Kinesiology Education – Present and Future

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Abstract

Kinesiology, as a substrate science, and its applied fields occupy a special place in response to the negative challenges of modern civilization. This is especially true for kinesiology education and kinesiology teaching methodology, which, as an applied scientific discipline, is subordinate to the field of kinesiology education. Kinesiology readily solves its scientific problems, among which are the ones related to challenges imposed by modern civilization, not just at the substrate science level, but also in its applied fields, including kinesiology education and emphasizing the significant role of kinesiology teaching methodology. For the scientific achievements of kinesiology and kinesiology teaching methodology to be implemented into the theory and practice of kinesiology education, it is necessary to do the following things, among others: 1. Special attention should be paid to the affirmation of kinesiology education, especially through scientific research, on all levels of the educational vertical. 2. Flexible programmes should be implemented to educate professional staff that would meet the requirements of modern education and society’s new interests, who will know how to use modern educational technologies and who will have the necessary competences to successfully carry out these activities. 3. It needs to be ensured that the name of the school subject be changed to “Kinesiology culture“ in the new school curriculum, that is in the making as we speak. Additionally, the number of teaching hours should be increased so as to achieve congruence with the demands of the Lisbon Strategy, as well as with the new and increasingly more responsible role of this subject, especially as a developmental and compensational means. 4. With the goal of ensuring that we actively provide equal educational opportunities to all the participants in the educational process, kinesiology resources should be used to the greatest possible extent, especially the ones related to modern organizational frameworks, timely planning and programming, efficient implementation of methodological organizational frameworks and work methods,
work load and efficient monitoring and evaluation procedures in the field of kinesiology education. Of course, the stated views of the present and future of kinesiology education are not the only ones, on the contrary, they should be taken as one of the possible solutions for a better tomorrow for kinesiology education.

Key words: curriculum; kinesiology; kinesiology culture; kinesiology education; kinesiology teaching methods.

Introduction

To speak today, at the onset of the 21st century, about the present and the future of kinesiology education is impossible without taking into account fundamental factors which have to a greater or lesser extent determined not only its present but rightfully influence the future of this exceptionally relevant area of applied kinesiology.

In the attempt to find a clear and concise answer to the mentioned title, particularly from the aspect of power that influenced it, is influencing, and will continue to influence the future of kinesiology education, the following should be pointed out.

For a more convincing detection of the miles covered by kinesiology education (less yesterday, and more tomorrow), we must agree that scientific and technical discoveries, the advancement of information technology and ever strong influence of globalization are the main characteristics of the times we are living in (Findak, 2009). The consequences of the growth trend (positive and negative), are clearly influencing our life and work in a contemporary society, our health, and the more frequently present, hypokinesia. There is no doubt that it is the youngest who are most intensely registering changes brought about by civilizational trends (Findak, 2001; Hardman, 2008). In order for children, students, and youth to prepare themselves and respond to civilizational challenges, primarily from the aspect of negative influences on their health, it is necessary to ensure a continuous transformation of the educational system. From the point of view of kinesiology, the answer to what school, i.e. what quality school should look like today and tomorrow, will probably find agreement in that it should be: (1) a school that will provide safety and improvement of children’s health, influence their skills and characteristics, acquisition and perfect knowledge necessary for an efficient life and work in the contemporary society; (2) a school in which every student can reach success according to their capabilities; i.e. (3) a school in which everyone can succeed (Findak & Prskalo, 2005).

There is no doubt that in such a corpus of values special place is dedicated to our substrate science, its applied areas, particularly kinesiology education and derivatives of this area of applied kinesiology, i.e. the area of physical and health education, more precisely the subject physical and health education.

At present, kinesiology theory and practice are at such a level that enable the mentioned and other trends, particularly those related to the compensational role of physical exercise, to be solved with the assistance of scientifically founded exercise. In that respect, there seems to be a need for kinesiology education and consequently
the health and physical education teaching area, to take on a more influential role in establishing balance between contemporary man and the nature of life and work in contemporary society.

**Kinesiology Education at Present**

In analyzing present-day kinesiology education, it is inevitable to mention that a lot has been done in the development of our substrate science and its applied areas, including the area of kinesiology education.

Throughout that time, kinesiology has patiently and slowly paved its way of development, which is best seen in the fact that during the last five decades there was a surge of graduates, postgraduates and students in the doctoral programme of study. More than a thousand scientific and professional papers have been published and over a hundred professional development and scientific conferences have taken place. If to that we add that kinesiology is an autonomous science that deals with its scientific challenges at the level of substrate science, and influences the development of its applied areas, including the area of kinesiology education, then its role in profiling kinesiology education is even greater.

A significant role in scientific thought and finding solutions in the area of kinesiology education is ascribed to the methodology of kinesiology teaching as an applied scientific discipline. This is not only because methodology of kinesiology teaching is a science studying matters in education, and as such is in the area of kinesiology education (Findak, 1993). Its aim as a scientific discipline is to observe and study matters of educational work (Rosandić, 1986), search for new phenomena and awareness of the educational process, teaching process and process of physical exercise. Therefore, considering that in relation to kinesiology, as a substrate science, methodology of kinesiology teaching has its narrower area of scientific interest, that it is research oriented in the examination of matters of education in all organizational forms of work which exist in the area of kinesiology education, this applied scientific discipline has substrate value for kinesiology education. Surely, that fact has had a significant impact not only on the quality, but on the quantity of scientific research in the area of applied kinesiology.

Nevertheless, despite all the significant achievements in the area of substrate science and its applied areas, numerous research, indicators and examples from everyday practice show that the effort in answering all challenges springing from the demands of life and work in a contemporary society are not meeting demand. That is the case with all areas of applied kinesiology including the area of kinesiology education.

Moreover, we hold that this area of applied kinesiology is more emphasized than other areas. To support that, there are numerous examples showing that the current state of kinesiology education, i.e. physical and health education, is due to objective rather than subjective factors. In addition to the irrefutable evidence of the need and usefulness of exercise for the life and work of man in a contemporary society, particularly children and youth, people's awareness these days for the need for exercise
is infrequently closer to the one from the last century than this one. Proof of that is, among other, the fact that two hours of physical and health education in our schools has been present for over one century, as if absolutely nothing has changed during that period in the way people, children, and youth live? It also seems that the well-known fact, not to say truth, that for normal functioning man needs on average eight hours of work, eight hours of sleep and eight hours of leisure time during which time will be found for biotically conditioned exercise, seems to be overlooked or is overlooked! That that is the most needed, particularly for children and youth, more today than tomorrow, we have consistently been suggesting, proving and warning society for more than half a century, but it seems in vain. Despite the fact that the problem of coeducation has existed in theory and practice, i.e. in the current curriculum for physical and health education, separately for female and male students, it has not been solved to this day, or at least not in all schools. The same goes for carrying out all forms of work that are a constituent part of official curricula, but are not being carried out in all schools. Although the educational part of physical and health education in the National curricular framework is well situated, indicating that all scientific and professional preconditions for creating a quality subject curriculum are met, the mentioned advantages have not been utilized as the National curricular framework has been put “on hold” for, to us, unknown and dubious reasons. At the same time, that was a chance for the long sought for change of the name of the subject to be implemented, which has not happened to this day, and so on!

So, besides being the most efficient manner for the profession and professionals to provide answers to the present changes surrounding us, offering solutions based on achievements in the science of kinesiology (and the fact that kinesiology education, physical and health educational area, and physical and health culture are founded on for the present kinesiology as substrate science and teaching methodology as an applied scientific discipline), still does not seem applicable!? We find that to be the main reason why numerous comparative benefits of this area of applied kinesiology have not been utilized.

Understandably, there are other factors, among which a significant role is given to professionals, who have influenced the past and present state in kinesiology education. It is with pleasure that we maintain that in the area of educating professionals a lot has been achieved. Unfortunately, the same cannot be said for their professional development. In such a corpus of values, it is important to emphasize that the majority of our female and male colleagues do their work not only well but honorably. What is more, they still have the charisma that gives them strength to repair what others break in their everyday work. Unfortunately, the achievement in the education of professionals is still inadequately accompanied by their continuous professional development. That influences not only on the needs that come from their lifelong learning, but their advancement in the profession. If we agree that that is more important today than it was yesterday, as kinesiologists have access to more exact information about their
students, for which they should have competences which are key for lifelong learning, then we will most likely agree with the fact that along continuous modernization of education, they should also be ensured a more appropriate professional development.

It is evident that the above-mentioned does not cover all of the issues and perspectives that relate to present-day kinesiology education. On the contrary, they should be perceived as a reinforcement for devising possible and necessary directions for the further development of kinesiology education not only today but also tomorrow.

**The Future of Kinesiology Education**

The future of each science and structure depends and continues to depend on numerous factors that are impossible to anticipate today (Kenneth, 2005). The same goes for our own area of work making it rather difficult to predict the future. Therefore, the attempt to provide an answer to the title of this paper leaves us to nothing but set forth our aspirations and probabilities of events for a more successful future of kinesiology education and consequently of children, students and youth. Another reason being that the so-called first digital generation will most definitely engage in different work, activities and will most likely have different needs than present-day man (Bruner, 2003; David, 2005).

In that corpus of values, taking advantage of our substrate sciences and their applied areas is actually a requirement and basic condition for realizing the fundamental role of our area of work which is to give our profession more opportunities to help society in promoting a new style of life for all generations (Hatz, 2004).

In achieving that aim, the main route of our activity should be the promotion of a lifestyle in which exercise will be weaved into the culture of living. Our chance and our commitment is to prove and show people what the priorities for a healthy and happy life are, keeping in mind that health and happiness cease to exist without movement, i.e. exercise.

Here we must emphasize that such a task is not the sole responsibility of the profession and professionals, but should be carried out in a thoughtful, planned, persistent and systematic manner, where it is rightfully expected that the maximum contribution comes from the substrate science and its applied areas.

Kinesiology theory and practice have readily met civilizational challenges, particularly in answering to the ever-more-present motor inactivity of children and youth. Witness to that is the fact that present-day kinesiology readily provides answers to its scientific issues not only at the level of substrate science, but also in its applied areas including kinesiology education. Because of that, the coming period should, among other, continue with scientific research at all levels of education, particularly ones which are applied.

Speaking of the contribution of kinesiology teaching methodology in further development of kinesiology education, it must be pointed out that the need for
researching the phenomena of education exists in all organizational forms of work in this area of applied kinesiology, as it all comes down to the educational process (Findak, 1993). Kinesiology represents a starting point for all applied areas for appropriate interpretation of the anthropological status of those involved in exercise and for the establishment of changes that occur under the influence of exercise. Kinesiology teaching methodology represents the starting point in kinesiology education for proper interpretation of necessary procedures and their consequences which are undertaken with the aim to prepare, organize, carry out and evaluate the effect of a particular educational process. Teaching methodology and accordingly kinesiology teaching methodology is the only science researching the entire immediate educational process in the area of kinesiology education (Findak, 2003; Bežen, 2008).

For a successful implementation of scientific achievements in kinesiology and kinesiology teaching methodology into the theory and practice of kinesiology education and for ensuring a better future of this area of applied kinesiology, it is necessary, among other, to do the following:

1. One of the strategic lines of development of kinesiology education, and consequently the area of physical and health education, i.e. physical and health culture, should be to ensure an individualized approach in work. The reason for this is the presently emphasized development-compensational role of this area of education, i.e. the teaching subject which, it is expected, will be even more present in the future. What is more, children and youth should be prepared and qualified for applying the learned beyond school – their leisure time at home, during the weekend, holidays, later education, and finally for engaging in physical exercise, regardless of their fitness, and later throughout their life.

2. Multiple issues regarding the name of the subject physical and health culture has been present in theory and practice for more than 20 years. Evidence of that lie in the conclusions of Croatian summer schools of kinesiologists to which the author of this paper contributed significantly (xxx, 1994; 1998; 2001; 2007). The proposed change of name of this subject comes as a result of cognitive-theoretical achievements in kinesiology as a substrate science of kinesiology education as its applied areas, and kinesiology teaching methodology as an applied scientific discipline. The proposed name of the subject kinesiology education can find its place in the fundamental sciences, i.e. kinesiology as a substrate science. We are actually dealing with a compound, kinesiology culture, where kinesiology implies not only belonging to a fundamental science but where the etymology of the name and the word culture has been its integral component to this day. Everything points to the conclusion that this is not merely a formal change of name for this subject but a fundamental change with far-reaching positive implications. Every subject belongs to a fundamental science and analogous to that the subject kinesiology culture should, among other, ensure
a joint relationship of the general (kinesiology as substrate science) and the special (Bežen, 2008) (kinesiology education as an applied area of kinesiology to which the subject kinesiology culture belongs). It is evident that the newly proposed name achieves the mentioned, which cannot be said for the present-day name. Therefore, everything points to the conclusion that we cannot ignore the epistemology according to which belonging to a fundamental science – kinesiology as a substrate science, kinesiology education as its applied area and kinesiology teaching methodology as an applied scientific discipline is manifested in what kinesiology culture as a subject should continuously follow in the development of science. In that way, new scientific achievements in substrate sciences and its applied disciplines can be reflected in kinesiology culture teaching (Findak, 2014). In addition to firmly advocating that the professional content of a subject is more relevant than its name, in spite of the fact that the existence of a subject is least dependent on its name, we hold that a lot of relevance is in the name of a subject. What is more, not only because the name can precisely point to the area of activity, but because indirect and direct participants in the educational process can be informed about its influences and tasks, and consequently its role in the school's overall realizations of aims and tasks. Without doubt, the possible and necessary contribution of each subject in the school's realization of aims, tasks and content, is dependent not only on the ranking of a particular subject in the curriculum, but its status in the system of education (Findak, 2014). If to that we add that in Croatia, everything existing in this area has an attribution to the narrow substrate science, i.e. kinesiology, then it is easily concluded that changing the name of this subject is not a case of “word play” but a case of “word power”, and accordingly, the power of a message, which legitimately stems from the suggested name for this subject – kinesiology culture.

3. Considering that contemporary life and work is accompanied by physical inactivity particularly among children and youth (Findak, 2013), and that physical education classes represent the only regular weekly physical exercise for the majority of the student population between the ages of 6 and 18 (and that number is on the increase), physical education is taking on a more significant development-compensational role in the life of children, students and youth (Kovač, Jurak, & Strel, 2007). The emphasized development-compensational role of physical education classes comes from, on the one hand, the possible and necessary influence of physical exercise on the growth and development of students, and, on the other hand, from the need for neutralizing the consequences of hypokinesy to which children and youth are more frequently being exposed (Findak, 2012). This is, at the same time, the answer to all those who think, and often “silently”, or due to insufficient information suggest that the subject physical education, or the insufficient number of lessons of physical education can be substituted by involving students in extra-curricular or out-of-school physical activities!?! That
is simply not possible! Not only because teaching is the only organizational form of work which is represented in the curriculum (theme, organization, place, time) but because it is the only organizational form of work that involves all students - and that is why it cannot be substituted with any other organizational form of work (Findak, 2003). However, in addition to the fact that this subject has a more responsible and greater role by the day, that role cannot be realized presently in its fullest extent primarily due to the inappropriate number of hours of physical education lessons. In order to take advantage of the possibilities of physical and health education, the new curriculum should increase the number of hours of physical education lessons. In respect of all factors directly or indirectly affecting the educational system, and which are many, we suggest that younger pupils (grades 1-4 of primary school) have one lesson of physical education per day, and pupils of middle school age (grades 5-8) and secondary school students (grades 1-4 of secondary school) have three hours of physical education, i.e. every other day. This proposal on the number of hours of physical education lessons in primary and secondary schools in the Republic of Croatia is in agreement with suggestions of the European Union. Article 10 of the Resolution of the European Parliament that refers to the role of physical and health education, calls all members to introduce obligatory physical education lessons in the duration of at least three hours per week (xxx, EU, 2007).

In addition to the awareness that the suggested increase of the number of hours of physical education lessons will not meet the real needs of children, pupils and youth (according to the results of numerous scientific research), we hold that the new and more responsible development-compensational role of physical and health culture will be carried out to a greater extent than to this day. This is rightfully expected from this subject and this area of applied kinesiology.

4. In the attempt to increase the efficiency of this educational area, i.e. the subject, its curriculum should establish what is expected of its participants at the end of an educational period. More precisely, it should have clear learning outcomes or competences that children, students and youth should acquire throughout their entire education. By focusing on the acquisition of competences, the role of students and professionals in the educational process changes. In such a constellation, as opposed to focusing on teaching content, as was practice, the responsibility shifted onto the learning process, i.e. acquisition of set educational outcomes. Such a situation enables students not only to develop their own potential but refers them to how to use that potential in real life (Findak, 2011).

5. One of the basic conditions for ensuring more quality implementation of all organizational forms of work in the area of kinesiology education is that participants in the educational process are its genuine subjects. The realization of that requires work that is designed according to their authentic needs,
capabilities and interests. The essence of individualization is manifested in ensuring active equalization of educational capabilities for all participants in the educational process, particularly in teaching or physical exercise (Findak, 2010). Obviously, when the conditions for applying individualized work are limited, individualization can be ensured by implementing individualized forms of work. The answer to the question what should be individualized while doing any kind of organizational work in the area of kinesiology education is everything that contributes or that can contribute to individualized work with children, pupils and youth. We proudly state that the possibilities for carrying out individualized work in the area of kinesiology education, and consequently the physical education and health area are almost indefinite. In support to that statement there are facts according to which the implementation of relevant working procedures in this area of applied kinesiology are scientifically grounded in the substrate science and kinesiology teaching methodology as an applied scientific discipline. That enables us to solve more effectively all issues relating to the implementation of individualized forms of work in this area of applied kinesiology.

6. Whether the coming period will ensure greater quality of work primarily depends on the diagnosis. The diagnosis of the current, anthropological status of subjects represents one of the basic conditions for an effective implementation of procedures relating to planning, development, selection and application of organizational forms of work, methods of work, proportion, distribution and control of load, assessment and evaluation of outcomes, etc.

In the theory and practice, including the area of kinesiology education, various types of diagnostic procedures are implemented, but rarely is it educational diagnostics. Exercise, i.e., motor movement, in our domain of work represents something that is in medicine, for example, a drug, and the aim of educational diagnostics is to provide information on the current state of a subject’s motor knowledge (Findak, 2011). Therefore, there should be agreement that educational diagnostics is carried out along with other diagnostic procedures for a more efficient implementation of procedures.

7. With the aim to ensure, i.e. reach greater efficiency in work in the coming period, more attention should be given to intensification. It is evident that intensifying the process of physical exercise does not provide a universal recipe for ensuring quality work in the area of kinesiology education, but it surely contributes to more quality work in all organizational forms of work that exist in this area of applied kinesiology (Findak, 2012). That is why there is no room for the dilemma of whether to use the comparative advantages of intensifying exercising or not. What is more, any hesitation or delay in taking adequate measures to ensure efficient intensification of exercise can be one of the causes of the present weak work efficiency but also of the implementation of the overall quality of work.
order for achievements in kinesiology and kinesiology teaching methodology and consequently kinesiology education to become more dominant than to this day, particularly when dealing with the application of theoretical achievements in practice, in mediating new theoretical information and practical knowledge, the application of educational technology should be more frequent (Findak, 2015). Obviously, that is the case for other areas of our work and actions.

8. We should agree that a lot is expected and demanded of professionals today and more so in the future, not only that they are prepared to accept the challenge of rapid spread of knowledge, but that they can respond to the changes occurring in a contemporary society. Present-day professionals must, among other things, be capable of establishing a balance between the individual and group, between traditional and contemporary, between competition and cooperation, between local and national, between national and global (Kenneth, 2005). That is the reason why flexible programmes of education should be offered for future professionals who will meet contemporary demands and new societal interests, who will know how to utilize contemporary educational technology, or, in a nutshell, who will have the competences for successfully doing their work. Pursuant to that, we hold that present-day kinesiologist, and the kinesiologist of the future should be one who can carry out scientifically based diagnostics, prognostics, programming, organization, realization, assessment and evaluation related to the educational process, teaching process and process of physical exercise. What is more, in conditions when kinesiologists have access to exact information about their students, their role and their status change significantly, i.e. the status of the profession to which they belong. It is evident that being aware of the information remains a constituent part of a kinesiologist’s professional ethics, which represents a new and increased responsibility not only for our colleagues but for the kinesiology profession. Issues of present-day kinesiology education and the future of kinesiology education are most certainly issues that will become interesting for many professionals beyond this assembly.

With this plenary presentation, the author drew attention to only a few of the aspects relating to the theme of this conference. We anticipate that other approaches to the same or similar issues exist, and hope that through your papers, actions and thoughts you will contribute to the above-mentioned thoughts and solutions.

Nevertheless, I hold that we can all agree in one, and that is that through the many difficulties, kinesiology education is confidently heading into the future!

**Conclusion**

Based on the above mentioned, it is evident that issues relating to the present and future of kinesiology education most definitely deserve not only greater attention but also more answers to questions which determine this area of applied kinesiology. It is acceptable that the mentioned perspectives are not the only ones that address
the present and future of kinesiology education. On the contrary, they should be understood and accepted as (1) one of the achievements of kinesiology as a substrate science and kinesiology teaching methodology as an applied scientific discipline in considering their contributions to the development of work in the area of kinesiology education, (2) and as a vision of possible and necessary directions for further development of this important area of applied kinesiology, particularly from the aspect of its contribution in the preparation and training of children and youth for living and working in contemporary society.

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Kineziološka edukacija – sadašnjost i budućnost

Sažetak
U odgovoru usmjerenom na negativne izazove suvremene civilizacije posebno značenje pripada kineziologiji kao supstratnoj znanosti, njezinim primijenjenim područjima, a osobito kineziološkoj edukaciji i kineziološkoj metodici, koja, kao primijenjena znanstvena disciplina, za područje kineziološke edukacije ima supstratnu vrijednost. Kineziologija spremno rješava svoje znanstvene probleme, pa i one vezane uz civilizacijske izazove, ne samo na razini supstratne znanosti nego i u svojim primijenjenim područjima, uključujući i kineziološku edukaciju, a ističući značajan ulogu kineziološke metodike. Da bi se znanstvena postignuća kineziologije i kineziološke metodike što uspješnije implementirala u teoriju i praksu kineziološke edukacije, potrebno je, uz ostalo, učiniti sljedeće:
1. Naša osobita pozornost treba biti posvećena afirmaciji područja kineziološke edukacije posebice putem znanstvenih istraživanja, na svim razinama odgojno-obrazovne vertikale. 2. Fleksibilnim programima treba školovati stručne kadrove koji će udovoljavati suvremenim potrebama, novim interesima društva, znati se koristiti suvremenom odgojno-obrazovnom tehnologijom i koji će imati potrebne kompetencije za uspješno obavljanje te djelatnosti. 3. U predmetnom kurikuлу koji je upravo pred izradom osigurati ne samo promjenu naziva predmeta u „Kineziološka kultura“ nego i povećanje broja sati nastave, kako bi bio kongruentan sa zahtjevima koji proizlaze iz Lisabonske deklaracije, kao i s novom i sve odgovornijom, posebno razvojno-kompenzačijskom ulogom ovoga predmeta. 4. U cilju osiguravanja aktivnog izjednačavanja odgojno-obrazovnih mogućnosti svih sudionika, u odgojno-obrazovnom procesu treba se u još većoj mjeri koristiti svim kineziološkim resursima, a poglavito onim vezanim uz: suvremene organizacijske oblike rada, primjereno planiranje i programiranje, efikasno provođenje metodičkih organizacijskih rada, metode rada, volumen opterećenja, učinkovite procedure praćenja i vrednovanja rada u području kineziološke edukacije. Dakako, navedena vidjena vezana uz sadašnjost i budućnost kineziološke edukacije nisu jedina. Naprotiv, treba ih shvatiti kao jedno od mogućih rješenja ne samo za bolje danas nego i sutra kineziološke edukacije.

Ključne riječi: kineziologija; kineziološka edukacija; kineziološka kultura; kineziološka metodika; kurikul.