

DISTANCE LEARNING IN DANCE SPORT DURING THE COVID-19 OUTBREAK**Alen Miletić**

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Original scientific paper

Abstract

This investigation was conducted during the Covid-19 outbreak and lockdown period as a cause of closure of schools and higher education institutions. Learning dances, in which physical contact dominates, became extremely demanding and challenging at that time. The basic aim of this study was to analyse some metric characteristics of newly – constructed test for assessing the level of performance of samba and rumba steps learned in distance learning condition. The second aim was to determine differences by gender on the level of acquired skills in both samba and rumba. The sample of subjects consisted of 24 female and 15 male kinesiology students (aged 21-24). Three independent experts evaluated the performance of dances according to criteria described in newly-constructed tests. According to results obtained from the K-S test, the newly-constructed test showed satisfactory characteristics of sensitivity. Satisfactory values of Cronbach's alpha were determined (.95), and the overall variability of experts according to factorial analysis were explained 90%, showing thus good characteristics of objectivity and homogeneity. High correlation (.81) was established between evaluating samba and rumba dances on newly – constructed tests scale from 0 to 10, and evaluating samba and rumba on the Likert scale, commonly used in PE classes, presenting satisfactory validity of tests intended for evaluation of the level of performance of samba and rumba dances in distance learning conditions. According to the results of the T-test, significant differences in gender and performance of dance structures were obtained in the favour of female students. In conclusion, students can properly learn dances using the experimental distance learning method, and their dance skills can be correctly evaluated by the use of the newly-constructed tests.

Keywords: *rumba, samba, evaluation, motor learning***Introduction**

The crisis that was caused by the Covid-19 pandemic reflected on all life aspects, and thus on higher education all around the world as well. In a matter of only few weeks, teaching at higher education institutions transformed from face-to-face to online teaching method. From kinesiological, pedagogical, sociological and technological aspect, numerous challenges of distance learning immediately appeared (Bielikova et al, 2021; Karaca & Ilkim 2021; Viscione & D'Elia, 2019; Denysova, Shynkaruk & Usychenko, 2018). One of key features of distance learning in kinesiology was maintaining the quality and volume of teaching programmes, as well as ensuring objective and individual evaluation of acquired skills in students. Teaching dances online in the environment of higher education was a subject to different research studies even before the Covid-19 pandemic (Caldwell & Milling – Robbins, 2007), but during the pandemic there was an expansion of research analysing principles of modern distance learning in dance training courses (Papp – Danka & Lanszki, 2020; You, 2020; Aruta, Ambra, Ferraro, & Iavarone, 2021; Zhang & Yang, 2021). It resulted in showing various advantages that can be acquired by

the use of internet technology. Alexiadis & Daras (2014) designed a pattern for automatic dance performance evaluation that employs motion capture data using marker-less motion capture. Geographical distances between dancers, experts, choreographers, physical conditioning coaches, doctors, and others who participate in careers of dancers and teaching dances, ceased to be a significant obstacle, which thus reflected in budget-friendly and available dance professionalism. Instructional materials for learning dancing that are available online can be used both by beginners and professional dancers (Rowe, Martin, Buck & Anttila, 2018; Jin & Martin, 2019).

The task of a kinesiologist is rather challenging in these newly arisen circumstances since the regular methods of teaching are visual, auditory, kinaesthetic and analytic. While acquiring dance structures all four methods are applied, and adjustment to distance learning is possible through application of information technology as quality replacement of the analytic method of learning through a video, based on analytic breakdown of movements, counting, and music in two learning

phases. Visual training dominates in distance learning since it can be easily applied on the platform of massive open online courses (MOOC) which host short video tutorials. Uploading videos on the platform is easy and it helps provide the content to a wider audience. It is also suitable for an exchange of experience between experts, though controlling the quality of disseminated video materials remains a questionable issue. Besides mentioned, one of the positive sides is that the social media can be an additional tool of communication between MOOC users and the users of an educational programme, therefore of effective communication in the learning process on the teacher-learner level (Cavus, 2015). Online Laban movement analysis (LMA), a method and language for describing, visualizing interpreting and documenting human movement, can be applied in teaching dances. It adapts the learning process according to the needs of learners through performance error detection (Aristidou & Chrysanthou 2013; Aristidou, Stavarakis, Charalambous, Chrysanthou & Himona, 2015; Chen, Lin, Tsai & Dai, 2011; Santos & Dias, 2010). LMA includes: Body – what the body is doing and the interrelationships within the body; Effort – the qualities of movement; Shape – how the body is changing shape and what motivates it to do so; Space – where the body is moving and the harmonic relationship in space. On the other hand, distance learning lacks in kinaesthetic method which is significantly important in elite dance, but basic dance structures can be acquired by improving other three methods that are based on listening, analytics and demonstration. In order to determine the efficiency of distance learning of dance structures, it is crucial to implement scientific kinesiological research which provide constructed tests for evaluation of the level of dance skills acquired through the distance learning process. Current study applied the existing kinesiological kinesimetric methodology in these newly arisen circumstances of motor learning. An expressed place in Physical Education (PE) is taken by dancesport. Practising couple dances in PE provides an additional socializing and educational effect, which particularly contributes to nurturing tolerance and understanding between boys and girls. It has been assumed that the tests for evaluation of skills level implemented on the population of students in distance learning will be adjustable for evaluation of skills in PE, and particularly in secondary-school population for which dancesport is considered an appropriate activity. Before the application of the newly-constructed test for the level of dance performance assessment (based on a wider measuring scale and constructed for the use in distance learning conditions), it should be compared and validated with the use of a familiar test that has already been used for student evaluation of dance performance in non-distance learning conditions (that is based on a narrower measuring scale), commonly used in PE classes. You (2020), after

conducting extensive research, emphasized that learning dance structures from a distance assumed a positive direction in development of dance education, but with a requirement of improving the system of controlling quality which is exactly the aim of this study. Monitoring the quality of the teaching process, load, as well as motivation and adaptation of students to newly arisen circumstances of distance learning (Papp – Danka & Lanszki, 2020), is a specific challenge in kinesiology. Therefore, current study will contribute to the scarce corpus of research that analyse the objectivity and quality of evaluation of dance skills in conditions of distance learning.

The principal aim of this study was to evaluate some metric characteristics (objectivity, sensitivity, homogeneity and validity) of the newly constructed tests for evaluation of learning basic techniques in Latin dances samba and rumba. These dances were taught by the use of distance learning method and the study aimed at determining differences by gender on the level of acquired skills in both samba and rumba.

Methods

Prior to the research, following the methodology proposed by Cohen (1988) sample size estimate was conducted based on the effects of used variables in the similar research (Božanić & Miletić, 2011; Grčić, Miletić & Kuzmanić, 2015; Miletić, Katić & Maleš, 2004). It was calculated that for alpha level of 0.05 and power of 0,80 sample sizes from 23 to 31 were necessary to detect the significant effect of gender. Therefore, the research was conducted on a sample of 39 subjects, third-year male and female students of kinesiology aged 21 to 24, studying full-time at the Undergraduate Study of Kinesiology, Faculty of Kinesiology, University of Split, course Theory and Methods in Dances. Three evaluators evaluated the performance of each dance that was performed after being taught online. Uniform evaluation criteria were set prior to the performance and evaluation of subjects without a possibility of additional agreements or mutual consulting. Both male and female students participated in the process of learning equally. Evaluation was implemented by breaking down the choreography in basic parts and consequently evaluating each dance part independently by grading it with mark 2 if performed correctly, mark 1 if performed partially correctly, and mark 0 if performed incorrectly. Described evaluation method is common in scientific environment and is used for evaluation of aesthetic movements (Božanić & Miletić, 2012; Grčić, Miletić & Kuzmanić, 2015). While preparing videos for distance learning, additional efforts were put on each part of dances as they were followed by methodological procedure of their acquirement followed by verbal instructions which were recorded and uploaded on the platform separately. In the second phase of learning each part of the dance was recorded in regular and determined

rhythm and tempo, and with music they were uploaded on the platform. The default tempo for the samba was 121 BPM (Beats per Minute), allegro and in the 4/4 time signature, and the default tempo for the rumba was 111 BPM, moderato and in the 4/4 time signature. Basic structures followed by music that were evaluated in samba were: (1) basic step; (2) Whisk; (3) Chucharacka (4) samba turn, and (5) general aesthetic impression of regular technical performance and choreography coherence. Basic dance structures that were evaluated in rumba with music were: (1) basic step; (2) promenade step; (3) rumba turn; (4) rumba figure eight and (5) general aesthetic impression of regular technical performance and choreography coherence. Students had access to all videos at all times at their disposition to watch, pause and analyse. Distance learning enabled learning dances. Methodological procedure of learning dances samba and rumba from distance was implemented through providing videos by phases as follows: (1) explanation and demonstration of basic stance and movements, (2) demonstration of dance parts at a slower rhythm followed by counting, (3) demonstration of the dance in its regular rhythm followed by counting, (4) demonstration of the dance followed by music, (5) connecting dance parts in one dance structure – choreography. After watching a video, students' task was to repeat demonstrated dance parts by phases, randomly, and within a specified time framework (a month) they had to practise each dance, record their performance of the final phase of learning – connecting dance parts in a dance as a whole, and send it to their professor. Each received video of each student was evaluated by three independent experts according to beforehand determined criteria. The basic idea for the experimental design is presented as Figure 1. This study was approved by the Ethical Board of the Faculty of Kinesiology, University of Split.

Statistics

Methods for data analysis were selected according to the aim of the research, analysis of metric characteristics of the newly constructed tests for evaluation of the level of skills in Latin dances samba and rumba, acquired by the use of distance learning method. For analysing sensitivity, following statistical parameters were calculated: mean (AS), standard deviation (SD), minimum value (MIN), maximum value (MAX), and distribution normality was tested by the use of the Kolmogorov – Smirnov test (KS). For analysing the objectivity of experts, Cronbach's alpha was calculated, and for analysing the homogeneity of components, first major component was calculated with factor analysis. For analysing validity, correlation between values achieved in the newly constructed tests and values achieved from the classical method of grading on the Likert scale was calculated, and are presented in Figure 2 for samba dance and in Figure 3 for rumba dance. Differences

by gender on the level of dance structures of samba and rumba, after distance learning, were tested by the use of the T-test for independent variables.

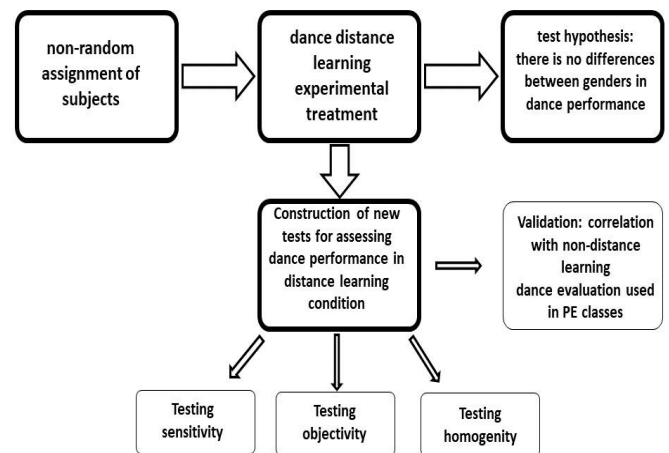


Figure 1. Experimental design

Results

Based on the values of descriptive statistics (Tables 1 and 2) it can be determined that values in components of testes were regularly distributed, meaning the tests for evaluation of basic dance skills in samba and rumba were adequate for the population of students. It has been noted that in all three experts and in both dances, the KS test did not deviate significantly from the Gaussian curve with the margin of error of 0.05, having thus satisfactory sensitivity as such. Experts had uniform middle values of marks for both dances, and the closest criterion in evaluation of the dances was shown by the second expert. According to values of Cronbach's alpha, both tests showed good measuring characteristics of objectivity which indicated clearly determined and transparent criteria of evaluation of dance structures samba and rumba learned from distance. Latent dimension in the space of variables of experts (Table 3) explains 90% (samba) and 92% (rumba) of the total variance of the system of components with a uniform and homogeneous projection of all experts on mutual measuring subject. Findings presented in Figure 2 and 3 show high correlations for dances samba and rumba (.81) between the skills level in dances practised from distance, through the newly constructed tests on the scale from 0 to 10 and the classical school method for evaluation of dance structures on the Likert scale from 1 to 5. After determining good metric characteristics for evaluation of the skills level in dances samba and rumba, the sample of kinesiology students was divided in subsamples according to gender, in order to determine possible differences in acquiring skills by gender when learning the dances from distance. The values of the T-test for independent variables (Table 4) showed significant differences by gender in both applied tests.

Table 1 - Table 1. Descriptive statistics, values of the Kolmogorov-Smirnov test (KS) and Cronbach's alpha (Alpha) for variable Samba

Samba/Evaluators	Mean	Min	Max	SD	KS	Alpha
S1	3.51	0.00	10.00	3.28	.16	
S2	4.51	0.00	10.00	3.05	.18	
S3	3.56	0.00	10.00	3.40	.18	
Total Samba	3.86	0.00	10.00	3.09	.13	.95

*KS test is significant on the level of 0.05 for: $d < 0.21$ (when $N=39$)

Table 2. Descriptive statistics, values of the Kolmogorov-Smirnov test (KS) and Cronbach's alpha (Alpha) for variable Rumba

Rumba/Evaluators	Mean	Min	Max	SD	KS	Alpha
S1	4.41	0.00	10.00	3.34	.16	
S2	5.18	0.00	10.00	3.28	.11	
S3	3.56	0.00	10.00	3.25	.17	
Total Rumba	4.38	0.00	10.00	3.15	.11	.96

*KS test is significant on the level of 0.05 for: $d < 0.21$ (when $N=39$)

Discussion and Conclusion

According to showed values, the overall metric characteristics of the test for evaluation of skills level in dances samba and rumba after implemented distance learning method, can be considered satisfactory. Current study confirmed that the determined criteria of evaluation were an adequate tool for individual and objective evaluation of dance skills in beginners. Perceptual learning models such as visual or auditory can be achieved in teaching dances from distance. Visual model assumes better learning of elements that are acquired by watching the demonstrator or a video, which was improved during distance learning as students were provided with videos showing ideal performance of dancing steps, and they had an opportunity of analysing them at their own pace and time. Instructional video material containing information on methods of teaching some dancing elements applied in face-to-face learning is no longer available. Therefore, it can be considered that the visual model of perceptual learning of dances from distance is the most advance one. The auditory model of perceptual learning means learning with music and rhythm, and receiving verbal instructions while learning. Learning dancing with music and rhythm from distance is not different than learning the same face-to-face since monitoring of prepared videos is implemented with music and rhythm. However, receiving verbal instructions for

corrections occurs with a delay, that is after students record their performance and send it to their professor. This makes correcting mistakes from distance harder as the only contact between a student and teacher is a video. Analytical model assumes better learning if it means solving some motor tasks. Choreographing a dance in both learning methods, face-to-face or distance learning, can be considered an equivalent to solving motor tasks. In conclusion, greatest difference between these two learning methods in teaching dances is the lack of kinaesthetic method of perceptual learning from distance. Kinaesthetic model means better learning of new elements if a person, for example with the help of a dance partner, tries to feel how to perform a dance structure. During conducted research basic beginner-appropriate dance structures were acquired, and the significance of kinaesthetic model was not expressed since practising choreography in pairs is the second phase in learning dances. It should also be emphasized that for learning a dance from distance it is required to possess a certain level of information literacy and developed self-discipline as well as work habits to exercise, and it is questionable to what extent can distance learning be applied on primary-school children despite the fact that testing conducted on the population of students was quite successful. Further research is required in order to analyse the efficiency of acquiring skills in dance structures and

their evaluation in younger age groups of schoolchildren in order to determine applicability of learning dance structures from distance in school-related kinesiological practice.

Table 3. Structure of the latent dimension in the area of components of evaluators

V	Samba	Rumba
S1	-0.95	-0.97
S2	-0.93	-0.95
S3	-0.97	-0.96
Expl.Var	2.71	2.76
Prp.Totl	0.90	0.92

Table 4. Significance of Independent T-test differences on the level of dance structures performance of samba and rumba

	Mean (F) N=24	Mean (M) N=15	T-value	p
Samba	5.42	2.89	-2.69	0.01
Rumba	5.67	3.58	-2.10	0.04

Despite the fact that all subjects had the same amount of time at their disposition to practise both dances, it is obvious that they had more difficulties in mastering samba. Even though this dance is of faster rhythm, its structure and technique in the process of learning should not have an impact on greater difficulties of its acquiring in relation to rumba. It can be assumed that subjects needed certain amount of time to adjust to form of learning dance structures from distance, which should be confirmed by conducting more research. Planning and programming of teaching dances from distances should preferably anticipate time of adjustment to the new method of learning regardless of the type of dances. Also, further research should be conducted on the topic of learning dances from distance that should include analysis of dancing pictures, which this research lacked, in order to determine which dance parts exactly need additional practice to make distance learning method of learning dance structures as efficient as face-to-face method of learning the same. Good solutions for partial learning of dances from distance can be applied according to previous research (Aristidou et al. 2015) which used the LMA method with the aim of identifying style qualities in dance motions. According to the obtained values, the LMA method, through components of body, shape and space, is efficiently used for

comparison in quality and evaluation of folk dances. According to research of Chalabaev, Sarrazin, Fontayne, Boiché, & Clément-Guillotin, (2013), the common opinion was that men are more dominant gender when it comes to sporting activities, which also results in the area of education (Nicaise, Bois, Fairclough, Amorose, & Cogèrino, 2009).

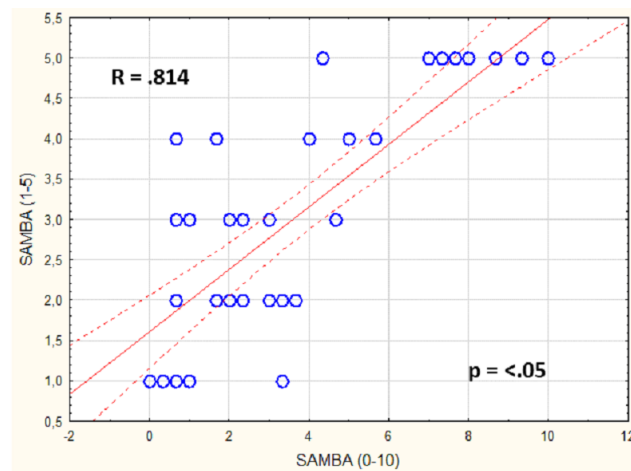


Figure 2. Scatterplot correlation between the basic level of skills in samba practised from distance, through newly constructed tests on 0 to 10 scale, and classical school method of evaluating dancing structures on 1 to 5 Likert scale.

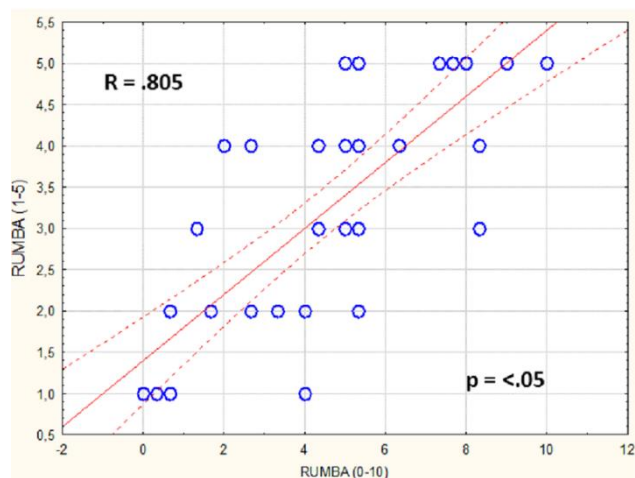


Figure 3. Scatterplot correlation between the basic level of skills in rumba practised from distance, through newly constructed tests on 0 to 10 scale, and classical school method of evaluating dancing structures on 1 to 5 Likert scale

In current study, even though both female and male students of kinesiology had the same conditions for learning from distance, female students performed dances better. It is not a novice that, in aesthetic sports, differences in gender in motor performance are in favour of female students (Božanić & Miletić; 2011; Delaš, Božanić & Miletić, 2011). Uzunović, Kostić, & Miletić (2009) established on a sample of dancers in dancesport that different motor abilities in men and women are responsible for successful

performance. Abilities as coordination, movement frequency, balance, coordination with rhythm and flexibility explain 66% of the variance of success in standard competitive dances in female dancers, while the frequency of movement, explosive strength, static balance, flexibility and aerobic endurance explain 71% of the variance of success in standard competitive dances in female dancers. According to Rintag et al. (2012) there is no difference by gender in motivation towards physical activity among university sport science students. A limiting factor for physical activity in both genders, as reported by students, are injuries, and lack of time and motivation. It should be emphasized that in distance learning (according to Perkowski 2012) there is a small, significant relationship between gender and academic performance and gender and self-efficacy, favouring females over males. Therefore, future research should include comparison of achieved results in learning by gender in distance learning method and face-to-face method, which this study lacked due to the situation with the Covid-19 pandemic. Somewhat difficult possibility of correcting mistakes during motor learning and providing feedback might have a significant impact on the level

of acquired skills in distance learning method, thus it should be further investigated.

To conclude, the newly constructed tests for evaluation of the level of dance skills in samba and rumba, in kinesiology female and male students, and after the procedure of distance motor learning, showed good metric characteristics of sensitivity, objectivity, homogeneity and validity. Their practical applicability is of particular importance in the environment of teaching dances from distance by including analytic, auditory and visual learning method, but not the kinaesthetic one. Furthermore, teaching dances from distance is difficult due to the lack possibility of correcting mistakes of learners and providing feedback on how to make those corrections since the only contact between the student and teacher is a video. It should be emphasized that for teaching dances from distance it is required to have a certain level of information literacy, as well as strong self-discipline and work habits of exercising. Therefore, it is questionable to what extent distance learning could be applicable on the population of primary-school children, even though the application of tests was quite successful on the population of kinesiology students.

References

- Alexiadis, D. S., & Daras, P. (2014). Quaternionic signal processing techniques for automatic evaluation of dance performances from MoCap data. *IEEE Transactions on Multimedia*, 16(5), 1391-1406. DOI: [10.1109/TMM.2014.2317311](https://doi.org/10.1109/TMM.2014.2317311).
- Aristidou, A., Stavrakis, E., Charalambous, P., Chrysanthou, Y., & Himona, S. L. (2015). Folk dance evaluation using laban movement analysis. *Journal on Computing and Cultural Heritage (JOCCH)*, 8(4), 1-19. DOI: <http://dx.doi.org/10.1145/2755566>.
- Aristidou, A., & Chrysanthou, Y. (2013). Motion indexing of different emotional states using LMA components. In *SIGGRAPH Asia 2013 Technical Briefs* (pp. 1-4). <https://doi.org/10.1145/2522628.2522651>.
- Aruta, L., Ambra, F. I., Ferraro, F. V., & Iavarone, M. L. (2021). Bodytasking. Analysis and Perceptions of a Distance Dance Experience. *Giornale italiano di educazione alla salute, sport e didattica inclusiva*, 5(1). DOI: <https://doi.org/10.32043/gsd.v5i1.313>.
- Bielikova, N., Tsos, A., Indyka, S., Contiero, D., Pantik, V., Tomaschuk, O., ... & Podubinska, S. (2021). The Motor Activity Status and Students Self-Assessment of Health During a COVID-19 Pandemic. *Sport Mont*, (19 (S2)). doi: 10.26773/smj.210901.
- Bozanic, A., & Miletic, D. (2011). Differences between the sexes in technical mastery of rhythmic gymnastics. *Journal of Sports Sciences*, 29(4), 337-343. <https://doi.org/10.1080/02640414.2010.529453>.
- Caldwell, L.A., & Milling-Robins, S. (2007). Teaching Dance in Online Setting, *Journal of Dance Education*, 7(1), 25-29. doi: 10.1080/15290824.2007.10387329.
- Cavus, N. (2015). Distance learning and learning management systems. *Procedia-Social and Behavioral Sciences*, 191, 872-877. doi: 10.1016/j.sbspro.2015.04.611.
- Chalabaev, A., Sarrazin, P., Fontayne, P., Boiché, J., & Clément-Guillot, C. (2013). The influence of sex stereotypes and gender roles on participation and performance in sport and exercise: Review and future directions. *Psychology of sport and exercise*, 14(2), 136-144. <http://dx.doi.org/10.1016/j.psychsport.2012.10.005>.
- Chen, J. F., Lin, W. C., Tsai, K. H., & Dai, S. Y. (2011). Analysis and evaluation of human movement based on laban movement analysis. *Journal of Applied Science and Engineering*, 14(3), 255-264. <https://doi.org/10.6180/jase.2011.14.3.09>.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Revised ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- Delas Kalinski, S., Miletic, D., & Bozanic, A. (2011). Gender-based progression and acquisition of gymnastic skills in physical education. *Croatian Journal of Education: Hrvatski časopis za odgoj i obrazovanje*, 13(3), 4-24. <https://hrcak.srce.hr/77306>.
- Grčić, V., Miletić, A., & Kuzmanić, B. (2015). Construction of tests for evaluating the level of hip hop performance. *Research in Physical Education, Sport & Health*, 4(1), (p.133-136). Available at: http://www.pesh.mk/PDF/Vol_4_No_1/9.pdf.
- Jin, J., & Martin, R. (2019). Exploring the past to navigate the future: examining histories of higher dance education in China in an internationalized context. *Research in Dance Education*, 20(2), 225-240. <https://doi.org/10.1080/14647893.2019.1566304>.
- Karaca, Y., & İlkim, M. (2021). Investigation of the attitudes distance education of the faculty of sport science students in the Covid-19 period. *Turkish Online Journal of Distance Education*, 22(4), 114-129. <https://dergipark.org.tr/en/pub/tojde/issue/65206/1002783>.
- Miletic, D., Katic, R., & Males, B. (2004). Some Anthropometric Characteristics of Elite Rhythmic Gymnasts. *Coll. Antropol*, 28(2), 727-737.

- Nicaise, V., Bois, J. E., Fairclough, S. J., Amorose, A. J., & Cogérino, G. (2007). Girls' and boys' perceptions of physical education teachers' feedback: Effects on performance and psychological responses. *Journal of sports sciences*, 25(8), 915-926. <http://dx.doi.org/10.1080/02640410600898095>.
- Papp – Danko, A., & Lanszki, A. (2020). Distance education at the Hungarian Dance Academy during the Covid-19 Pandemic. *Tanc es Neveles. Dance and Education*, 1(1), 59-79. doi: 10.46819/TN.1.1.59-79.
- Perkowski, J. (2013). The role of gender in distance learning: a meta-analytic review of gender differences in academic performance and self-efficacy in distance learning. *Journal of Educational Technology Systems*, 41(3), 267-278. <https://doi.org/10.2190/ET.41.3.e>.
- Rintaugu, E. G. & E.D.K. Ngetich (2012). Motivational gender differences in sport and exercise participation among university sport science students. *Journal of Physical Education and Sport*, 12(2), 180.
- Rowe, N., Martin, R., Buck, R., & Anttila, E. (2018). Researching dance education post-2016: The global implications of Brexit and Trump on dance education. *Research in Dance Education*, 19(1), 91-109. doi: 10.1080/14647893.2017.1354839.
- Santos, L., & Dias, J. (2010, February). Laban movement analysis towards behavior patterns. In *Doctoral Conference on Computing, Electrical and Industrial Systems* (pp. 187-194). Springer, Berlin, Heidelberg.
- You, Y. (2020). Online technologies in dance education (China and worldwide experience). *Research in Dance Education*, 1-17, doi: 10.1080/14647893.2020.1832979.
- Uzunović, S., Kostić, R., & Miletić, Đ. (2009). Motor status of competitive young sport dancers–gender differences. *Acta Kinesiologica*, 3(1), 83-87.
- Viscione, I., & D'Elia, F. (2019). Augmented reality for learning in distance education: the case of e-sports. *Journal of Physical Education and Sport*, 19, 2047-2050. DOI:10.7752/jpes.2019.s5304.
- Zhang, E., & Yang, Y. (2021). Music dance distance teaching system based on Ologit model and machine learning. *Journal of Ambient Intelligence and Humanized Computing*, 1-17.
Computing <https://doi.org/10.1007/s12652-021-03221-w>.
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