

The development of professionally important qualities as a result of various activities: Learning, sport, and labour market

El desarrollo de cualidades profesionales importantes como resultado de diversas actividades: Aprendizaje, deporte y mercado laboral

*Daniil Shmatkov, **Nadiia Bielikova, ***Yurii Brytan, ***María Sánchez Zafra

*Scientific and Research Institute of Providing Legal Framework for the Innovative Development (Ukraine), **Research Center for Industrial Problems of Development (Ukraine), ***Ukrainian Engineering Pedagogical Academy (Ukraine), ****University of Jaén (España)

Abstract. The purpose of this article is to define evolution of opinions about the formation of the in-demand qualities (soft skills) in the Ukrainian labour market and the possibilities of their formation through sports based on the opinions of key participants in the market. The basis of the study is a survey of professionals (104 respondents), students (314 respondents), and schoolchildren (326 respondents). The coherence of the respondents' answers was checked by the Spearman rank correlation coefficient and Kendall rank correlation coefficient. The correlation, factor, and cluster analyses were used in the study methods. Factor analysis allowed us to form obtained qualities into two factors (of primary and secondary importance). Using cluster analysis, all the qualities that were identified by the respondents were divided into three uniform groups. It was also proved that the clusters differ most in terms of the qualities that were named by schoolchildren, and the clusters which are the closest in terms of the qualities were highlighted by the employers. The study was conducted within the framework of new approaches to searching the tendencies and key elements of competition on the labour markets, and it complements the work (Cachón-Zagalaz et al., 2020) by including the aspects into the analysis of schoolchildren and highlighting the distinguishing aspects that are involved in their perception of in-demand qualities. The uniqueness of the qualities that were highlighted by the students who do sport and the importance of these qualities in the formation of professional competencies have been proved.

Keywords: learning, sport, labour market, qualities, soft skills.

Resumen. El propósito de este artículo es definir la evolución de las opiniones sobre la formación de las cualidades más demandadas (soft skills) en el mercado laboral ucraniano y las posibilidades de su formación a través del deporte a partir de las opiniones de los principales agentes del mercado. La base del estudio es una encuesta realizada a profesionales (104 encuestados), estudiantes (314 encuestados) y escolares (326 encuestados). La coherencia de las respuestas de los encuestados se comprobó mediante el coeficiente de correlación de rangos de Spearman y el coeficiente de correlación de rangos de Kendall. En los métodos de estudio se utilizaron los análisis de correlación, de factores y de conglomerados. El análisis factorial permitió formar las cualidades obtenidas en dos factores (de importancia primaria y secundaria). Mediante el análisis de conglomerados, todas las cualidades identificadas por los encuestados se dividieron en tres grupos uniformes. También se comprobó que los clusters son los que más se diferencian en cuanto a las cualidades nombradas por los escolares, y los clusters que más se acercan en cuanto a las cualidades fueron destacados por los empresarios. El estudio se ha realizado en el marco de los nuevos enfoques de búsqueda de las tendencias y elementos clave de la competencia en los mercados de trabajo, y complementa el trabajo (Cachón-Zagalaz, et al., 2020) al incluir los aspectos en el análisis de los escolares y destacar los aspectos distintivos que intervienen en su percepción de las cualidades demandadas. Se ha comprobado la singularidad de las cualidades destacadas por los alumnos que hacen deporte y la importancia de las mismas en la formación de competencias profesionales.

Palabras clave: aprendizaje, deporte, mercado laboral, cualidades, habilidades sociales.

Introduction

The trend of development of the world economy before the COVID-19 pandemic was the Fourth Industrial Revolution. Its essence consists in the rapid

development of genetics, artificial intelligence, robotics, nanotechnology, 3D printing and biotechnology and other advanced innovative fields that form not only the future of the development of national economies, global and local labour markets, but it also forms a portrait of an in-demand professional in this market, and it has long-term sustainability on it. This portrait should have both technical and soft skills, be hypocritical and adaptable to rapid changes.

Fecha recepción: 18-02-21. Fecha de aceptación: 08-06-21
María Sánchez Zafra
mszafra@ujaen.es

Based on the research from the World Economic Forum (2016; 2020), we can highlight sustainable (2016–2025 years) and oscillating (2020-202?) drivers of social and economic changes which will influence the changes in the labour markets and the demand for workforce. Oscillating social and economic drivers are: automation, in tandem with the COVID-19 recession; job creation slowing; inequality and the dual impact of technology and the pandemic recession; shorter window of opportunity to reskill and upskill. The main sustainable social and economic drivers are: changing work environments and flexible working arrangements (including remote work); high skills gaps; recognizing the value of human capital investment; climate change; rising geopolitical volatility; new consumer concerns; longevity and aging societies.

This list of drivers shows that the workforce is facing a number of challenges due to the rapid development of technology and social changes that are happening in the present-day world. Analysis of the dynamics of the development of the world labour markets shows that a human of working age will seek to improve his skills and develop the in-demand qualities and competencies throughout his career in a long-term outlook. These are the features of the Fourth Industrial Revolution. In addition to the challenges of the Fourth Industrial Revolution that have become common by 2020, the workforce will face additional challenges of economic stagnation due to the pandemic in the coming years, making it even more necessary to find additional competitive advantages in the Bank's labour market (Alston, 2015; Reuters Staff, 2020).

The problems of forming the qualities and competencies that are demanded by employers are presented in the scientific research in a fairly complete manner. Three areas of research can be distinguished:

- research that is focused on revealing the peculiarities of formation of basic competencies in the learning process, which can be conventionally called a «school of professional competencies» (Baker et al., 2017; Cripe & Manfield 2012; Ghimire & Martin, 2011; Grillenberger et al., 2016; Herta et al., 2019; Kunter et al., 2013; Mulder, 2014; Sederevièiûtë-Paèiauskiënë et al., 2014);

- research on the formation of not only competencies, but also personal qualities that are valued by employers, which can be called a «school of competitive advantages» (Barak, 2016; Froy et al., 2012; Santesmases, 2021; Smith & White, 2017; Weinberger, 2014);

- detailed research of the influence of different

aspects of life, including human health and physical activity on the formation of in-demand qualities (soft skills) and competencies; these research can be called a «school of the man of many talents» (Cachón-Zagalaz et al., 2020; del Campo et al., 2017; Erkut et al., 2014; Griffiths et al., 2017; Meek et al., 2012; Pedron et al., 2019; Swanson & Kent, 2017).

Despite more research, the problems of forming the in-demand qualities in the labour market and identifying the factors that influence them, forming these qualities require further elaboration. The purpose of this article is to define evolution of opinions about the formation of the in-demand qualities (soft skills) in the Ukrainian labour market and the possibilities of their formation through sports based on the opinions of key participants in the market.

Methodology

Design and participants

At the beginning of the study, a hypothesis was put forward that sports help people to form soft skills that are in demand on the labor market. To confirm the hypothesis, the main subjects of the market were identified, a research scheme was drawn up, and random probabilistic (taking into account the general population of the region's inhabitants) sample of an unfixed volume was formed. In general, the study used some ideas on the methodology presented in another study of the impact of sport engagement on graduate employability (Griffiths et al., 2017) with a change in the quantitative variables collected and small changes in the groups of participants. In the study, we separate soft skills (personal qualities, attitudes, and attributes) from technical skills (job-related skills) according to the state of the art (Griffiths et al., 2017), and we pay attention to the study of soft skills without reference to specific competencies.

A total of 326 participants, aged 14 to 18, took part in the anonymous survey. The data were aligned with the previously obtained survey results of professionals (104 respondents), students (314 respondents). The smaller number of professionals in comparison with other strata is justified by the fact that mostly there are several subordinates for each supervisor (de Reuver & van Woerkom, 2010; Kim et al., 2016). The surveys included all groups of key subjects of the labor market – schoolchildren (they form ideas and guidelines for the desired skills), students (they are at the stage of familiarization with the profession) and employers

(legislators of opinions on professional qualities). The inclusion of these groups in the stratified random sampling made it possible to analyze the full cycle of the formation of in-demand qualities in the labor market and to understand how consistent their opinions are, including the role of sport in this process.

The survey was taken in the schools, higher educational establishments and production enterprises in the Kharkiv region. The whole study involved 314 senior students for bachelor's and master's degrees (7 universities), where 53.2% were athletes, and 46.8% were non-athletes; 104 employers (managers of various levels) in the field of education and technology (18 organizations), and 326 schoolchildren (9 schools). A detailed review of the respondents (excluding schoolchildren and including the opinions of 442 parents) was previously presented (Cachón-Zagalaz et al., 2020); this article is a continuation of this study.

The research design involved three successive stages.

At the first stage, a questionnaire was developed in the form of an open survey, groups of respondents were formed and a survey was conducted among them.

At the second stage, the results were processed and factor analysis was applied, which was supposed to solve two problems: 1) to reduce the number of qualities that are highlighted by respondents identifying the most important ones, and 2) to determine the structure of relations between them.

At the third stage, cluster analysis was applied, which unlike factor analysis, is based on different classification algorithms, therefore, the results of grouping the qualities were slightly different and they allowed to expand the conclusions of the research that are based on several statistical interpretations. Using a combination of cluster and factor analysis allows us to satisfy two criteria:

- a rational combination of methods from the point of view of their simplicity (cluster analysis allows us to get a partition of the population that satisfies the criterion of optimality in a smaller number of iterations unlike, for example, discriminant analysis);

- sufficient variability of the results (the results of cluster and factor analysis differ, and their interpretation allows us to draw conclusions about the classification of soft skills with sufficient accuracy and validity).

The applicability of these methods is explained by a large array of initial data (88 unique qualities), the lack of obvious correlations between them, different characteristics of the respondents (age, professional and life experience, and the possession of information for

analysis) that proposed the qualities, and the capacity and some uncertainty of the concept of «quality» itself, which required systematization and allocation of averaged out in the process of analysis.

Parameters and tools

An anonymous online survey was conducted over two months of 2019 in schools in the Kharkiv region. The survey was conducted to contain data on the sex and age of the respondents. Informed consent was obtained from school administrations. We used methods of data analysis such as correlation, cluster, and factor analysis.

It should be indicated that some exceedingly extensive and contiguous qualities were combined into the process of processing the results. For example, the following: volition, willpower and self-control combined into self-control; stress resistance and steadiness combined into steadiness; conscientiousness and honesty combined into honesty; concentration of attention, attention to detail and attentiveness combined into attentiveness; focus on results and effectiveness combined into effectiveness (Cachón-Zagalaz et al., 2020).

Procedure

The survey results were transferred from separate forms to general files and processed using Excel and STATISTICA.

As a result, we have made an attempt to retrace the evolution of young people's expectations of university study, to compare it with the expectations of employers and to identify those competitive qualities that can be brought into the personality structure by physical activity.

The definition of the peculiarities of the formation of in-demand qualities in the labour market of Ukraine was based on a study of the relations between the employers' requirements for professional and personal qualities of jobseekers and the conformability of these requirements to the expectations of the schoolchildren and students as a future workforce.

At the first stage of the study, the students were asked to answer the question «Do you do sport?». Hereupon, the athletes were asked to indicate a sport they have done, afterwards, the following task was proposed: «Please list in order of importance 2-5 personal qualities that you have mastered as a result of sports activities that you can use in future professional activity» ... For non-athletes, the following task was proposed: «Please list in order of importance 2-5 per-

sonal qualities that you have mastered as a result from learning activities that you can use in future professional activity.» The professionals and schoolchildren were immediately asked to answer the question on the five most important personal qualities. At the same time, the professionals focused on the qualities which they would like to see in the workforce. The schoolchildren emphasized those priority qualities which they would like to develop during their studies at the university in order to find the desired job in the future.

Thus, each respondent was asked to name five key qualities that represent the competitive advantage of the workforce in the labour market. The qualities indicated by the respondents were ranked as follows: 1st – 5 points, 2nd – 4 points, 3rd – 3 points, 4th – 2 points, 5th – 1 point. The choice of such number of qualities is explained by the need, on the one hand, it considers the variety and priority of qualities reflected by each respondent and, on the other hand – «by intention to avoid frivolous answers» (Cachón-Zagalaz et al., 2020).

Research context

The essence of the research is to reveal the features of the process of formation of the soft skills which are demanded by employers and allow to achieve success in professional activities from the point of view of employers, students and schoolchildren. The context of the study is formed by the developments in modern pedagogy focused on solving the problems of finding the most effective mechanisms for the formation of professional competencies. However, classical approaches to the educational services need to be supplemented by the methods of other sciences. A person may meet the need for retraining, changing the sphere of activity, mastering a new profession, etc. more than once in the process of conducting professional activity. In general, we can say that uncertainty is a key element of the life stage of economic development that means that the workforce is required to have professional competencies with an extended set of professionally important qualities (self-control, responsibility, educability, etc.). Consequently, the problem is the identification at the beginning, and then the search for the ways to develop additional qualities that will improve the individual's competitiveness in the labour markets.

The study considered the need for further development of available approaches to studying the complex competitive advantages of a man in the labour

market. For example, there is a well-known model «Moving from a low to high-skilled equilibrium» (Froy et al., 2012) which shows how the competences of the workforce become more complicated as the demand for them continues to increase. However, these studies do not answer the question which factors influence the shape of certain human qualities and what can be done to develop the in-demand qualities.

There are good reasons for the analysis that allow us to consider the maximum number of additional factors that affect the formation of competencies and in-demand qualities in modern labour markets. For example, works studies (Cachón-Zagalaz et al., 2020; Erkut et al., 2014; Swanson & Kent, 2017) show the advantages of the athletes with completed higher education over non-athletes with completed higher education in the labour market due to many professionally important qualities which sport gives.

The workforce offers its professional competencies with additional professionally important qualities which it possesses in the labour market as a product, and if there is an employer's demand for them, the transaction takes place. Therefore, the employer offers wages, working conditions, fringe benefits for the employee, and the transaction takes place only if the employer has a demand for them. A desire to supply-and-demand equilibrium is a basic quality of market systems, however, due to instability factors, the system constantly deviates from its equilibrium state and a certain amount of instability occurs. The pursuit of equilibrium between supply and demand is a basic quality of market systems, but due to instability factors, the system constantly deviates from its equilibrium state and a certain amount of instability occurs.

The idea behind this research is to assume that when the influence of factors of external and internal instability increases (illustrated in the Introduction section), competition between employees begins not only on the basis of competitive advantages (professional competence), but also in additional competitive advantages (qualities). This tendency lies within the framework of modern concepts of marketing and competitiveness: as competition increases, the basic functions of products become similar (all manufacturers achieve this) and they begin to compete on additional functions and benefits that can bring to them the consumer. We can see a reflection of this thesis in modern studies on skills development (Kankaraš et al., 2016; Sasso & Ritzen, 2019).

The employee offers the following elements to the

employer:

- qualification;
- professional competencies, including soft skills, values, etc.;
- other personal characteristics (gender, age, physical condition, etc.).

Some elements may be considered changeable and the others may be unchangeable. Gender is unchangeable, as well as age. An employee cannot influence these characteristics in any way. Health is a partly variable characteristic: it can be improved, but improvement is possible only within certain limits. Professional competencies can be changed by improving the level of their qualifications, which is necessary, but it is a time-consuming process. Therefore, the element of «professionally important qualities» (soft skills) is the most diverse, flexible, and develops regardless of the development of other components of competence. It is reasonable to assume that this element will be located closest to the personality core in personality organization, and it will have the maximum variability and time rate.

Results

This research shows which qualities are demanded by professionals in the labour market, how they meet the expectations of schoolchildren and students. The analysis and interpretation of the answers of students involved in sport proved that sport can be one of the key factors that influence the formation of personal qualities required demanded by the employers.

The survey shows 88 professionally important qualities of various levels of priority.

The most popular sports among athletic students were: physical activities accompanied by music, weightlifting, athletics, playing sports, martial arts and other sports. Other sports include swimming, cycling, kayaking, equestrian sports, winter sport, shooting, extreme sports (Cachón-Zagalaz et al., 2020).

On average, schoolchildren named 3.9 qualities per person; non-athletic students – 3.5; athletic students – 3.3; professionals – 4.1.

The schoolchildren named 20 unique qualities relatively the athletic students: altruism, analytical thinking, mutual support, kindness, non-conflictiveness, neatness, tenderness, patriotism, social intelligence, exactingness, assiduity, charisma etc. the schoolchildren named 18 unique qualities relatively non-athletic students: venturesome, cheerfulness, HLS, leadership,

patriotism, personal presentation, decency, systematicity, versatility, firmness, charisma, enthusiasm etc.

The athletic students named six unique qualities relatively to the schoolchildren: flexibility, maximalism, reaction, self-criticism, cunning, sense of humor. Non-athletic students named 8 unique qualities relatively to the schoolchildren: flexibility, adaptability, spatial thinking, self-criticism, justness, cunning, sense of humor.

The processing of the results showed that the highest priority qualities, according to the students, in general, are the following: communicability, responsibility, self-control, attentiveness. These are the qualities that allow us to achieve success in competing in the labour market.

According to the athletic students, qualities such as self-control, endurance, effectiveness, self-confidence, responsibility are prior to succeed in professional activities.

According to non-athletic students, the most attractive qualities of the workforce are communicability, responsibility, self-control, attentiveness.

The employers' opinion differs from the students' opinion. According to the survey results, the highest priority qualities that determine success in the labour market are responsibility, diligence, honesty, communicability.

The opinions of schoolchildren were different too. They put self-development at the top of the list, and professionalism, tact, communicability were also prioritized.

At the same time, schoolboys named the following priorities: professionalism (130), self-development (101), tact (90).

The schoolgirls identified: self-development (230); creativity (157); tact (141).

Thus, the ratings of priority qualities varied between different groups of the respondents. The calculation of Spearman Rank Order Correlations at $p < .05$ showed that the values of their pairwise rank correlations are at the average level, but it is less than 0.6 (Table 1).

Table 1.

Spearman Rank Order Correlations

	Students	Professionals	Schoolchildren
Students	1.000000	.588006	.456631
Professionals	.588006	1.000000	.559461
Schoolchildren	.456631	.559461	1.000000

However, the results of ANOVA analysis confirm the general consistency of the students, employers, and schoolchildren ratings on the following parameters:

Chi Sqr. ($N = 6$, $df = 49$) = 181.9081; $p = .00000$

Kendall Coefficient of Concordance = .6187 Average rank $r = .5425$

The pairwise correlation coefficients between the groups of respondents have the following values:

- Professionals / All students = .5912 (fig. 1);
- Professionals / Schoolchildren = .48524 (fig. 2);
- All students / Schoolchildren = .3671 (fig. 3).

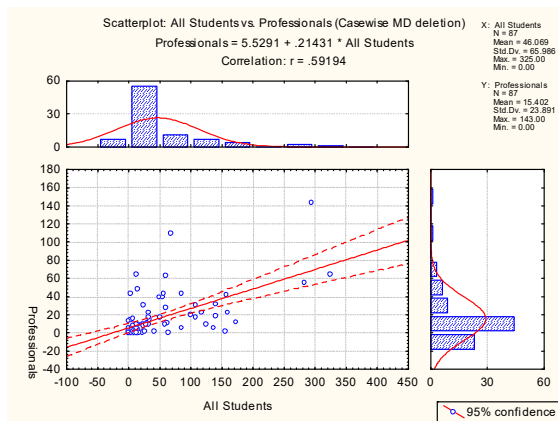


Fig. 1. Scatterplot of the correlation between the responses of professionals and all of students

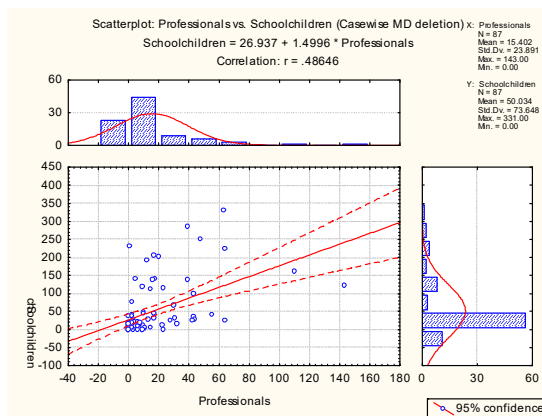


Fig. 2. Scatterplot of the correlation between the responses of professionals and all of schoolchildren

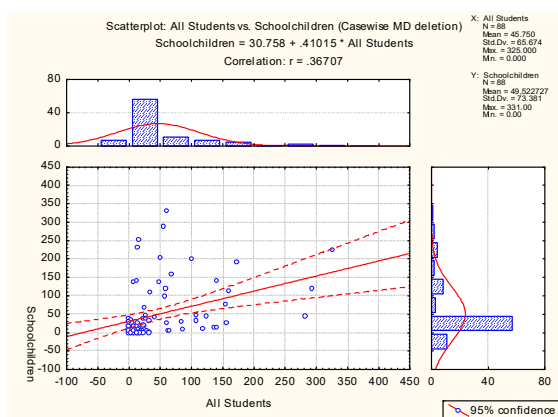


Fig. 3. Scatterplot of the correlation between the responses of all students and schoolchildren

In order to conduct a more detailed analysis of the answers of all three categories of the respondents and to summarize the obtained results, the cluster and factor methods of multivariate statistical analysis were applied.

Factor analysis showed that the qualities of the higher priority for the entire population of the respondents (schoolchildren, students, professionals) are those that can be combined into two factors (Table 2).

No. of the Factor	Eigenvalue	% Total - variance	Cumulative - Eigenvalue	Cumulative - %
1	42.68010	48.50012	42.68010	48.50012
2	24.49715	27.83767	67.17726	76.33779

According to the rules of analysis, the factors included qualities with a test coefficient of more than .70. On this basis, the structure of factor 1 «Qualities of primary importance» included 39 qualities that, according to employers, students, and schoolchildren's opinion, are competitive advantages in the labour market. The qualities, included in the first factor, explain 48.5% of the dispersion in the respondents' scores.

The structure of factor 2 «Qualities of secondary importance» included 33 qualities. This factor can explain 27.8% of the dispersion in the respondents' scores.

Further 16 qualities with a factor loading of less than .70 were not included in the highlighted factors. Table 3 presents some of the qualities included in the factors which have the highest factor loadings of greater than .80.

Table 3. The results of factor analysis of the qualities highlighted by the employers, students and schoolchildren (qualities with the highest factor load are presented, = .90)

Factor 1	Factor 2
"Qualities of primary importance" explains 48.5% of the dispersion in the respondents' scores	"Qualities of secondary importance" explains 27.8% of the dispersion in the respondents' scores
Altruism (.91); Mutual support (.94); Attentiveness (.93); Critical thinking (.91); Educability (.99); Independence (.99); Social Intelligence (.92)	Flexibility (.91); Responsibility (.94); Scheduling time and loads (.98); Making decisions (.96); Teamwork (.90); Determination (.96); Self-control (.93); Self-criticism (.95); Precision (.98); Goal setting (.93); Sense of humor (.95).

Using cluster analysis (k-means method), all the qualities identified by the respondents were divided into three uniform groups (Fig. 5).

The first cluster includes 13 qualities, including such as empathy (distance from respective cluster center – 86.17); kindness (44.81); diligence (48.97) and others.

The cluster number 2 includes 14 qualities: communicability (distance from respective cluster center – 123.17); responsibility (97.29); self-control (67.52) and others.

The third cluster includes 61 qualities, as well as: punctuality (distance from respective cluster center – 45.02) proactivity (33.65); honesty (33.58), etc. This cluster is the most numerous, but it contains the qualities that scored less points (the Euclidean distances of its components to the supposed center are lower than those of other clusters, varying between 1.56 ... 45.02). Thus,

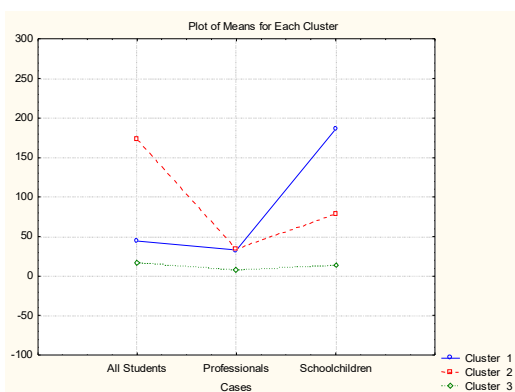


Fig. 4. Graph of average values of characteristics of the clusters of qualities highlighted by the employers, students, and schoolchildren

although the set of the qualities indicated by the respondents is large, the priority ones indicated by the majority are not so numerous and they mostly fall into clusters 1 and 2.

It also follows from fig. 4 that the clusters are different in qualities that were named by the schoolchildren, and the clusters that are similar in qualities were identified by the employers.

Discussion

Thus, we confirmed the possibilities of forming a wide range of soft skills in the process of physical activity (Griffiths et al., 2017), described their diversity, assessed and compared in this context the expectations of schoolchildren, and students from studying at the university, as well as the expectations of employers regarding their subordinates. We defined evolution of opinions about the formation of the in-demand qualities from schoolchildren to employers and related them to the soft skills that are formed during physical activity.

The results of the survey of professionals are the most coherent; intermediately, this may indicate that their opinions are the most stable and formed. Unlike factor analysis, which reduces the number of qualities in the factor analysis due to those which have a low factor load, cluster analysis allowed to identify three homogeneous clusters of qualities.

In general, both methods allow us to obtain additional information on the qualities named by the respondents in terms of their possible classifications and make analysis and interpretation easier.

This research is a contribution to the development of a theoretical approach to determining the features of the formation of in-demand qualities in the labour market and the opportunities of their development through involvement into physical activity. The analysis is based

on the concept of «professionally important quality» as a certain characteristic of personality that constitutes additional, and in some cases, basic, competitive advantage in the labour market. In fact, the selected qualities are more personal than professional ones, however, the demand for these qualities by the employers allows them to be considered as an addition to the compulsory qualifications, professional competencies, and workforce characteristics.

The students, employers and schoolchildren opinions which personality traits contribute to professional success are divided. An analysis of the top priorities chosen by these groups of respondents shows that only communicability made it into the top of ten priorities of employers, students and schoolchildren. Responsibility, self-control, effectiveness were indicated by the students and employers, but not by schoolchildren.

Attentiveness was indicated by the students and schoolchildren, but not by the employers. Self-development, diligence were indicated by the employers and schoolchildren.

It should be noted that schoolchildren indicated one unique quality – patriotism, which was not indicated by students and employers. The development of this quality is considerably formed by sports (Bas, 2016), since athletic feats, participation in team competitions stimulate a sense of patriotism.

In general, it can be concluded that opinions on the most important qualities change throughout life: schoolchildren emphasize more general personal qualities, students and professionals underscore various qualities that will potentially contribute to success in professional activity. It can be also seen that the students who do sport give preference to a number of volitional, cognitive and leadership qualities which are not indicated as top-priority by professionals, but they can expand the competitive advantage of an individual. Some inconsistency in the views of students and schoolchildren can be explained by a lack of formation of opinions and limited vocabulary stock of the latter, as well as the change in students' opinions is affected by higher education.

The identification of homogeneous groups of qualities using factor and cluster analyzes made it possible to establish that it is advisable to consider not each quality separately, but some of their combination (two or more factors, clusters), which allows to structure a sufficiently large amount of raw data and to increase the efficiency of decisions on the development of each subject of the

labour market.

The analysis of the qualities chosen by different respondents and their entire set allows us to conclude that all qualities that received a large number of points, as well as high indicators of the test coefficient are quite universal. For example, ambitiousness (.85), attentiveness (.93), proactivity (.85), educability (.99), decency (.83), diligence (.87), and goal setting (.93) make for success in any field of activity. Responsibility is also a universal quality that has received the highest scores by employers.

However, these qualities are not naturally given, therefore, they can be developed and improved throughout life, «the physical activities only embody potentials for developments; they are not enough in themselves to ensure positive development» (Bailey, 2018). The sport is one of the ways to develop personal qualities (soft skills). This tendency stays within the mainstream of the general biological channel: activity improves adaptability to the environment.

As it was previously shown (Cachón-Zagalaz et al., 2020), the advantages of the athletic students in the labour market are evident in the form of unique qualities that form sport – self-control, persistence, responsibility, effectiveness, self-confidence, discipline, perseverance, steadiness, goal setting, scheduling time and loads, etc. The choice of these qualities shows that there are such personal characteristics that help to obtain and develop professional competencies, and adapt to changing external environment.

While academics suggest more thoughtful incorporation of work experience into curricula (Baker et al., 2017), we believe that developing soft skills does not necessarily require work experience, and that sports are an effective mean of the corresponding development.

In general, the set of qualities that young people without sporting attitudes consider to be suitable for the labour market, correlates with the opinion of professionals. However, the qualities highlighted by the athletic students may serve as an additional competitive advantage in this market, an unspoken need for professionals.

In addition, sport contributes to the preservation and improvement of health which is important in a pandemic now and it will be important in the future when the pressure on the pension system increases, as well as during economic crises and inevitable periods of unsustainable development. According to scientists (Dewenter & Giessing, 2015), a variety of professionally important qualities affected by the influence of sport,

can bring not only a pay rise but it also gives the advantages in work search, career growth, speed and quality of professional tasks, labour capacity, etc.

Limitations

The limitations of the study related to the form of the survey (an open-ended question), which, on the one hand, allowed to provide a wide variation of the qualities chosen by respondents, on the other hand, made the conceptual differentiation of the content of some qualities difficult. Although the respondents were not required to define each named quality, this limitation was partially removed by combining similar qualities. At the same time, the subjective approach of the researchers can be a limitation to this process. Another limitation is not dividing the schoolchildren into athletes and non-athletes.

In addition, many respondents (mostly schoolchildren) called such a quality as «competence» which is essentially a concept of a higher order. We considered this aspect in the process of applying statistical methods, however, we did not consider «competence» as a professionally important quality to be formed in a particular type of activity.

The sampling limitations were only geographical – the survey location was Kharkiv and Kharkiv region. The problem of the extrapolation of the obtained results to other regions and countries requires further analysis. The different number of respondents for each group is based on the choice of a stratified sample for this empirical study. A clarification of extrapolation possibilities also requires further analysis.

Conclusion

This research was conducted within the framework of new approaches to searching the tendencies and peculiarities of competition in the labour markets (Griffiths et al., 2017; World Economic Forum, 2020; UNDP, 2020) and supply the previous research (Cachón-Zagalaz et al., 2020) by including schoolchildren into the analysis and highlighting unique aspects related to their perception of in-demand qualities.

An analysis of the opinions of various subjects of the labour market – employers and future professionals (schoolchildren and students) on personality traits that ensure career success was carried out. A comparison of priorities highlighted by different groups of respondents revealed that their coherence is average, the most

coherent are the opinions of students and professionals, and the least coherent are the opinions of students and schoolchildren.

This research makes it possible to track the transformation of the young people's views on soft skills during their study and sport, and to compare these views to the requirements of the labour market.

The uniqueness of the highlighted qualities of students who do sport and the importance of these qualities in the formation of professional competencies has been proved. The directions for further research are to search for qualities formed as a result of physical activity and in-demand qualities in the labour market, as well as effective mechanisms for their development.

References

- Alston, P. (2015). *Special rapporteur on extreme poverty and human rights. A/HRC/29/31*. Retrieved from <http://www.ohchr.org/EN/Issues/Poverty/Pages/AnnualReports.aspx>.
- Bailey, R. (2018) Sport, physical education and educational worth. *Educational Review*, 70(1), 51-66. DOI: 10.1080/00131911.2018.1403208.
- Baker, C., Loughren, E. A., Dickson, T., Goudas, M., Crone, D., Kudlacek, M., ... & Tassell, R. (2017). Sports graduate capabilities and competencies: a comparison of graduate and employer perceptions in six EU countries. *European Journal for Sport and Society*, 14(2), 95-116. <https://doi.org/10.1080/16138171.2017.1318105>.
- Barak, M. E. M. (2016). *Managing diversity: Toward a globally inclusive workplace*. Sage Publications.
- Bas, M. (2016). The evaluation of the university students patriotism levels according to gender, age, family structure and sports activities. *European Journal of Education Studies* 2(2), 34-43.
- Cachón-Zagalaz, J., Sánchez-Zafra, M., Lara-Sánchez, A., Zagalaz-Sánchez, M. L., & Shmatkov, D. (2020). Study on the relationship between physical activity and the development of professional competence: Findings from a study in Ukraine. *Journal of Human Sport and Exercise*, 15(3), 591-607. doi:<https://doi.org/10.14198/jhse.2020.153.10>
- Cripe, E. J., & Manfield, R. (2012). *Competency development guide. Fort Lauderdale, FL: Workitect*.
- de Reuver, R., & van Woerkom, M. (2010). Can conflict management be an antidote to subordinate absenteeism?. *Journal of Managerial Psychology*, 25(5), 479-494. <https://doi.org/10.1108/02683941011048382>
- del Campo, D. G. D., García-López, L. M., Pastor-Vicedo, J. C., Romo-Pérez, V., & Eirín-Nemiña, R. (2017). Percepción del profesorado sobre la contribución, dificultades e importancia de la Educación Física en el enfoque por competencias. *Retos*, 31, 34-39.
- Dewenter, R. & Giessing, L. (2015). The Effects of Elite Sports Participation on Later Job Success. *DICE Discussion Paper*, 172.
- Erkut, S., Pappano, L., & Tracy, A. J. (2014). Does Playing a Varsity Sport Have Employment Advantages? An Audit Study of Leadership, Sex, and Race. In *122nd American Psychological Association Annual Convention*, Washington, DC, August 7-10.
- Froy, F., Giguère, S., & Meghnagi, M. (2012). Skills for Competitiveness: A Synthesis Report. *OECD Local Economic and Employment Development (LEED) Papers*, No. 2012/09, OECD Publishing, Paris. <https://doi.org/10.1787/5k98xwskmvr6-en>.
- Ghimire, N. R. & Martin, R. A. (2011). A professional competency development model: Implications for Extension educators. *Journal of International Agricultural and Extension Education*, 18(2), 5-17. doi:10.5191/jiaee.2011.18201.
- Griffiths, K., Bullough, S., Shibli, S., & Wilson, J. (2017). The impact of engagement in sport on graduate employability: implications for higher education policy and practice. *International Journal of Sport Policy and Politics*, 9(3), 431-451. <https://doi.org/10.1080/19406940.2017.1359648>.
- Grillenberger, A., Przybylla, M., & Romeike, R. (2016). Bringing CS innovations to the classroom: a process model of educational reconstruction. *ISSEP 2016*, 31.
- Herta, C., Voigt, B., Baumann, P., Strohmenger, K., Jansen, C., Fischer, O., Zhang, G., & Hufnagel, P. (2019). Deep Teaching: Materials for Teaching Machine and Deep Learning. In *HEAD'19. 5th International Conference on Higher Education Advances*. Editorial Universitat Politècnica de València. 1153-1131. <https://doi.org/10.4995/HEAD19.2019.9177>.
- Kankaraš, M., Montt, G., Paccagnella, M., Quintini, G., & Thorn, W. (2016). Skills Matter: Further Results from the Survey of Adult Skills. *OECD Skills Studies*. *OECD Publishing*.
- Kim, T.Y., Lee, D. R., & Wong, N.Y. S. (2016). Supervisor humor and employee outcomes: The role of social distance and affective trust in supervisor. *Journal of Business and Psychology*, 31(1), 125-139. <https://doi.org/10.1108/02683941011048382>

doi.org/10.1007/s10869-015-9406-9.

- Kunter, M., Kleickmann, T., Klusmann, U., & Richter, D. (2013) The Development of Teachers' Professional Competence. In: Kunter M., Baumert J., Blum W., Klusmann U., Krauss S., Neubrand M. (eds) *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers. Mathematics Teacher Education*, 8. Springer, Boston, MA. https://doi.org/10.1007/978-1-4614-5149-5_4.
- Meek, R., Champion, N., & Klier, S. (2012). *Fit for release: how sports-based learning can help prisoners engage in education, gain employment and desist from crime*. Prisoners Education Trust.
- Mulder, M. (2014) Conceptions of Professional Competence. In: Billett S., Harteis C., Gruber H. (eds) *International Handbook of Research in Professional and Practice-based Learning. Springer International Handbooks of Education*. Springer, Dordrecht. https://doi.org/10.1007/978-94-017-8902-8_5.
- Pedron, S., Emmert-Fees, K., Laxy, M., & Schwettmann, L. (2019). The impact of diabetes on labour market participation: a systematic review of results and methods. *BMC Public Health*, 19(1), 1-13. <https://doi.org/10.1186/s12889-018-6324-6>.
- Reuters Staff (2020). Global economic recovery may take five years, World Bank chief economist says. *Reuters*. Retrieved from <https://www.reuters.com/article/us-health-coronavirus-worldbank/global-economic-recovery-may-take-five-years-world-bank-chief-economist-says-idUSKBN26816L?il=0>.
- Sasso, S., & Ritzen, J. (2019). Sectoral cognitive skills, R&D, and productivity: a cross-country cross-sectional analysis. *Education Economics*, 27(1), 35-51. <https://doi.org/10.1080/09645292.2018.1515309>.
- Santesmases, J. S. (2021). Estudio de la transversalidad de los contenidos en Educación Física a través de los currículos competenciales. *Retos*, 40, 419-429.
- Sederevièiûtë-Paèiauskienë, •., Miškiniënë, M., & Norkienë, E. (2014). Development of technological competencies: a precondition for life long learning. *Pedagogika*, 113(1), 123-131. doi:10.15823/p.2014.1756/.
- Smith, E. & White, P. (2017), A 'great way to get on'? The early career destinations of science, technology, engineering and mathematics graduates, *Research Papers in Education*, 32(2), 231-253.
- Swanson, S. & Kent, A. (2017). Passion and pride in professional sports: Investigating the role of workplace emotion. *Sport management review*, 20(4), 352-364. <https://doi.org/10.1016/j.smr.2016.10.004>.
- UNDP (2020). *Global Knowledge Index 2020*. Retrieved from https://knowledge4all.com/Reports/globalknowledgeindex2020_en.pdf.
- Weinberger, C. J. (2014). The increasing complementarity between cognitive and social skills. *Review of Economics and Statistics*, 96(4), 849-861. https://doi.org/10.1162/REST_a_00449.
- World Economic Forum. (2016). The future of jobs: Employment, skills and workforce strategy for the fourth industrial revolution. *Global Challenge Insight Report*.
- World Economic Forum. (2020). *The Future of Jobs Report 2020*.

