# TRENDS IN E-LEARNING IN MASSAGE THERAPY – TECHNICAL AND PEDAGOGICAL SOLUTIONS

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**Abstract.** Electronic learning in the field of higher education has led to an intensification of the educational process, including a creation of new and perfection of the existing strategies and methods for teaching and learning. The dynamically changing reality sets new and hard to solve problems to massage education. Modern informational and communicational technologies enable the organization of the educational process in massage therapy but also pose a number of challenges to lecturers. This research aims at studying the students' perception about the distance practices oriented to massage therapy and more particularly about gaining practical skills in virtual environment. Materials and methods: The research was done in the period March-May 2020 among 94 second-year students with major Kinesitherapy at NSA "V. Levski". The students were taking part in an e-learning course in Chinese massage therapy including both theoretical knowledge and electronic practical classes. Results: The students showed a very good level of preparation in massage therapy which was evident from the conducted survey with the help of a questionnaire, but the preferable form of education in this subject is the classroom-based one. Conclusion: We think that blended learning in the field of massage, i.e. a kind of education which combines the personal touch with the lecturer, synchronized and asynchronized education is the appropriate kind of education where the personal contact with the lecturer is an invariable part.

*Keywords:* massage; e-learning; electronic resources; students

**Introduction**

In the last years we have witnessed changes in all aspects of human life which were provoked by the development of information and communication technologies (ICT). Educational systems have been subjected to pressure. They should evolve in order to be adequate to the changing society and the situation related to the pandemic SARS-COVID-19.

The dynamically changing reality poses new and hard to resolve problems to massage education. Modern ICT enable the change in the organization of the

educational process in massage therapy, help students to gain knowledge and acquire skills in massage techniques, but also set numerous challenges to the lecturers from methodological point of view, including control and assessment of knowledge and forming skills and competencies in the educational process. Students' education with major kinesitherapy at National Sports Academy "V. Levski", Sofia is a foundation for the preparation of future specialists working in the system of public health. This education is organized and conducted according to all state requirements and in compliance with EU standards and the new realities. Massage therapy is one of the major disciplines which students study in their bachelor's degree in massage because big part of their future activities will be massage in its various forms for prophylactic and treatment of patients suffering from different diseases.

A number of systematic surveys provide evidence in support of e-learning as an efficient educational method in students' education (Zirkle, 2003; Asenova, Yotovska, 2014; Li et al., 2019). E-learning has the potential to ease the transition between educational and clinical environment, the integrity of the studying process, the balance between work and studies, as well as the transfer of knowledge (Kirkova-Bogdanova et al., 2016).

The educational contents needed for achieving educational goals within the semester-long education in massage therapy today is bigger in comparison with previous years (Goranova, 2018). This is not only due to the development and advance of massage therapy but also because of electronic media which nowadays make the access to quality information easier. E-learning in massage provides new levels of interactivity which are realized only through computer technologies (Schwartz, 2010). Multimedia presentation of the materials and the possibilities of the systems for control of the educational contents enable rendering an account of the individual characteristics of each future professional in kinesitherapy such as habits, learning style, cognitive abilities and motivation. Through the application of standards, we can enable transfer of educational contents and compatibility of the carried-out e-exercises in different e-learning platforms (Ulrich et al., 2014). Electronic testing enables a reliable and objective assessment of students' achievements with timely and recorded feedback (Kirkova, Mateva & Taneva, 2014). The educational process in massage therapy is carried out with technologies which modern students are accustomed to and which are part of their daily routine.

The aim of this study is to research students' perception and experience as regards distance practices oriented to massage therapy and the acquisition of practical skills in virtual environment in particular.

**Materials and methods**

The research was done in the period of the summer semester of the academic 2019/2020. It was carried out among 94 second-year students (56 female students

and 38 male students) with major kinesitherapy at NSA "Vassil Levski", Sofia. The mean age of the students who took part in the e-learning was 21±4.5 years. The students took part in an e-learning course in Chinese massage therapy which included both theoretical knowledge (publishing lectures and plans of exercises in virtual educational environment, carrying out of electronic discussions, publishing student's materials: reports and presentations in electronic educational environment) and electronic practical activities (publishing educational films about massage, conducting massage therapy in virtual environment, shooting videos while performing different massage techniques and methods). In the core of e-learning in massage, we set the main psychological-pedagogical directions – behaviorism, cognitivism, and constructivism with their theoretical variations and practical realization (Alonso et al., 2005; Onda, 2012; Georgieva, 2014; Ho, Ke & Liu, 2015). Their efficiency, from pedagogical point of view, is realized and could be analyzed in a particular educational context with adequate and reliable research methods (Hokanson & Miller, 2009).

The main characteristics of the carefully planned and professionally designed e-learning in massage therapy are: multimedia – different ways of expression are used: graphs, sound, animation, video clips, etc.; accessibility – constant access to the educational contents by the users, it can easily be found and used when and where necessary; orientation towards learners – designed especially for the students; interactivity – the interaction between the learners, educational materials and virtual environment is provided; reuse – educational materials can be used many times in different educational context; openness – it is easily expanded and actualized; mobility – it is compatible with different systems for control of the educational contents and independent of the electronic resources for distribution; personalization – satisfaction with different learning models and speed in acquisition of the educational material. As regards teaching, the leading is the relation activities – results – assessment criteria, as well as the importance of the feedback.

The education was carried out through instructional design, through identification of the best practices or through gathering the knowledge in pedagogical design patterns. For the purposes of this research we used instructional design and we answered the following questions: what kind of help learners need; how to assess their results and how to communicate with them; how to make the education effective, attractive and accessible to each of them.

The use of the educational platform of NSA "V. Levski" and the platform ZOOM enabled us to share, use many times, preserve, provide access to and integrate the educational material. Each practical exercise carried out in the platform ZOOM included an educational film related to the topic of the lesson. For each exercise we provided links to the Internet sites, a list of paper-based sources, educational activities which the students can do, as well as guidelines and materials for aiding the students

in their work. Each practical exercise ended with an assessment test and shooting a short video which reflected the set aims and served as students' self-check and control of the acquired knowledge and practical skills on behalf of the lecturer.

**Results**

The results from the inquiry about the students' opinion are important when we assess the e-learning in massage therapy, the level of teaching and the implementation of knowledge into practice.

Figures 1 – 4 give an idea about the quality of teaching in the three levels of acquisition of knowledge and skills – theoretical activities and exercises in an online environment, as well as students' practical preparation in massage. The assessment was made with a Likert-type scale from 1 to 5 where 1 equals excellent and 5 – bad.
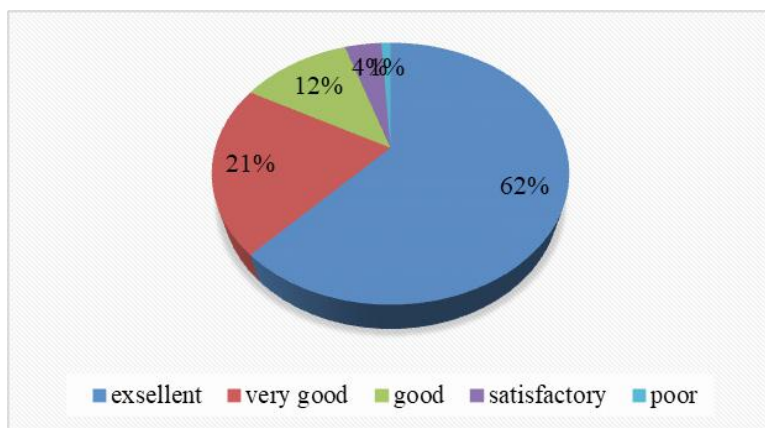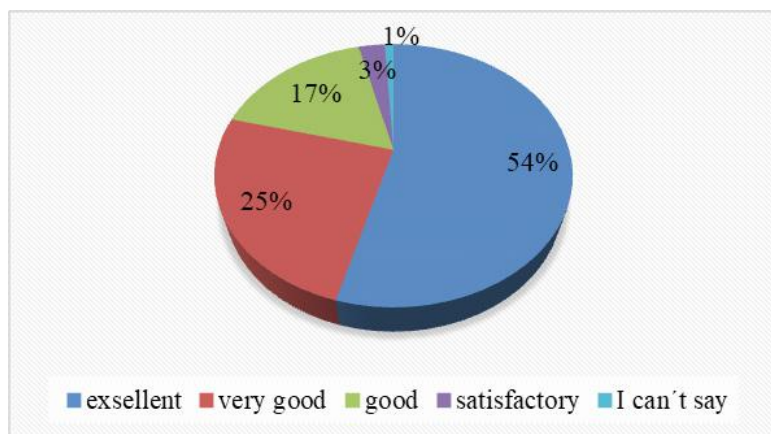


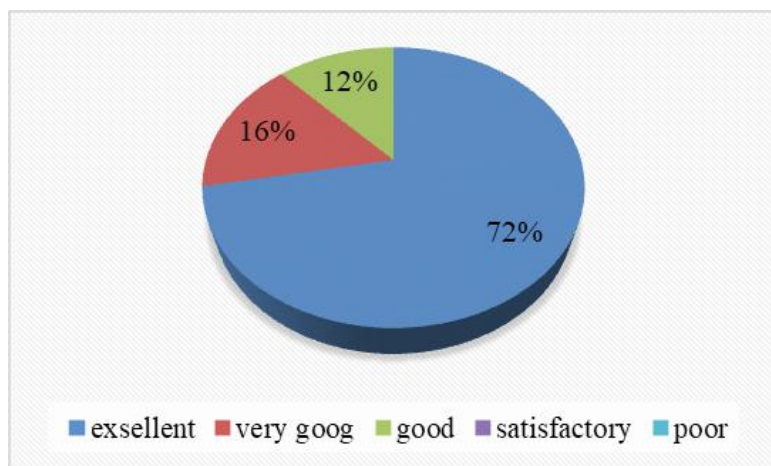**Figure 1.** Evaluation of the quality of e-learning in massage

Figure 1 shows that the researched students expressed a very strong positive attitude to the quality of the education in massage (a total of 83% of the researched individuals gave an excellent and very good marks), and only for 4% of the students, the e-learning was satisfactory and for 1% – poor.

The results from the evaluation of the conducted online practical exercises in massage (Figure 2) were similar.

The inquiry revealed that the students were satisfied not only with the level of the conducted education but also with the quality of the published materials. The results from the inquiry (Figure 3) are indicative that most of the students (72%) gave an excellent mark to the published educational materials which helped them to maintain their practical skills gained during their practice.

**Figure 2.** Evaluation of the quality of the online practical exercises in massage



**Figure 3.** Evaluation of the quality of the published materials in massage

The quality of education, respectively the satisfaction of students' needs, is very important for the implementation of e-learning in massage. That is why we believe that the level of students' satisfaction is the most important factor (Figure 4).

Analyzing the results from the research, we found that the positive answers were prevalent – for the whole research period, they were about 75% (42% – very satisfied and 33% – satisfied). There were significant differences in the partial students' satisfaction – 23% were partly satisfied, and 2% were not satisfied and pleaded for increasing the quality of the education. This partial dissatisfaction with the e-learning

**Figure 4.** Evaluation of the degree of satisfaction with
e-learning in massage

system and the obtained results have a positive effect because they reflect the possibilities of an educational system to be improved and to become much more modern and beneficial for the students. This dissatisfaction was related to some recommendations on behalf of the students for improving the quality of the conducted education.

It is very important for the quality education in massage that students acquire practical skills and competencies for the correct execution of the massage therapy.



**Figure 5.** Evaluation of the practical preparation in massage after e-learning

Despite the difficulties the students had during their practical activities because of the lack of personal contact with the lecturer and the poor facilities they had, they believed they were very well practically prepared (66% of the researched students).

For 8% of them, their technical preparation was satisfactory and only for 3% it was not satisfactory (Figure 5).

These data are quite a clear evidence that students' education in massage was carried out on a high level and brought them not only theoretical knowledge but also practical skills which will enable them to develop and achieve professional realization. This determines the quality of education which, according to most of the students, is high and totally meets their idea of a good educational system.

When we analyzed the results from the survey on e-learning in massage (Figure 6), we noted that the preferred form of education in this subject is the classroom-based one, but for 39% of the students it is blended learning.
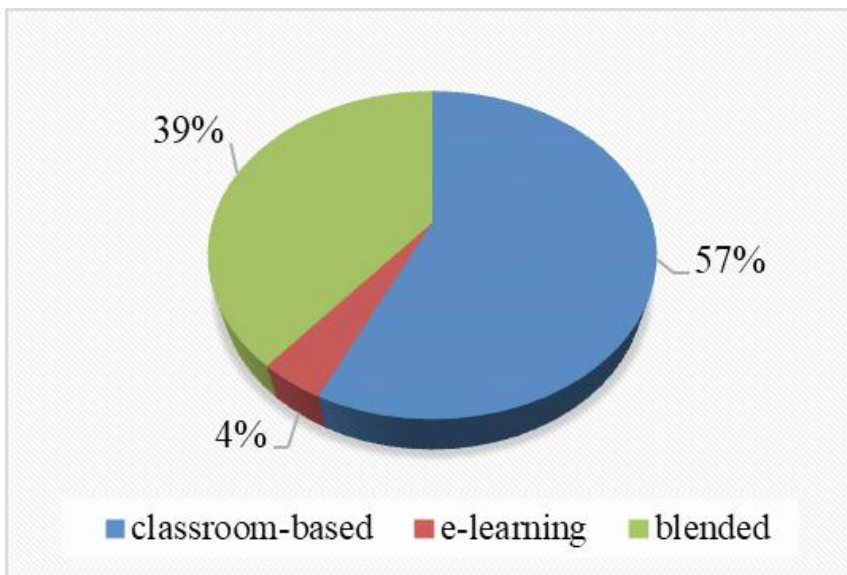


**Figure 6.** Preferred type of education in massage

According to Salyers et al. (2014), students express weaker preferences for electronic forms of education than their lectures. Williams et al. (2011) think we pay insufficient attention to students' attitudes to online education, but in our opinion, this is a corrective for the quality of teaching. Similar reserved attitude on behalf of students was observed by Kilova et al., (2017) and Moule, Ward, Lockyer (2011). Students' reserved attitude can be explained with their professional preferences – they have chosen a humanitarian major, not education in information technologies. A number of authors point out that the quality of the design and presentation of the electronic educational material affects

both efficiency and motivation (Cowham, Duggleby, 2005; Cook et al., 2009; Bichsel, 2013).

**Discussion**
The e-learning in massage therapy which combined synchronized learning (happening in real time) and asynchronized learning (allowing learners to access educational materials at their convenience), where the communicational process was carried out through the distance studies platform of the NSA "V. Levski", the platform ZOOM, messenger, email, chat or text messages in virtual groups was an efficient form of education in emergency situation.

The students understand the nature of e-learning, assess its positive qualities but are not willing to give up the traditional classroom-based education (Bates, Watson, 2008). According to the future kinesitherapy specialists e-learning is useful and supports their studies but cannot be a substitute for the real practice (Lightfoot, 2006).

The advantages of the electronic education in massage are: economy of time and financial resources; high speed of distribution of the information; adaptation according to the strengths and weaknesses of each learner; combination of different methods of acquisition of the information (through reading, watching and listening), performing different activities for practical self-teaching. There are some risks such as poor quality of the Internet connection, longer process for designing the teaching materials, time and wider knowledge of the lecturers, intruding into the learners' privacy during tracking their behavior (Peña-Ayala, Sossa & Méndez, 2014).

Some of the disadvantages of the e-learning in massage are: in synchronous learning the virtual communication takes time and can be tiring for the visual analyzer; it is related to some investment in appropriate inventory for performing massages and engaging other people for the real execution of the massage therapy (Schwartz, 2010).

In our opinion, a significant contribution of e-learning in massage with behavior design are the feedback and individualization. Individualization is related to learners' possibility to go through the different steps with their own tempo. A significant problem is the probability of creating a passive subject who would seek only the correct solutions and high evaluation. The implementation of behaviorism in e-learning in massage is related mostly to stimulation of the role of the lecturer who provides certain assistance through advice or additional information which learners can apply and practice, with further feedback (positive or negative). Learning is divided into small consequent steps, each of which covers a unit from the educational material or a certain skill – "programmed education/learning" and "drill and practice" (Peytcheva-Forsyth, 2010). The approaches of behaviorism and constructivism were mixed to a great extent at the beginning of the e-learning in massage therapy. The contents of the educational material was logically organized (cognitivism) and the students learnt the material using tech-

niques for operational conditioning (behaviorism). In the context of information and communication technologies, cognitivism in e-learning in massage is seen in appropriately illustrated materials, graphs and pictures, educational films. There are discussions related to the educational material and the conversations are usually restricted within certain issues (Tallent-Runnelset al., 2006). We believe that constructivism is the new educational paradigm and the interest to it is growing all over the world (Toshev, 2015). In the process of education in massage therapy students get to their own understanding, build their own cognitive schemes and achieve a purposeful outer actualization and stimulation. The most important tasks of massage education are initiation, maintenance and influence on mental processes which learners apply into practice.

We consider it very important to integrate constructivism into e-learning in massage and benefit from their mutual influence – enriching (construction of new approaches to the design of e-learning) and correction (the emergence and development of new technologies in education, practices and models of their integration in the educational context) (Peytcheva-Forsyth, 2009).

### Conclusion

The education of students in massage theory and practice requires constant perfection of the teaching methods and practical preparation in compliance with the dynamic conditions of modern life. The idea of e-learning is not to be a substitute for the personal touch but to be combined with other teaching methods in order to increase the efficiency of the educational process. We think that the blended education in the field of massage, i.e. an education which combines personal contact, synchronized and asynchronized education is an appropriate type of education where the personal contact is an invariable part. Electronic learning has the potential to develop due to its numerous advantages but mostly because of the degree of control over the educational process which learners gain.

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