational process, is an urgent pedagogical problem.

Methodology (materials and methods). The organization of the educational process at a university in the form of e-learning has several fundamental differences compared to other well-known forms. Two points are essential for our further presentation. Firstly, the student's individual educational goal is set by themself individually; the state and society can adjust and control the individual educational goal, indirectly influencing it, but the prerogative of setting an individual educational goal belongs only to the student. Secondly, the individual educational trajectory of achieving the student's individual educational goal is calculated and placed in the virtual educational space of the university, where the place of "classic" forms of education (seminars, lectures, practical lessons) is occupied by the student's solution of pedagogical situations prepared by teachers, including using modern multimedia [10]. I.e., the individual educational trajectory has a set of graphs of the form A0?T1?A0=S1?S1?T2?.....?Tc?A0=Ak?Sk?Tc+1?..... Tp?A0=An?Sn?Tp+1?A0=A0, where A0 is the current educational situation from a set of educational situations A0={A0, A1, A2, ... A0}, reflecting the level of formation and development of the student's basic qualities and competence corresponding to the educational goal at a given time. 0 is the target educational situation, and -1 and -2 are intermediate educational situations. It should be noted that intermediate educational situations -1, -2, ... Nn are formed in advance by technical means of implementing e-learning based on the target educational situation 0, and the current educational situation 0 is formed by the results of the student's performance of test tasks Ti. That is, "A0={Y} where Y={Y1, Y2, ..., Yi} is a set of student competencies, the formation of which the student must have to achieve an individual target educational situation A0" [11, p.301]. Strictly speaking, the target educational situation 0 is a formalized model of the student's individual educational goal. At the same time, as shown in the works of Andryushchenko, L. B., Nicolini, A., Santos, C., May, D. & and Sleptsova M., the target educational situation may include basic qualities and competencies displayed not only on "quantitative" but also on "qualitative" scales [12, 13, 14, 15]. However, taking into account the basic qualities and competencies displayed on the "qualitative" scales is a very difficult multiparametric task. Therefore, we will limit ourselves to considering only those basic qualities and competencies, the level of formation and development the student displays on "quantitative" scales. In this case, the target educational situation 0 becomes a strict mathematical model of the student's individual educational goal, which greatly simplifies both the construction of an individual educational trajectory to achieve it and the assessment of the effectiveness of the relevant educational process. This approach is most consistent with comparing the effectiveness of the educational process using the example of the course "Physical Culture and Sports."

This approach allows for a wide-based pedagogical experiment involving students of various levels and fields of study, as well as educational institutions of different levels. Then there are many educational situations, A={A0, A1, A2, ...A0}, each of which is a set of Yi={Y0, Y1, Y2,....Yn} corresponding, in our case, only to a set of basic physical parameters of the student's body, i.e., Yi ={y0, y1, y2, ...yn}, where, for example, y0 is the weight of the student, y2 is the number of contractions of the heart muscle per minute, y3 is the number

of push-ups from the prone position, etc. Ti is a test task from a set of test tasks T={T0, T1, T2, ...Tp}, prepared in advance by the teaching staff of the corresponding department of the university, according to the results of which the student's current educational situation is determined. Then, the situation in the educational space is determined using mathematical methods. -2, ... -n}, the degree of correspondence of which with the current educational situation is maximum, i.e., -0=-i. Further, we believe that the student is in an educational situation, and to transfer them to the target educational situation, 0 in accordance with the individual educational trajectory, 0=Ai?Si?Ti+1?..... Tp?0=Nn?Sn? Tp+1?0=0, asking them to perform a pedagogical situation Si from a set of pre-designed pedagogical situations S={S1, S2, ... Sn} is necessary. It should be emphasized here that when organizing the educational process in the form of e-learning, the students' physical parameters are measured and controlled remotely using microprocessor technology. Based on the data obtained, the student's current educational situation is also determined by computer technology, and the following pedagogical situation is selected for the student to perform, which determines the direction and speed of the educational process for a particular student. The individual educational trajectory has not only a linear structure but also includes feedback, which is shown, for example, in the work of D. A. Aldunin [16].

Accordingly, the way training sessions are conducted is also changing. The main one for e-learning is the student's fulfillment of the pedagogical situation S={S1, S2, ... Sn}[17]. According to the basic provisions of the situational approach to the organization of the educational process at university, the pedagogical situation is defined as "a system of conditions designed by the teacher, encouraging and mediating the activity of the student in a social and subject context" [17, p.106]. S.Yu. Temina clarifies: "The resolution of the pedagogical situation is reduced to solving a pedagogical task, in the process of which it turns out pedagogical influence on students with certain educational goals" [18, p.43]. The difference between the pedagogical situation and other forms of teaching is also considered in detail by E. L. Rudneva, O. N. Tkacheva, and N. A. Shmyreva [19].

Using the results of these scientific studies, an elective course, "Physical Culture and Sport," in the form of e-learning was created in the electronic educational space of the Federal State Budgetary Educational Institution of Higher Education "Voronezh State Pedagogical University" and a pedagogical experiment was conducted to determine its effectiveness. We determined the efficacy of the elective e-learning course regarding the achievement of the student's individual educational goal, as the criteria of the VFSK TRP were used [20]. Among the students of all courses and areas of study at the Voronezh State Pedagogical University, 246 volunteers were selected and divided into three groups: "classic," "remote," and "electronic." The experiment was conducted in the 2021/2022 academic year. For students of the "classic" group, training sessions on the elective course "Physical Culture and Sports" were conducted per the schedule of training sessions on the basis of the Voronezh State Pedagogical University under the guidance of the university's teaching staff. The individual educational goal of the student was determined empirically by the teacher. However, no restrictions were laid down in the pedagogical experiment for all participants of the experiment included in the "classic" group; only the standards of the "golden badge" of the VFSK TRP were established as an individual educational goal[20]. For students of the "remote" group, training sessions on the elective course were conducted per the schedule under the guidance of the university's teaching staff, using modern technical means of communication. Accordingly, students had the opportunity to individually study anywhere, at any sports facility that met the requirements for the educational platform of the elective course. The teacher also empirically determined the student's individual

educational goal. However, the opinion of the student played a much more significant role. For the most part, namely 54.88% of cases, the individual educational goal of the student corresponded to the standards of the "golden badge" of the VFSK TRP, 42.68% of cases—to the standards of the "silver badge" of the VFSK TRP, 2.44% of cases—to the standards of the "bronze badge" of the VFSK TRP. Based on the basic provisions of the e-learning organization at the university, the students of the "electronic" group independently determined their individual educational goals. Still, it was strictly fixed at the beginning of each student's participation in the pedagogical experiment.

As a result, for the most part, namely 54.88% of cases, the student's individual educational goal corresponded to the standards of the "golden badge" of the VFSK TRP, 42.68% of cases—to the standards of the "silver badge" of the VFSK TRP, 2.44% of cases—to the standards of the "bronze badge" of the VFSK TRP. By the basic provisions of the e-learning organization at the university, for students of the "electronic" group, the individual educational goal was determined by the students independently. Still, it was strictly fixed at the beginning of each student's participation in the pedagogical experiment. As a result, only 7.32% of students participating in the pedagogical experiment as part of the "electronic" group designated their individual educational goal as achieving the standards of the "golden" badge of the VFSK TRP, 32.93% of students and 59.76% of students identified a separate educational goal as achieving the standards of the "silver" badge of the VFSK TRP, the bronze" badge of the VFSK TRP. During the 2021/2022 academic year, the experiment participants participated in the educational process, fulfilled the tasks and requirements of teachers or control solutions generated by computer systems for students of the "electronic" group, and completed test tasks.

The results of the study. The results of the conducted pedagogical experiment comparing the effectiveness of the organization of the educational process in the form of e-learning relative to the "classic" and "remote" forms of its organization with the example of the elective course "Physical Culture and Sports" are shown in Table 1.

Table 1.

Comparative table of the effectiveness of the organization of the educational process

The form of organization of the educational process	"Bronze Badge"	"Silver Badge"	"Golden Badge"	Note
Individual educational goal. Delivered/achieved in % of the number of participants				
"Classic"	0 / 37,80	0 / 43,90	100 / 17,65	
"Remote"	2,44 / 25,61	42,68 / 51,22	54,88 / 23,17	
"Electronic"	59,76% / 9,75	32,93% / 59,76	7,32% / 24,39	6.1% of participants did not reach the goal

It should immediately be noted that there is a significant difference in the levels of individual educational goals set in different groups of participants in the pedagogical experiment. If in the "classic" group for each student, the maximum possible quantitative values of the parameters of an individual educational goal are immediately set, then in the "electronic," when setting an individual educational goal, the minimum possible, or rather

guaranteed achievable with minimal effort, values are set. This conclusion allows us to draw statistics on the implementation of the educational process schedule. The attendance of classes among the participants of the "classic" group for the 2021/2022 academic year averaged 82.6%. The same indicator among the participants of the "distance" group for the 2021/2022 academic year averaged 79.4%. However, in the case of 100% attendance of classes, none of the participants of the "classic" and "distance" groups was recorded. A different result was obtained by technical means of objective control over the work of students in the "electronic" group. Nine students out of 82 group members strictly followed the individual educational trajectory, which can be considered 100% attendance of classes. Twenty-two students from among the "electronic" group participants followed an individual educational trajectory with an error of up to 15%. The rest of the participants allowed a significant deviation from the schedule, and five people stopped participating in the pedagogical experiment altogether. Thus, the indicator of discipline in the implementation of the schedule of the individual educational trajectory, in our case, was the same indicator of attendance in the "classic" and "distance" groups, which was only 37.8%.

Nevertheless, according to the 2021/2022 academic year results, 76 out of 82 students, or 92.7% of the participants of the "electronic" group, achieved or exceeded their individual educational goals. When organizing the educational process in the "classic" form, the number of participants who completed an individual educational goal was only 17.65%. Accordingly, when organizing the educational process in a "remote" form, the number of participants who achieved an individual educational goal is 31.71%.

According to G.B. Kornetov's generally accepted definition, "In a broad sense, effectiveness is determined by the degree to which goals are achieved" [21, p.4]. Based on the results obtained, it can be concluded that the effectiveness of the educational process in the form of e-learning is much greater, one can say overwhelming, in relation to the "classic" and "distance" forms of its organization.

However, a detailed analysis of the results shows that out of 164 students who took part in the pedagogical experiment as part of the "classic" and "distance" groups, 27 students fulfilled the standards of the "golden badge" of the VFSK TRP, 53 students fulfilled the standards of the "silver badge" of the VFSK TRP, 84 students fulfilled the standards of the "bronze badge" of the VFSK TRP. At the same time, no participants fulfilled the standards of the VFSK TRP. That is, all 100% of the participants in the pedagogical experiment achieved the minimum quantitative indicators of the individual educational goal.

Having analyzed the results according to various criteria, we can assert that the effectiveness of various forms of organizing the educational process significantly depends on the individual educational goal and the student's desire to achieve it. For example, by making a sample only among students of the "electronic" group who did not allow deviations from the individual educational trajectory, we get a significant excess of the efficiency indicators of the organization of the educational process in the form of e-learning relative to other forms of its organization. Such results are achieved, among other things, by the available e-learning capabilities for organizing classes around the clock, at a time convenient for the student, adapting the educational process to changes in the controlled biological parameters of the student's body, and a high degree of variability in the individual educational trajectory. However, the data obtained during the pedagogical experiment cannot confirm the higher efficiency of the organization of the educational process in the form of e-learning in other conditions.

Conclusion. The conducted pedagogical experiment showed the relevance of e-learning as a

form of organizing the educational process among students, as well as "a high need to update the information component of FC, so 45% of students supported the study of mobile health and FC applications, 36.7% emphasized the need to improve digital communication services with teachers" [22, p. 47]. At the same time, the results of scientific research show that the effectiveness of the educational process in the form of e-learning is not always higher than the "classic" forms of its organization [23]. More in-depth scientific research is needed so that "e-learning becomes almost ubiquitous" [24, p. 12].

Библиография

1. Цифровая образовательная среда по физической культуре и спорту в вузе / Н. Ю. Сурова, Т. Н. Шутова, Л. Б. Андрющенко, А. Г. Ростеванов // Теория и практика физической культуры. – 2021. – № 1. – С. 47-49. – EDN HBMQOR.
2. Корнетов, Г. Б. Что такое эффективность образования? // Школьные технологии. – 2020. – № 4. – С. 3-14. – EDN TORZTF.
3. Темина, С. Ю. Различные подходы к трактовке и разрешению педагогических ситуаций // Известия Волгоградского государственного педагогического университета. – 2009. – № 4(38). – С. 42-46. – EDN KVJQUX.
4. Руднева, Е. Л. Педагогические задачи и ситуации как средство профессиональной подготовки будущих педагогов / Е. Л. Руднева, О. Н. Ткачева, Н. А. Шмырева // Сибирский педагогический журнал. – 2010. – № 2. – С. 50-58. – EDN PEULGN.
5. Бабина, А.А. Основы высшего профессионального образования: подготовка к ВФСК ГТО («Готов к труду и обороне»): учебное пособие; Министерство науки и высшего образования Российской Федерации, Федеральное государственное бюджетное образовательное учреждение высшего образования "Тюменский индустриальный университет". Тюмень: ТИУ, 2020. – 134 с.
6. Донскова, Е. В. Профессионально ориентированные ситуации в педагогическом образовании: сущность, проектирование, реализация // Дискуссия. – 2014. – № 9(50). – С. 105-110. – EDN SXTOPZ.
7. Алдунин, Д. А. Математическая модель для построения оптимальной индивидуальной образовательной траектории обучающегося при изучении массовых открытых онлайн-курсов / Д. А. Алдунин, Г. Г. Федин // Информационные технологии. – 2019. – Т. 25. – № 4. – С. 250-256. – DOI: 10.17587/it.25.250-256. – EDN CBWZLS.
8. Sleptsova M. Formation of students' social competence in a virtual educational environment // Education and Information Technologies. – 2018. – №24. – С. 743-754. – DOI: 10.1007/s10639-018-9798-z.
9. Nicolini A. Using Competence Modeling to create Knowledge Engineering / A. Nicolini, C. Santos, H. Hoeschl, I. Theiss, T. Bueno// Professional Practice in Artificial Intelligence. IFIP WCC TC12 2006. IFIP International Federation for Information Processing, vol 218. Springer, Boston, MA. – DOI: 10.1007/978-0-387-34749-3_16.
10. May D. ModellING Competences – Developing a Holistic Competence Model for Engineering Education / D. May, P. Ossendorf // Engineering Education 4.0. Springer, Cham. – DOI: 10.1007/978-3-319-46916-4_72.
11. Student's educational goal and formalization of its representation in E-learning / L. B. Andryushchenko, S. I. Filimonova, M. V. Sleptsova [et al.] // Journal of Physics: Conference Series, Krasnoyarsk, 08–09 октября 2020 года / Krasnoyarsk Science and Technology City Hall. – Krasnoyarsk, Russian Federation: IOP Publishing Limited, 2020. – P. 12082. – DOI: 10.1088/1742-6596/1691/1/012082. – EDN RDIVJJ.
12. Филимонова, С. И. Образовательная среда подготовки студентов к сдаче нормативов ВФСК ГТО / С. И. Филимонова, Ю. Б. Алмазова, М. В. Слепцова // Актуальные проблемы, современные тенденции развития физической культуры и спорта с учетом реализации

национальных проектов : Материалы Всероссийской научно-практической конференции с международным участием, Москва, 19–20 мая 2020 года / Под научной редакцией Л.Б. Андрющенко, С.И. Филимоновой. – Москва: РЭУ, 2020. – С. 300-307. – EDN GXKXDD.
13. Педагогическая концепция цифрового профессионального образования и обучения: монография / В. И. Блинов, П. Н. Биленко, М. В. Дулинов [и др.]. – Москва: Московский городской педагогический университет, 2020. – 112 с. – ISBN 978-5-85006-240-8. – EDN NTHVBX.
14. Слепцова, М. В. Физическая культура в E-learning / М. В. Слепцова, Н. А. Слепцова // Физическое воспитание и студенческий спорт. – 2022. – Т. 1. – № 2. – С. 189-198. – DOI: 10.18500/2782-4594-2022-1-2-189-198. – EDN CKQHCK.
15. Шевченко, О. И. Методы и формы обучения студентов / О. И. Шевченко, М. А. Волков, А. С. Приставка // Международный журнал гуманитарных и естественных наук. – 2018. – № 5-1. – С. 106-112. – EDN USIWTP.
16. Андреев, А. А. Педагогика в информационном обществе, или электронная педагогика // Высшее образование в России. – 2011. – № 11. – С. 113-117. – EDN OJLRPD.
17. Инновационные педагогические технологии и стратегии в высшем профессиональном образовании / М. В. Берсенев, Ю. В. Богинская, Н. В. Горбунова [и др.]. – Симферополь: Общество с ограниченной ответственностью «Издательство Типография «Ариал», 2022. – 224 с. – ISBN 978-5-907587-49-6. – EDN NALCGS.
18. Назаров, А. Д. Цифровое образование: новые вызовы // Московский экономический журнал. – 2020. – № 8. – С. 36. – DOI: 10.24411/2413-046X-2020-10542. – EDN FBYKZA.
19. Сергачева, Е. В. Электронное обучение (e-learning) и его роль в современном образовании // Образование. Наука. Инновации: Южное измерение. – 2018. – № 2(48). – С. 84-92. – EDN YXSCTZ.
20. Лукашенко, Д. В. Цифровое образование-образование 4.0: технологии в образовании и критерии оценки // Естественные и технические науки. – 2020. – № 12(150). – С. 216-217. – EDN ZUXVTV.
21. Скляр, М. А. Цифровизация: основные направления, преимущества и риски / М. А. Скляр, К. В. Кудрявцева // Экономическое возрождение России. – 2019. – № 3(61). – С. 103-114. – EDN BAWPJQ.
22. Кузьмина, Н. А. Эффективность процесса обучения и учения // Теория и практика общественного развития. – 2013. – № 12. – С. 67. – EDN RRUDDJ.
23. Диденко, А. В. Оценка эффективности внедрения e-learning / А. В. Диденко, Н. В. Аксенова // Профессиональное образование в России и за рубежом. – 2015. – № 1(17). – С. 91-96. – EDN TUHFFD.
24. Махов, С. Ю. Электронное обучение (e-learning) в сфере физической культуры и спорта // Наука-2020. – 2016. – № 3(9). – С. 3-13. – EDN YUQVSF.

Результаты процедуры рецензирования статьи

В связи с политикой двойного слепого рецензирования личность рецензента не раскрывается.
Со списком рецензентов издательства можно ознакомиться здесь.

На рецензирование представлена работа «E-learning: к вопросу эффективности организации образовательного процесса в вузе».
Предмет исследования. В качестве предмета, как следует из названия работы, являются E-learning технологии и их использование в практике образовательного процесса вуза. Предмет представлен корректно. Поставленные автором цели и задачи были решены.
Методология исследования. Методологией являются работы зарубежных и

отечественных исследователей. Проведенный анализ научных исследований позволил создать в форме E-Learning в ФГБОУ ВО «Воронежский государственный педагогический университет» электронный курс «Физическая культура и спорт». Автором был проведен педагогический эксперимент, позволяющий определить ее эффективность.

Актуальность. Актуальность затронутой проблемы в работе обосновывается с нескольких позиций. С одной стороны, нахождение новых форм и методов организации образовательной деятельности в условиях цифровизации практически всех направлений человеческой деятельности E-learning технологии становятся более эффективными. С другой стороны, использование технологий электронного обучения недостаточно распространилось в образовательных учреждениях, а проверенные образовательные технологии отсутствуют. Поэтому справедливо отмечает автор, что разработка педагогической технологии практической реализации положений педагогической концепции организации электронного обучения в вузе и/или её отдельных элементов, позволяющих объективно доказать более высокую эффективность образовательного процесса в форме E-learning по сравнению с «классической», «дистанционной» и иными формами организации образовательного процесса, является актуальной педагогической проблемой.

Научная новизна. Запланированное исследование интересно как с теоретической, так и с практической точки зрения. Автором было показано, что эффективность различных форм организации образовательного процесса существенно зависит от индивидуальной образовательной цели и личного стремления студента к ее достижению. Рекомендуется в выводах определить личный вклад автора в решение поставленной проблемы.

Стиль, структура, содержание. Стиль изложения соответствует публикациям такого уровня. Язык изложения научный.

Структура работы четко прослеживается. Во введении описана актуальность, поставлена проблема и цель; методология содержит краткий анализ проведенных исследований, описаны материалы и методы. Результаты исследования содержать количественный и качественный анализ. В кратком заключении представлены небольшие выводы.

Библиография. Библиография статьи включает в себя 24 отечественных и зарубежных источника, значительная часть которых издана за последние три года. Проблематика работ соответствует тематике статьи. В библиографии представлены как научно-исследовательские статьи, монографии, и автореферат диссертации, так и учебное пособие. Источники литературы оформлены однородно, имеются некоторое несоответствие. Но, в целом, библиографический список оформлен корректно, предъявляемые требования в основном были учтены.

Апелляция к оппонентам. В научной работе рекомендуется более подробно расписать проведенное исследование, выделив имеющиеся закономерности и взаимосвязи.

Выводы. Статья отличается несомненной актуальностью, теоретической и практической ценностью, будет интересна научному сообществу. Работа может быть рекомендована к опубликованию.