

*Student Points of View – Pedagogical,
Psychological, Social and Technical Issues*

ANALYSIS OF THE OPINION OF THE STUDENTS FROM THE NATIONAL SPORTS ACADEMY ABOUT THE DISTANCE LEARNING IN BASKETBALL IN THE CONDITIONS OF COVID-19 PANDEMIC

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Abstract. According to the declared state of emergency and lockdown in Bulgaria and in the world due to the pandemic of COVID-19, the last two months of the summer semester of the academic year 2019/2020 students from the National Sports Academy “Vassil Levski” (NSA) continued their education from a distance through the e-learning platform of the Academy, in which educational materials for the different disciplines were uploaded. The aim of this study is to examine the opinion of first-year students of NSA about the distance learning in basketball, which under normal circumstances is conducted in the hall. The study also aims to make a comparative analysis of the percentage of the answers received by the criteria: faculty (Sports and Pedagogy) and gender.

Research methodology: the students were provided with a questionnaire containing 14 questions. The survey was anonymous and not mandatory. It was completed by 106 students (53 men and 53 women) from the first year of the Faculty of Sports and the Faculty of Pedagogy. To achieve the aims of the study, the following methods were applied: a review of the specialized literature and conducting a survey.

Mathematical-statistical methods: the results were processed with SPSS 23, using frequency analysis by one-dimensional and two-dimensional frequency distribution, and comparison of the distribution of features with Pearson's χ^2 criterion.

Keywords: asynchronous learning; faculty of Sports; faculty of Pedagogy; gender

Introduction

Distance learning is an area of education that aims to provide training to participants who are not physically at a particular location. In general, distance learning could be described as learning in which learners are in a different place from the teacher and communicate with each other through a computer or other means of communication. Hill, in his 1997 paper (Hill,1997), describes the process that enables teachers and learners to communicate at a time convenient to them through paper or electronic media,

or through technology that allows them to communicate in real time. According to Hill, 1997 the Distance learning is guidance through print or electronic media to a person who is learning in a different place and time than that of teachers or other learners. In the same year, Willis and Dickinson describe the process and state that “Distance learning occurs when the teacher and learners are physically separated and when technology (sound, picture, print, etc.), often in combination with direct communication, is used to make a connection between the two parties”. (Willis & Dickinson, 1997).

Mielke (1999) defines distance learning as “a method of learning in which the learner is physically separated from the teacher and the institution.” This method can be applied alone or in combination with other forms of learning, including the traditional way of learning person in face-to-face instruction.

The types of available technologies used in distance learning are divided into two groups: synchronous and asynchronous. Synchronous technologies are in online delivery mode, where all participants are online at the same time. To organize them requires a schedule and the creation of virtual classrooms. Asynchronous technologies are in online delivery mode, where participants use course materials according to their own schedule. Students are not required to be together at the same time. However, this requires the availability of accessible, comprehensive and up-to-date teaching materials in the studied disciplines.

With the declaration of a state of emergency and lockdown in Bulgaria on March 13, 2020, for the first time in its 78-year history, NSA “Vassil Levski” the educational process became entirely online. All students received access to study materials in the online system for distance learning of NSA – virtual.nsa.bg – 24 hours a day, 7 days a week. Through the distance learning system, students gain access to e-textbooks, interactive learning materials, course assignments, self-preparation tests and exams in the disciplines they study. The system provides an opportunity for interactive connection between the teachers and students through modern means of communication on the Internet. The system provides an opportunity to teach students in real time, from anywhere in the world, at a time and place convenient for them. A quick and easy way to provide, receive and discuss information related to the learning process. The system offers asynchronous distance learning.

In the first year the subject “Basketball” is studied by students from the Faculty of Pedagogy and the Faculty of Sports during the summer semester. The curriculum includes 14 practical exercises, 5 lectures for the Faculty of Sports and 2 lectures for the Faculty of Pedagogy. As a sport for the full-time learning process, classes are held with each group once a week in the basketball hall. At the time of the study, the content of the teaching materials had to be maximally adapted to the asynchronous form of distance learning. In this regard, very detailed descriptions, explanatory diagrams and links for video materials corresponding to the study material were included. (Borukova et al., 2020).

The aim of this study is to examine the opinion of first-year students of NSA about the distance learning in basketball, which under normal circumstances is conducted

in the hall. The study also aims to make a comparative analysis of the percentage of the answers received by the criteria: faculty (Sports and Pedagogy) and gender.

Methodology

In the period from April 15 to June 7, 2020, in the distance learning platform of NSA “Vassil Levski” all first-year students were provided with a questionnaire of 14 questions, which was anonymous and not mandatory. 106 students (53 men and 53 women) studying at both NSA faculties responded to the survey voluntarily. To achieve the set goal of the research, the following methods have been applied: a review study of the specialized literature and a survey with a questionnaire.

Mathematical-statistical methods: the results were processed with SPSS 23, using frequency analysis by one-dimensional and two-dimensional frequency distribution, and comparison of the distribution of features with Pearson's χ^2 criterion.

Results and analysis

106 first-year students from the two faculties of Sport and Pedagogy were studied, of which 50% are women and men. Students from the Faculty of Sports have shown greater interest and activity in the study and are 80.2%, while those from the Faculty of Pedagogy are only 19.8%. The answers of the students in the

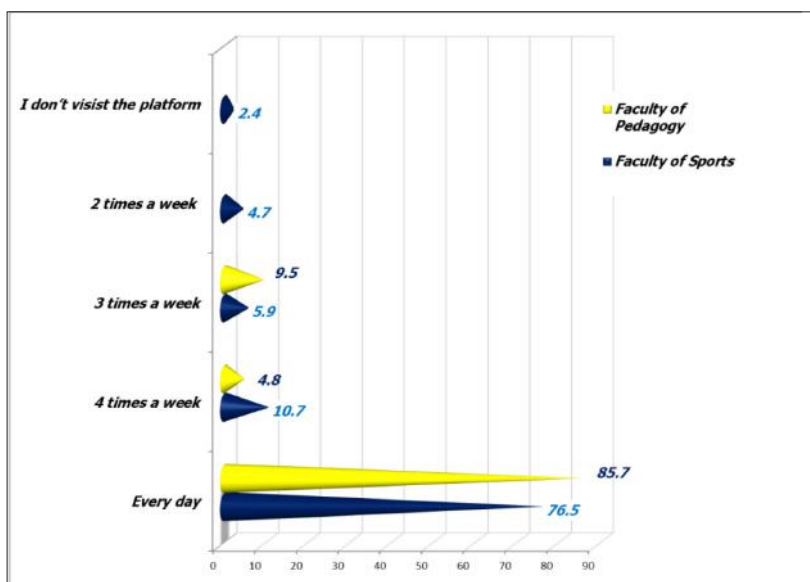


Figure 1. Comparative analysis on the indicator “Faculty” of the students' answers to the question “How many times a week do you enter the distance learning platform to check for new information?”

survey presented in Figure 1 show that the students who visit the platform every day were 85.7% from the Faculty of Pedagogy and 76.5% from the Faculty of Sports, 4 and 3 times a week is the additional percentage. By gender, these are 88.6% of the men and all 100% of the women.

Figure 2 presents the answers to the questions: “Do you find it easy to navigate in the platform with uploaded materials on different subjects?” and “Do you approve the way the basketball materials were presented to you?”. Students from both faculties find their way very easily in the platform with the uploaded materials in the various educational subjects. This is confirmed by the percentage of responses of students from the Faculty of Sports (83.5%) and those from the Faculty of Pedagogy, which are 81%. A very small percentage of the answers of the students from both faculties either cannot orient themselves or cannot make such an assessment on the issue. Women find it easier to find their way around the materials presented in the various disciplines in the platform – 81.1%, while for men the percentage is 60.4% (Figure 2).

In answering the question “Do you approve the way the basketball materials were presented to you?” very close values could be also observed. 71.4% of the students from the Faculty of Sports and 70.6% of the students from the Faculty of

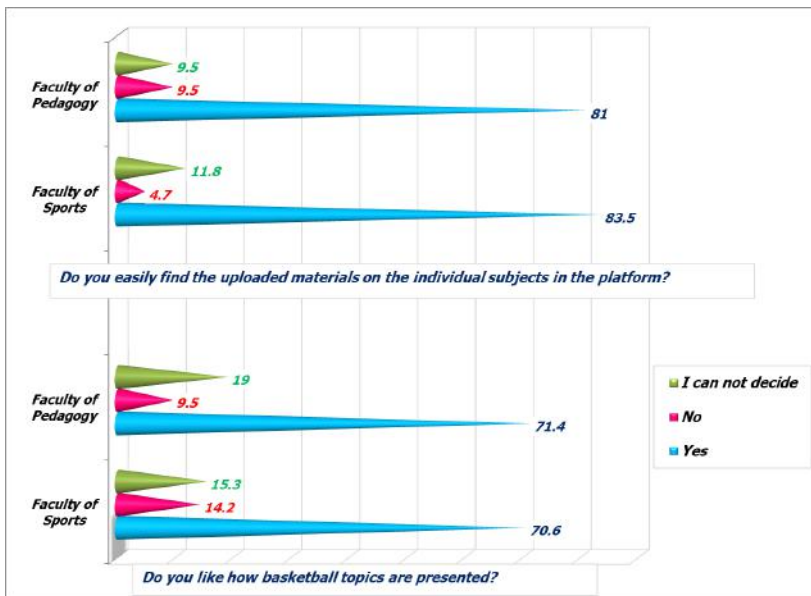


Figure 2. Comparative analysis by the “Faculty” of the students' answers to the questions “Do you find it easy to navigate in the platform with uploaded materials on different subjects?” and “Do you approve the way the basketball materials were presented to you?”

Pedagogy gave a positive answer. The answers to these two questions show that for first-year students it is not a problem to work with the distance learning platform, and specifically the uploaded adapted basketball teaching materials were well presented.

When analyzing the results, the answers received were on the question “*When you read the basketball teaching materials, do you visit the attached links to the lessons?*” were very interesting. The percentage and comparative analysis of the answers is presented in Figure 3. In the analysis of the Figure it becomes clear that 76.5% of students from the Faculty of Pedagogy always visit the links, and those from the Faculty of Sports were 64.7%. Unfortunately, 31.8% of the Faculty of Sports and 19% of the Faculty of Pedagogy did this only if the topic they were interested in was interesting, the remaining small percentage did not visit the links for better visualization of the material and additional information.

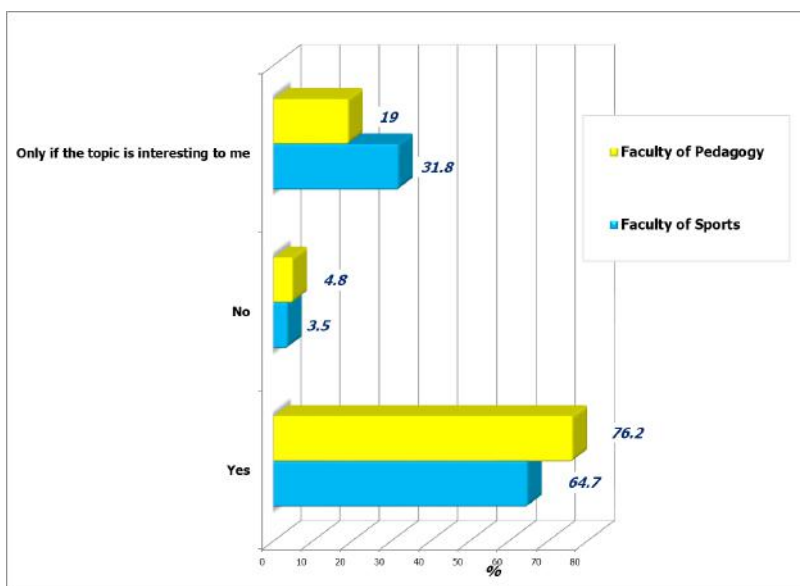


Figure 3. Percentage distribution of the answers by faculty to the question “*When you read the basketball teaching materials, do you visit the attached links to the lessons?*”

It was important for us to understand: “*What do you like about distance learning?*” and an opportunity for more than one answer was provided. The distribution of responses is presented in Figure 4. The analysis of the figure shows that almost all students prefer distance learning because they can study at a time convenient for them. For 90.5% of the students from the Faculty of Pedagogy this is good, because they can make their own schedule of classes, while those from

the Faculty of Sports were 68.2%. A good attestation for the materials developed by the lecturers is that the students from both faculties consider that they have comprehensive and accessible study material (41.2% Faculty of Sport and 38.1% Faculty of Pedagogy). For 16.5% of the students from the Faculty of Sports and 9.5% of the Faculty of Pedagogy, it is important that none of their colleagues from the study group bothers them.

Regarding the gender factor, the percentage distribution of responses is approximately the same as those by faculty.

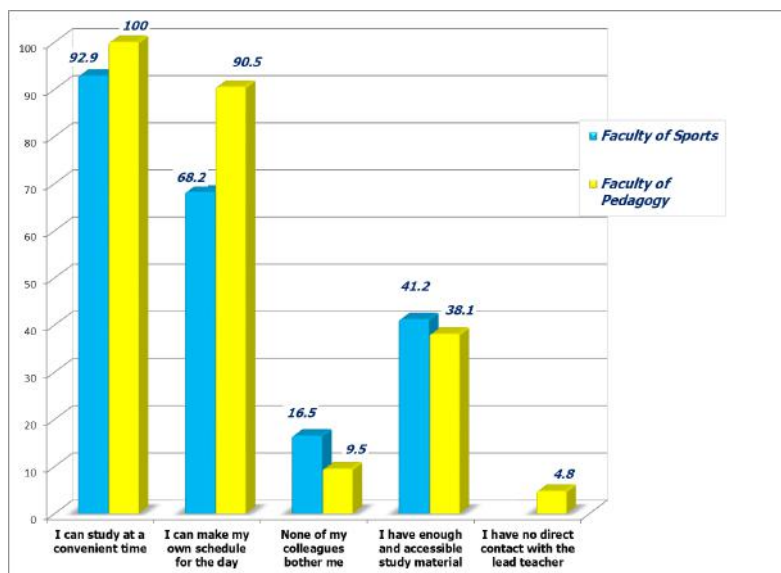


Figure 4. Percentage and comparative analysis by the Faculty of students' answers to the question “What do you like about distance learning?”

We considered it important to ask the students the question “*What do you dislike about distance learning?*” And again, provided the opportunity for more than one answer. The analysis of Figure 5 shows that what students from both faculties do not like the most (Faculty of Sport –78.8% and Faculty of Pedagogy – 85.7%) is that they cannot play basketball in class. For 76.2% of the students from Faculty of Pedagogy it is unacceptable that they are not with their study group, while this percent for the student from the Faculty of Sports is only 45.9%. The students from the Faculty of Pedagogy do not approve of the fact that there is no leading (main) lecturer - 66.7%, while for the students from the Faculty of Sports this percent is only 49.4%. Students from both faculties have difficulties in understanding the presented study material. These were 42.9% of the students from the Faculty of

Pedagogy and 32.9% from the students from the Faculty of Sports. 29.4% of the students from the Faculty of Sports and 23.8% of the students from the Faculty of Pedagogy have questions that they do not know who to ask, and almost 10% of both faculties do not like to study online at all.

And for these answers with respect to the gender factor, the percentage distribution of the individual answers is approximately the same as those for the faculty factor.

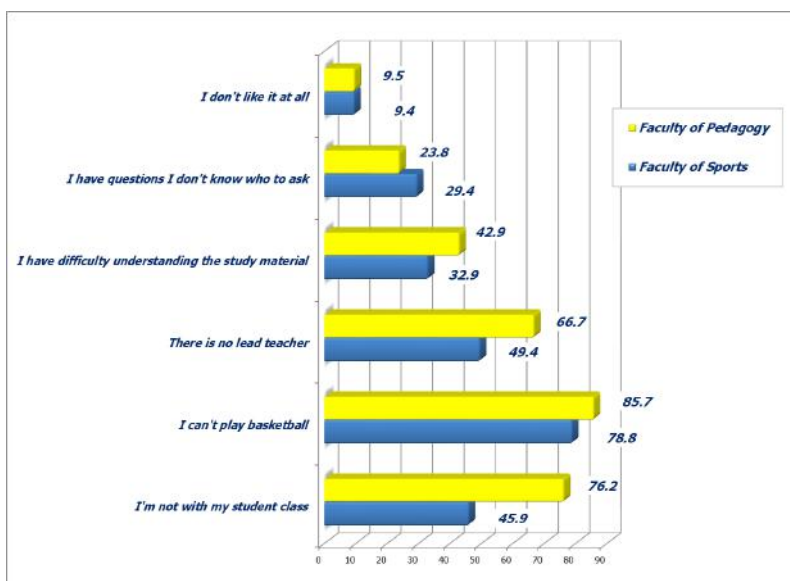


Figure 5. Percentage and comparative analysis by the Faculty of students' answers to the question “What do you dislike about distance learning?”

The analyzes made so far do not provide sufficient grounds to draw definitive conclusions about the significance of the differences in the opinions of the studied students. We have applied the procedures for statistical testing of hypotheses, using χ^2 – Pearson's test when comparing the frequency distributions.

When dividing the answers by the factor faculty (Pedagogy and Sports), the results of the students from NSA show that in most questions the values of χ^2_{emp} are lower than the tabular value of the comparative criterion. Therefore, with a high guarantee probability ($Pt \geq 95\%$), it can be considered that the null hypothesis is valid for them, ie. the existing differences do not depend on the faculty of the students. An exception is observed for two of the questions with more than one possible answer. These are one of the answers to the 12th question (*What do you like about distance learning?*) and 13th question (*What do you like about distance learning?*), where $\chi^2_{emp12} = 4,191$ and $\chi^2_{emp13} = 6,196$

are higher than the critical value ($\chi^2_{\text{critical}} = 3.84$). This gives grounds for rejecting the null hypothesis regarding the answers to these questions and accepting as true the alternative, according to which the faculty in which the students study determines their answer. Figure 6 shows that the students of the Faculty of Pedagogy consider it an advantage that they can make their own study schedule and do not approve of the fact that they are not with their study group in the basketball lessons, while this is not so important for the students from the Faculty of Sports. A study by Galimov, et al, (2019) found a similar attitude of students to the educational process, when studying the comfort levels of the educational environment at the university according to certain indicators characterizing psychological, intellectual and physical comfort parameters.

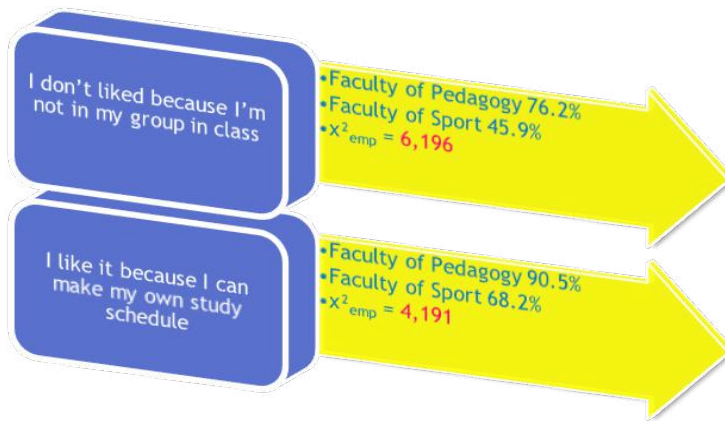


Figure 6. Statistical significance of the differences of the answers by faculty

In the division of the answers by gender factor (men and women), the results of the NSA students are presented in Figure 7 and show that in most questions the values of χ^2_{emp} are lower than the tabular value of the comparative criterion. Therefore, with a high guarantee probability ($Pt \geq 95\%$), it can be considered that the null hypothesis is valid for them, ie. the existing differences do not depend on the gender of the participants. An exception is observed for two of the questions. A statistically significant difference is observed in the answers to the 4th question "Is it easy to navigate with the uploaded materials on individual subjects?", where $\chi^2_{\text{emp4}} = 11.958$ and is higher than the critical value ($\chi^2_{\text{critical}} = 5.99$ at $\alpha = 0.003$), which proves that students gender determines how they orient themselves with the uploaded learning materials in the platform, and could be confirmed that women orient themselves much more easily than men.

Figure 7 also shows the 13th question, which has the possibility for more than one answer, where $\chi^2_{\text{emp13}} = 4.649$, and this value is higher than the critical

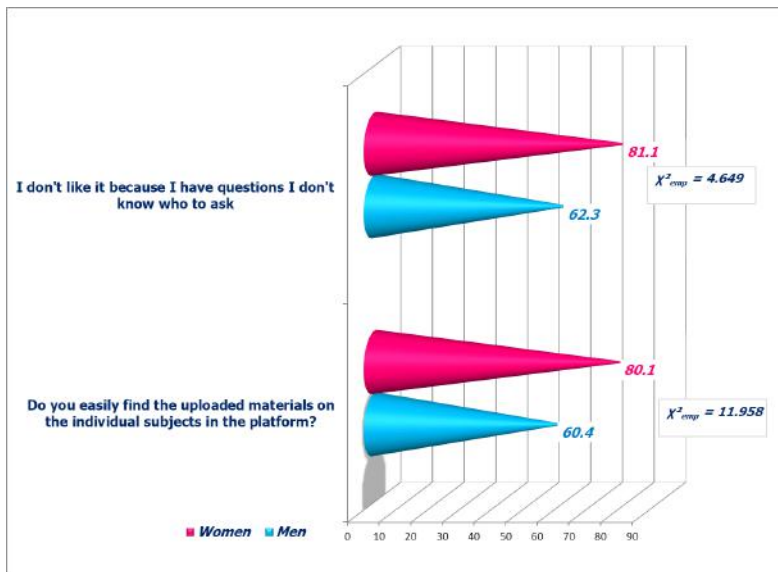


Figure 7. Statistical significance of differences by gender responses

one ($\chi^2_{\text{critical}} = 3.84$ at $\alpha = 0.041$). This gives grounds to reject the null hypothesis on this issue and accept as true the alternative, according to which gender largely determines what students do not like in distance learning. Women don't like it because they have questions, they have no one to ask, while for men, this could not be considered as a problem, even if they have some questions about the material, they find a way to receive the needed answers.

Discussion

The answers of the students in the survey shows that almost 90% of students regularly visit the distance learning platform to review the study material for the different study subjects and find their way very easily with the study materials in the different disciplines. The faculty determines that the students from the Faculty of Pedagogy consider it an advantage that they can make their own study schedule and do not approve of the fact that they are not with their study group in the basketball lessons.

Women are much more active and responsible in the learning process and find it easier to navigate the materials in different disciplines.

Gender determines how students orient themselves with the uploaded learning materials in the platform, namely that women find their way much easier than men, but they also don't like it because they have questions, they have no one to ask.

Distance teaching of sports is a challenge for leading teachers, who must prepare teaching material adapted to distance learning. This includes a lot of text description, explanatory diagrams and specially selected video so that students can visually perceive the submitted material (Borukova et al., 2020).

The effectiveness of the learning process, according to experts, is determined mainly by the ability of the platform to ensure the relevance of learning material, accessibility to learning materials and re-sources and user-friendly virtual environment (platform), (Kuleva, 2017). Distance learning, as well as traditional learning, requires learners to be tested, assessed, assisted where necessary and prepared for examinations. For this purpose, it is necessary to have two-way communication.

On the other hand, it is inevitable to comment on the return to the traditional form of training after the end of the COVID-19 crisis. Probably the next stage will be a compilation between classical and distance learning - ie. Blended learning, because the current situation predetermines the digitalization of traditional training (face-to-face learning) (Aleksieva, 2020).

REFERENCES

- Aleksieva, M. (2020). Obuchenieto po basketbol na studenti-magistri ot Velikotarnovskiya universitet v usloviyata na izvanredno polozhenie. *Godishnik na Nazionalna Sportna Akademiq „Vassil Levski“*, Tom 1, Sofia: NSA Pres, pp. 270 – 279 // [In Bulgarian]
- Bataineh, E. (2001). A Summary Look at Internet Based Distance Education. In J. Price, D. Willis, N. Davis & J. Willis (Eds.), *Proceedings of SITE 2001 – Society for Information Technology & Teacher Education International Conference* (pp. 123 – 128). Norfolk, VA: Association for the Advancement of Computing in Education (AACE). Retrieved July 16, 2020 from <https://www.learntechlib.org/primary/p/16660/>.
- Borukova, M., G. Brestnichki, Tz. Tzankov, M. Tzankova & Q. Asparuhov. (2020). Distanzionno obuchenie po basketbol v NSA. *Godishnik na Nazionalna Sportna Akademiq „Vassil Levski“*, Vol 1, Sofia: NSA Pres, pp. 289 – 298 // [In Bulgarian]
- Galimov, A., Botova, A., Nazarenko, A. & Galyautdinov, M. (2019). Model of Integration of Formal and Informal Education for Student-Athletes. *Journal of Applied Sports Sciences*. Vol.2/2019, pp. 86 – 93. DOI: 10.37393/jass.2019.02.8
- Gigova, V. (2002). *Statisticheska obrabotka I analiz na Danni*, Sofia, NSA-IPB. // [In Bulgarian]
- Hill, J.R. (1997). Distance learning Environments Via the World Wide Web. In H.K. Badrul (Ed) *Web based instruction*. Englewood. Cliffs NJ: Educational Technology Publication.

- Holmberg, B. (1990). *Theory and Practice of Distance Education*.
- Khan, B. (2005). *Managing E-learning: Design, delivery, implementation and evaluation*. 1 ed. Hershey, PA: Hershey PA: *Science Information Publishing*.
- Kuleva, M. (2017). Determining Criteria for Evaluating the Efficiency of The Education in A Distance Learning Platform. *International Scientific Congress "Applied Sports Sciences, 1 – 2 Dec 2017*, Sofia. pp.424 – 427 doi: 10.37393/ICASS2017/87
- Levy, Y. (2006). *Assessing the Value of E-Learning Systems*. 1 ed.s.l.: *Science Information Publishing*.
- Miellke, D. (1999). *Effective Teaching in Distance Education*. Report No.EDO-SP-1999-5. Washington, D.C.: Office of Educational Research and Improvement.
- Piccoli G., R. A. B. I. (2001). Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training. *MIS Quarterly*, December, pp. 401 – 426.
- Willis, B. & Dickinson, J. (1997). *Distance Education in the World Wide Web in In H.K. Badrul (Ed) Web based instruction (2nd ed)*. Englewood. Cliffs NJ: Educational Technology Publication.

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