

УДК 004: 796

Strategy of Distance Learning Development in Training of Specialists for Physical Education and Sports

Tatyana G. Rukosueva*

Siberian Federal University

79 Svobodny, Krasnoyarsk, 660041 Russia ¹

Received 2.09.2011, received in revised form 9.09.2011, accepted 16.09.2011

The article deals with the methodological approaches of distance learning. Active implementation of the forms of distance learning into the educational process is in demand due to the specificity of training the students of the Department of Physical Education and Sports. It should be noted that for students-sportsmen practicing winter sports, the members of the national Russian teams, the traditional approach is less effective due to long absence of students from studies. Therefore, distance learning is considered as a method of controlling the quality of education.

The concept of the strategy of distance learning development in training physical education and sports specialists has been offered. The integrative education system is based on the traditional education and distance learning. The strategy of distance education development has allowed to develop electronic versions of the lecture courses in several subjects (mostly for the Master students) and a lecture course in valeology, to develop software and teaching resources (educational multimedia materials) which allow the students to examine the materials of the lecture course visually, especially in medical biology and the theory of sports training methods. Assignments and instructional guidelines to them allow to study the material offered on the subjects more efficiently. Moreover, the skills acquired during distance learning enhance the students' opportunities to integrate via the Internet into other information portals of the Russian universities which provide distance learning services.

Keywords: strategy, distance learning, information, computer technology, case.

Objective

To form the system of quality assessment for training specialists in physical education on the basis of the integrative educational system of traditional and distance education.

Introduction

Distance learning is one of the most prospective forms of training. The idea of creating such a form of education was born long time ago.

Since the second half of the 20th century distance learning has become widespread (England, 1991; Gruber, 1994; Solovov, 1995; Moskovchenko, 1998). According to the scientists' forecasts distance learning (combined with traditional forms of study) will prevail in the coming century: no wonder it is called the education of the future (Andreev, 1997; Bogdanov, 1999; Yudin, 2003).

Volumes of the received and processed information have been growing incommensurably

* Corresponding author E-mail address: valeo_kgtu@mail.ru

¹ © Siberian Federal University. All rights reserved

leading to significant changes in many fields of the human activities. Common global information space available to any person has been formed. According to some scientists information is one of the major productive resources of the development of the economy and the society as a whole (Jones, 1992; Tikhonov, 1997; Soldatkin, 2001). The main priority of the information society is high professional skills of its members. Only intelligent, highly educated members of the society are able to use their knowledge and skills efficiently in order to improve life of the whole mankind. Many scientists believe that informatisation requires from each person constant updating of knowledge. Education should become continuous for each person throughout the life (Solovov, 1997; Bogdanov, 2000; Soldatkin, 2004).

Since 2000 the Ministry of Education of the Russian Federation has been paying significant attention to distance learning. Various orders have been developed and adopted regarding the implementation of distance learning in higher education, vocational and secondary education (Order No. 137 “On the implementation of distance learning technologies”, 06.05.2005; No. 4452 “On approval of the methodology of distance learning technologies in educational institutions of higher education, institutions of secondary and continuous vocational training of the Russian Federation”, 18.12.2002; No.63 “Procedure of development and use of distance learning technologies”, 10.04.2005, etc.).

It has been long time since the problem of education quality ripened demanding improvement of the education quality in remote villages and rural schools. The necessity of distance technology transfer is solved by the system of the Russian education which is proved by organisation of distance learning structures in many Russian universities. Since 1997 the Russian Ministry of Education has been carrying

out a large-scale experiment in the field of distance learning involving 12 universities with different forms of ownership (Basharina, 2010). Now the number of educational institutions has increased by many times. In the course of the experiment the developed distance technologies – case, television, computer, internet and satellite – were tested and their applicability in various combinations without loss of quality of the educational process was proved. It should be noted that distance learning technology has a number of advantages, within the concept of “lifelong learning” as well, which allowed it to improve educational services not only in higher education, but also in continuous professional education (Polat, 1998; Soldatkin, 1999; Bogdanov, 2000; Khutorskoy, 2002).

Distance learning combines the advantages of educational models and achievements of the civilization; it is focused on vocational education, better meets the needs of customers and consumers of educational services. Distance learning is not a modification of correspondent studies; it is a new form of vocational education (Syachin, 2001; Rukosueva, 2009).

Distance learning contributes to:

- development of the personality in accordance with his/her own interests and inclinations.
- development of professional competence which is needed by a student-sportsman.
- receiving education without negative psychological effects.
- feeling oneself significant in a new environment.
- getting purely individual advice regarding the issue of studying the course content.
- developing as a person, etc.
- obtaining a broad and specific idea about the possible problems in the professional field through immersion in the diverse experiences of students-sportsmen.

- communication with teachers via voice portal- Internet.

The basic meaning of distance learning is not only to develop a system of transfer of educational information and technology using the Internet, but to develop highly competent, highly professional electronic learner's guides that would enable students to learn and improve themselves (Ioffe, 2005; Moskovchenko, 2006).

Consequently, significant attention paid to education in Russia, globalisation processes, formation of the world educational space, development of new information educational technologies radically alter the approaches to traditional issues of the educational institution. In this respect the idea of "lifelong learning" gets particular meaning as the common value and the purpose of the modern developed society (Tikhonov, 1997; Moskovchenko, 1998; Soldatkin, 2004; Moskalev, 2004). The objective needs of the modern society in continuing education will allow to introduce the distance learning system promoting lifelong learning at many universities.

Distance learning is used as a wide range of educational programmes and courses, ranging from professional development training courses to accredited higher education programmes that implement the possibility of close contact of students with their teachers and fellow students. The teacher-student relationship is fulfilled through implementation of the Internet technology.

For this reason, distance learning becomes an extremely popular form of training. The use of distance learning technologies is especially important for teaching students-sportsmen practicing winter sports, while they spend most of the educational process time at training camps and competitions in other cities across the country and abroad. It removes the main barrier that keeps many professional sportsmen from continuing education, allows to gain more

profound knowledge having a flexible schedule. In order to provide effective interaction in distance learning the following tools are used: computer programmes, Internet, e-mail, telephone, fax and regular mail.

Conceptual approaches of the strategy of distance learning of the physical education specialists

Methods of developing distance learning strategy for training specialists of physical education are based on the studies of our researchers (Petrov, 1999, Nikolaeva, 2001; Syachin, 2001; Moskovchenko, 2010). Distance learning in the system of training specialists of physical education is a new approach to the educational paradigm. The basic mission of education is to ensure the quality of training, the conditions of self-determination and self-realisation, improvement of social and spiritual culture; active creative attitude to gaining knowledge on the subject and by sports kind (Rukosueva, 2010; Malitikov, 2001).

The system of training human resources for work in the field of physical education and sports is the major component of the Department of Physical Education and Sports of Siberian Federal University. Training specialists for physical education and sports is a specific field, unlike the other areas of vocational education. The educational environment should focus both on traditional technologies and the development of a modern information technology. Such technologies include the setting lectures in the form of video-conferencing and on-line advising. For personal training the Internet should be used. Multimedia IP-based technology allows not only to transfer knowledge, but also to control the educational process. In Russia there are currently three levels of vocational (basic) physical education: primary (schools of Olympic reserve), secondary (colleges and technical schools) and

higher (Bachelor, Specialist and Master). The important component of the vocational education is studying during the whole course: passing tests, examinations, receiving theoretical and practical knowledge in the process of learning from qualified teachers, masters (Malitikov, 2000, Nikolaeva, 2001; Zaichenko, 2004; Polat, 2006).

However, for the students of the Department of Physical Education and Sports professional education is associated with certain limitations that define the problem. Hence, a question arises: how to solve the problem of students' learning without distracting them from the competitive process and at the same time create conditions for independent study of the theoretical component of the curriculum. This problem can be successfully solved by including information technology in the educational process, i.e. elements of distance learning.

In our opinion, a better distance learning programme for students-sportsmen of different modes of study at the Department of Physical Education, formation of their individuality require high-quality electronic educational methodical complexes. Educational materials developed for various disciplines at the Department of Physical Education and Sports of Siberian Federal University allow to enhance the independent work of the student-sportsman and the teacher can spend more time on individual advising.

Key aspects to which attention should be paid in the qualitative distance learning programmes for the students-sportsmen:

- Qualitative distance learning should not only copy the programme of lectures providing reading on the computer screen. The course should be carefully developed and designed in order to constantly engage students giving greater opportunities to manage the learning process, to give the opportunity to look for the information

in the electronic libraries in accordance with the course content.

- Distance learning programme can involve a range of ways to deliver information, including regular mail, telephone, fax, Internet, email, interactive television, teleconferencing, audio and video conferencing. Methods of communication should fit the learning style comfortable for you. Training courses can be synchronous or asynchronous. Synchronous courses require simultaneous participation of teachers and students and their interaction in real time. Means of information delivery in this case include interactive television and videoconference. Asynchronous methods as opposed to synchronous ones are more flexible and allow students to choose convenient time for working with the course materials. Programmes that use asynchronous modes of interaction involve the use of the Internet, email, video tapes and regular mail (Mitchell, 2009).
- During education the students-sportsmen studying the distance learning programme should not feel isolated from one another, there must be ways and methods for interaction of students with each other and with the teacher, students should know how to get help and support easily.

To solve the problem of training students-sportsmen it is necessary to solve the following organisational issues: each student gets an individual laptop, login and password for the entry into the database, so that in any part of the world the student could enter the portal of the Department and study the subject in his spare time, ask questions to the teacher, make a control work, complete a test, etc.

Specificity of sport activities does not allow the student to acquire the full volume of

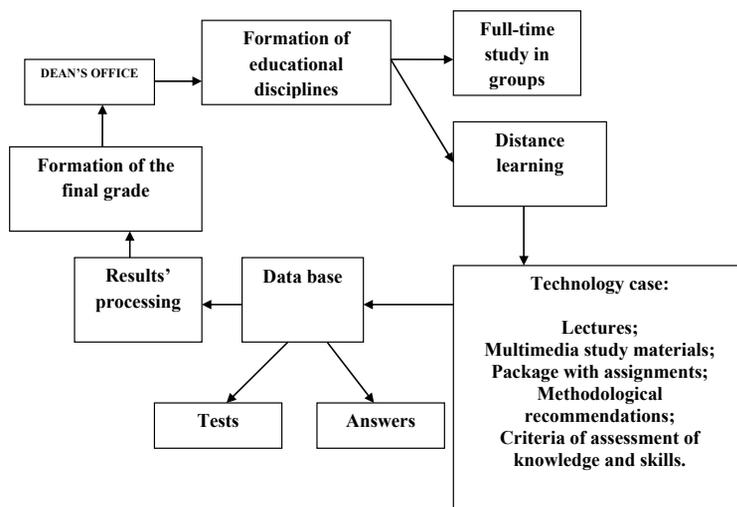


Fig. 1. The pattern of structural management of the integrative educational system

knowledge with implementation of the traditional form of training. In our opinion the developed pattern of the structural management of the integrative educational system (Fig. 1) will allow the Department of Physical Education and Sports to organise the educational process at a more qualitative level.

The strategy of development of the integrative distance learning system is a closed structure with feedback: Dean's office – learning – case – database – result – outcome – Dean's office.

The case of technologies is aimed at the students' independent study of lectures, electronic textbooks, multimedia learning materials, fulfillment of the assignments' package (seminars, laboratory exercises, and

trainings). The control of knowledge gaining must be implemented by means of the data bases, control works and essays. Computer networks can be used for audio and video conferencing, on-line consulting, correspondence and receiving of information from electronic libraries and data bases of universities.

Thus, the proposed strategy for the development of distance learning in training of physical education and sports specialists has a future not only as a method of improving the quality of educational services for students-sportsmen, but it will also allow to apply the experience of distance learning for further improvement of Bachelor, Master and Ph.D. students' training.

References

A.A. Andreev, *Vvedeniye v distantsionnoye obucheniye* [Introduction to distance learning]. Textbook. – Moscow: VU, 1997.

A.V. Basharina, *Rol' i mesto distantsionnykh obrazovatelnykh tekhnologiy v realizatsii kontseptsii "nepreryvnoye obrzovaniye" v Rossii* [Role and place of distance learning technologies in the concept of "continuing education" in Russia / All-Russian Scientific Internet Conference "Higher education in conditions of distance learning. Achievements, problems and prospects", Moscow 15.03.10-15.05.10.

V.M. Bogdanov, *Obrazovaniye v oblasti fizicheskoi kultury s pomoshchiyu kompyuternykh tekhnologiy* [Education in the field of physical education with the implementation of computer

technology] / Abstracts of UNESCO Int. Conf. "Education of adults as Russia's step into the 21st century (impulse of the V Hamburg Conference on Adult Education)"// V.M. Bogdanov, V.S. Ponomarev, A.V. Solovov. – Nizhny Novgorod: NNGASU, 1999. Part 2. – pp. 93-94.

V.M. Bogdanov, *Ispolzovaniye sovremennykh informatsionnykh tekhnologiy v teoreticheskoi i metodiko-prakticheskoi podgotovke studentov po fizicheskomu vospitaniyu* [Use of modern information technologies in the theoretical, methodological and practical training of students in physical education] // Materials of the All-Russian Scientific Conf. "Physical education and sports on the verge of the millennium" Saint Petersburg: Saint Petersburg State Pedagogical University, 2000. Part 2. – pp. 23-24.

Zh.N. Zaitseva, *Otkrytoye obrazovaniye: predposylki, problemy i tendentsii razvitiya* [Open education: background, problems and trends of development] Ed. by V.P. Tikhomirov. – MSUESI, Moscow, 2000.

T.P. Zaichenko, *Osnovy distantsionnogo obucheninya: teoretiko-prakticheskiy bazis* [Fundamentals of distance learning: theoretical and practical basis] / Textbook // T.P. Zaichenko. – Saint Petersburg: Herzen RSPU, 2004. – p. 167

A. Ivannikov, *Chto takoye distantsionnoye obrazovaniye* [What is distance learning] / A. Ivannikov, D. Bykov / Uchit. Gazeta [Teacher's newspaper] – 1994. – No. 38. – p. 8.

M.O. Ioffe, *O distantsionnom obrazovanii* [About distance learning] / M. Ioffe. – Moscow: Nezavisimaya gazeta [Independent newspaper], March 18, 2005

E.M. Malitkov, *Aktualniye problemy razvitiya distantsionnogo obrazovaniya v Rossiyskoi Federatsii i stranakh SNG* [Topical problems of development of distance learning in the Russian Federation and the CIS countries] / E.M. Malitkov, M.P. Karpenko, V.P. Kolmogorov // Law and Education. – 2000. – No. 1 (2). – pp. 42-54.

E.M. Malitkov, *Distantsionnoye obrazovaniye v Rossiyskoi Federatsii i stranakh SNG: voprosy teorii i praktiki* [Distance learning in the Russian Federation and the CIS countries: theory and practice issues] / E.M. Malitkov, M.P. Karpenko, V.P. Kolmogorov // Telecommunications and informatisation of education. – 2001. – No. 3. – pp. 16-36.

L.L. Moskaev, *Upravlenchiskiye i pravoviye aspekty distantsionnykh tekhnologiy organizatsii uchebnogo protsessa* [Managerial and legal aspects of distance learning technologies for the organisation of educational process] / L.L. Moskaev. – Krasnoyarsk: "Vesnik" of Krasnoyarsk State University, 2004. – No. 4. – pp. 58-59

O.N. Moskovchenko, *Aspekty valeologicheskogo distantsionnogo obrazovaniya* [Aspects of valeological distance learning] / Scientific and practical conference KraSDO-98 "Formation of distance learning system in the Krasnoyarsk Territory" / O.N. Moskovchenko. – Krasnoyarsk, 1998. – pp. 61-62

O.N. Moskovchenko, *Kompyuterniye tekhnologii v sisteme valeologicheskogo i fizkulturnogo obrazovaniya* [Computer technology in valeological and physical education] / O.N. Moskovchenko, A.V. Shumakov, V.V. Ivanitsky / Improving the quality of continuing professional education. Materials of International Scientific and Technical Conference: In 2 parts – Krasnoyarsk: Engineering and design centre of KSTU, 2006. Part 2. pp. 261-263

O.N. Moskovchenko, *Informatsionno-obrazovatelnoye soprovozhdeniye zdorovyeberegayushchei deyatel'nosti v vysshem uchebnom zavedenii/ Valeopedagogicheskiye aspekty zdorovyeformirovaniya v obshcheobrazovatelnykh uchrezhdeniyakh: sostoyaniye, problemy, perspektivy* [Informational and educational support for health-preserving activities in higher educational institution / Valeo-

pedagogical aspects of health formation in educational institutions: state, problems and prospects [Text]: Col. of abstracts. V All-Russian Scientific Conf. Ekaterinburg, April 22, 2010 / O.N. Moskovchenko, T.G. Rukosueva, M.A. Katsin, O.A. Katsin. – Ekaterinburg: Russian State Professional Pedagogical University, 2010. – pp. 79-83

N.I. Nikolaeva, *Dopolnitelnoye professionalnoye obrazovaniye vsfere fizicheskoi kultury i sporta: sostoyaniye i perspektivy* [Continuing professional education in physical education and sports: state and prospects] /N. I. Nikolaeva, Theory and practice of physical education. – 2001. N 12. – pp. 24-26.

P.K. Petrov, *Sovremenniy informatsionnyye tekhnologii v podgotovke spetsialistov po fizicheskoi kulture i sportu: vozmozhnosti, problemy, perspektivy* [Modern information technology for training specialists in physical education and sports: opportunities, problems and prospects] / P.K. Petrov // Theory and practice of physical education. – 1999. N 10. – p. 6-9.

E.S. Polat, *distantionnoye obucheniye* [Distance learning] Textbook. Ed. By E.S. Polat. – Moscow: Human.Ed. Centre VLADOS, 1998. – p. 192.

E.S. Polat, *Pedagogicheskiye tekhnologii distantionnogo obucheniya* [Educational technology of distance learning] Ed. by E. S. Polat. – Moscow: Academia, 2006.

Order No. 4452 of the Ministry of Education of the Russian Federation of December 18, 2002 “On Approval of the methodology of distance learning technologies implementation in educational institutions of higher, secondary and continuous professional training in the Russian Federation”.

T.G. Rukosueva, *Sovremenniy informatsionnyye tekhnologii v formirovani zdorovogo obraza zhizni / fizicheskaya kultura i sport v sisteme obrazovaniya* [Modern information technologies in forming a healthy lifestyle / physical education and sports in the education system] Materials of XI All-Russian Scientific Conference, Krasnoyarsk, April 17-19, 2009. Ed. by K.P.Bazarin / Yu.N. Yemets, T.G. Rukosueva, M.A. Katsin, I.N. Shevchenko. – Krasnoyarsk: Information and Polygraphic Complex of SibFU, 2009. pp. 145-147

T.G. Rukosueva, *Vozmozhnosti distantionnogo obrazovaniya v podgotovke spetsialistov fizicheskoi kultury i sporta / Fizicheskaya kultura i sport v sisteme obrazovaniya* [Possibilities of distance education in training specialists in physical education and sports / physical education and sports in the system of education] Materials of XII All-Russian Scientific Conference, April 23-25, 2010 Ed. by K.P. Bazarin. // T.G. Rukosueva. – Krasnoyarsk: Information and Polygraphic Complex of SibFU, 2010. – pp. 461-464.

V.I. Soldatkin, *Distantionnoye obucheniye: sushchnost, tekhnologiya, organizatsiya* [Distance learning: essence, technology, organization] / V.I. Soldatkin, A.A. Andreev. – Moscow: MSUESI, 1999. – p. 196.

V.I. Soldatkin, *Problemy sozdaniya informatsionno-obrazovatelnoi sredy otkrytogo obrazovaniya* [Problems of creating informational and educational environment of open education] (In accordance with the materials of the speech) / University management: practice and analysis – 2001. – No. 4 (19). – pp. 14-17

V.I. Soldatkin, *Internet-obucheniye: tendentsii i problemy* [E-learning: trends and problems]/ V.I. Soldatkin, S.L. Lobachev // Telecommunications and informatisation of education – Moscow, 2004. – No. 2 (21) – pp. 18-39.

A.V. Solovov, *Informatsionniye tekhnologii obucheniya v professionalnoi podgotovke* [Educational information technology in professional training] / A.V. Solovov // Higher education in Russia, 1995. – No. 2. – pp. 31-36.

A.V. Solovov, *Ob effektivnosti informatsionnykh tekhnologiy obucheniya* [About the effectiveness of educational information technology] / A.V. Solovov // Higher education in Russia. 1997. – No. 4. – pp. 100-107.

V.D. Syachin, *Perspektivy tekhnologii distantsionnogo obucheniya v vuze fizicheskoi kultury* [Prospects of distance learning technology in higher educational institution of physical education] / V.D. Syachin, M.A. Novoselov // Theory and practice of physical education. – 2001. N 12. – pp. 42-43.

A.N. Tikhonov, *Informatizatsiya rossiyskogo obrazovaniya i obshchestva vtselom* [Informatisation of the Russian education and the society in general] / A.N. Tikhonov, A.D. Ivannikov // International Cooperation, 1997. – No. 4. – pp. 1-3.

A. Khutorskoy, *Distantsionnoye obucheniye i ego tekhnologii* [Distance learning and its technology] / A. Khutorskoy / Computerra. – 2002. – No. 36. – pp. 26-30.

V.V. Yudin, *Obucheniye s ispolzovaniem distantsionnykh tekhnologiy: perspektivy i realii* [Education with implementation of distance technology: prospects and reality] / V.V. Yudin, Yu.V. Sokolova / Internet v biblioteke [Internet in the library]-Moscow, 2003. – pp. 86 – 92.

R. England, *A Survey of State Level Involvement in Distance Education at the Elementary and Secondary Levels* // ACSDE Research Monograph. – University Park: ACSDE, 1991.

H. Gruber, *Learning and strategic product innovation: Theory and evidence for semiconductor industry*. – Amsterdam etc.: North- Holland, 1994, 193 p.

N. Hammond et al. *Blocks to the effective use of information technology in higher education*. – Computers Educ., Vol.18, No. 1-3, pp.155-162, 1992.

A. Jones et al. *Providing computing for distance learners: a strategy for home use*. – Computers Educ., Vol.18, No. 1-3, 1992, pp.183-193.

I. Mitchell, *Distance Education: reflections on how it all began* / Distance Education. Vol.30, No. 1, May 2009, pp. 143-156

<http://www.caso.com>

<http://www.vu.org>

<http://www.users.portal.ru/rao-info>

<http://cnit.ssau.ru/ito/index.htm> Course “Information technology of distance learning”

<http://edu.of.ru/distantobr/map.asp>

Стратегия развития дистанционного образования в подготовке специалистов физической культуры и спорта

Т.Г. Рукосуева

*Сибирский федеральный университет
Россия 660041, Красноярск, пр. Свободный, 79*

В статье рассматриваются методологические подходы дистанционного обучения. Активное внедрение в учебный процесс формы дистанционного образования востребовано спецификой подготовки студентов факультета физической культуры и спорта. Следует отметить, что для студентов-спортсменов зимних видов спорта, членов сборных команд России традиционный подход менее эффективен, в связи с длительным отсутствием на учебно-тренировочных сборах и соревнованиях. В этой связи дистанционное образование рассматривается как метод управления качеством образования. Предложена концепция стратегии развития дистанционного образования в подготовке специалистов физической культуры и спорта. Интегративная образовательная система базируется на традиционном и дистанционном образовании. Стратегия развития дистанционного образования позволила разработать электронные версии лекционного курса по отдельным предметам (в основном для магистров) и лекционного курса по валеологии, создать программно-педагогические средства (учебные мультимедийные материалы), которые позволяют обучаемому визуально ознакомиться с материалами лекционного курса, особенно по медико-биологическому профилю и теории методики спортивной тренировки. Задания и методические указания к ним позволяют более качественно освоить предложенный материал по изучаемой дисциплине. Кроме того, приобретение навыков дистанционного образования расширяет возможности студента интегрироваться и выходить через Интернет в другие информационные порталы вузов России, предоставляющих услуги дистанционного образования.

Ключевые слова: стратегия, дистанционное образование, информация, компьютерные технологии, кейс.
