

математической статистики. Нами изучено влияние разработанной программы на развитие двигательных способностей старшеклассницами и исследованы особенности проектирования их жизненных перспектив. Под влиянием занятий по разработанной оздоровительно-рекреационной программе на основе применения средств ментального фитнеса произошли статистически достоверные положительные изменения в их отношении к собственному телесному потенциалу, а также в показателях физической подготовленности старшеклассниц.

Ключевые слова: *старшеклассницы, рекреационно-оздоровительная программа, ментальный фитнес, двигательные способности, саморефлексия телесного потенциала.*

SUMMARY

Dubynska Oksana, Marychenko Olha, Bielia Anastasiia. Influence of recreational and wellness program on physical fitness and mental state of high school girls on the basis of mental fitness.

A wellness and recreational training program based on the use of mental fitness has been developed, aimed at correcting physical fitness and improving mental state of high school girls. Methods: analysis and generalization of scientific-methodological literature, psychological-pedagogical methods, pedagogical experiment, testing, methods of mathematical statistics. We have studied the impact of the designed program on the high school students' motor skills development and explored the peculiarities of designing their life prospects.

After the experiment, which is related to testing the effectiveness of recreational technology based on the use of mental fitness, we determined the dynamics in the number of high school students with different types of representation of bodily potential, which showed positive changes in the experimental groups under the influence of the proposed experiments. It can be stated that under the influence of the classes on the developed wellness and recreation program there were significant positive changes in the attitude of the high school students to their own physical potential. The number of girls who are more receptive to their own self has increased, showing confidence in achieving the goal, willingness to overcome failure, at the expense of their abilities and self-activity. The results of the experiment testify to the expediency of introducing the author's program in the physical education of high school students.

Key words: high school students, recreational and wellness program, mental fitness, motor skills, self-reflection of physical potential.

UDC 304:316

Izabela Kiełtyk-Zaborowska
Uniwersytet Jana Kochanowskiego w Kielcach Filia
w Piotrkowie Trybunalskim
ORCID ID 0000-0003-4120-6446
DOI 10.24139/2312-5993/2019.08/066-077

ETHICAL ASPECTS OF SOCIAL NETWORKING.

The article poses the question about the importance of social networking in the lives of students. Attention is drawn to the possibility of a certain form of addiction to social networks. The analysis of the research results has allowed to formulate the following conclusions: students

spend more and more time watching what is happening on the networks; social networks are one of the fastest means of exchanging information between students; presence of an account on social networks facilitates communication of students with people who live far from them; what is happening on the network can negatively affect the privacy and professional development of students if they neglect the ethics of behavior on the network.

Key words: social network, reality, virtual world, ethical behaviour, addiction to "the net".

„A different new land has emerged. To those who are still looking for their place, it seems to be just like paradise. This land – the virtual world – already has millions of citizens. Every day, thanks to the Web, millions are trying to taste the other, happier life there. (...) <Cyberians> are often convinced that, by getting involved in new situations and relations, they are running away from the real life and problems" (Brzezińska, 2008, p. 9).

Introduction. Regardless of their age, contemporary people grow up surrounded by technology. Access to the Internet, sending and receiving messages, the possibility of having a conversation practically anywhere all allow for much more freedom of movement in the virtual world than the real one. It can be stated that we exist between two worlds. We build ties, maintain contacts, meet new people, gain knowledge, travel significant distances without leaving home (Kotyśko, 2013, p. 5-6). Social media profiles have become a component of our life, which translates to "being on/attending" social media portals by posting private pictures or daily commenting of posts of other people.

However, this phenomenon should not be generalised, as it is us who decide about who and when can see information about us in the form which we see appropriate. Having an account on a social networking site may constitute an alternative for shy people, who have problems with self-acceptance in the real world. *"Presence in social media is a facilitation for the shy. They can show their image created on their profile to others without pressure, as well as talk to others with less anxiety about how they will be perceived. For them it is a chance to open up and let others get to know them in an environment that is safe from their perspective"* (Kotyśko, 2013, p. 6).

Undertaking the topic of social networking sites and their presence in everyday life is extremely important owing to the decreasing age of their users and, consequently, the increasing threat resulting from unrestricted access to the Internet. Another problem is the increasing amount of time spent by not only young but also adult people online and the dangers of which they are not always aware.

Analysis of relevant research and methods of research. There is research in progress into the subject matter undertaken herein, including studies by the following scholars: B. Biłocka (Biłocka, 2019), M. Miotk-Mrozowska (Miotk-Mrozowska, 2009), J. Pyżalski (Pyżalski, 2012), S. Kozak (Kozak, 2011),

P. Chocholska and M. Osipczuk (Chocholska, Osipczuk, 2009), A. Mardofel, Z. Iwanowski, B. Chudzik (Mardofel et al., 2005), K. Kaliszewska-Czeremska (Kaliszewska-Czeremska, 2012), B. Szmigielska (Całe życie w Sieci, 2008), M. Skibińska (Skibińska, 2017), M. Kotyśko (Kotyśko, 2013), M. Brzezińska (Brzezińska, 2008).

The aim of this research was to determine the ethic peculiarities of social networking sites influence on students' private life.

Research Methods. The method of diagnostic survey, netnography have been employed for analyse of students' behaviour in social networking. Generalization of observation results and completed questionnaire enabled to determine the peculiarities of social networking sites influence on students' private life.

Results. The Internet, computer and smartphone have become part of our private life by offering unlimited access to issues we are interested in. They are also one of the quickest ways to converse with other people, exchange opinions and communicate in general. Having an account on a social networking site has become an indispensable thing nowadays, and not having it astonishes our friends. Pursuit of career, excess of domestic chores result in the fact that we have less and less time for meeting with friends, going to the cinema or cafe, whereas social media allow for nearly 24-hour contact with friends and thus a chance to follow their daily/private life and to share some information from ours. Unfortunately, even during face to face meetings of friends, more and more often we can observe that conversation between them is carried on using the phone and emoticons, which have replaced words. However, are all users aware of the growing addiction to the net? Is everyday checking of updates, photos and comments on social networking sites really essential? We should consider whether following everything that is happening online results purely from our curiosity, as well as when it becomes indispensable for daily functioning.

Having an account on a social media portal satisfies our curiosity as to what is going on in other people's lives. This does not only concern our close friends but also complete strangers, who are known from the TV, cinema, the world of culture, business or politics. Presence in the net works both ways: on the one hand, users find out interesting facts about others and on the other, they mark their presence by commenting pictures or other media, as well as by publishing information about themselves, such as photos or comments, sharing links to other sites etc. often keenly tracking the speed and type of response to the news they share.

Network users do not feel as restricted as in the real world, they have the possibility of sharing their thoughts and feelings using not only words but also a large variety of signs, they are not judged, they feel free, although they can lose control over their self along the way (Blada, 2005, p. 19). We need to keep in mind that we live in the real world, and not the virtual one and, as a consequence, we limit our contacts, method of communication and the quality of conversation.

More and more frequently words are supplanted by emoticons or abbreviations, and greetings from holidays or wishes are replaced by pictures.

According to Stanisław Kozak, the cyberspace may give us an illusory impression of maintaining contact with others. Online activity does not always translate into reference to reality and direct communication (Kozak, 2011, p. 60). With time, the users of Facebook, Instagram or other portals may even become slaves of notifications from their smartphones. "(...) *without access to the Internet, some people may even show signs of the withdrawal syndrome: sleep disorder, increased aggression, anxiety attacks. (...) This does not mean that they continually stare at the screen, but they respond to every notification and immediately reply to each message, SMS or event*" (Białecka, 2019, p. 29). Małgorzata Skibińska points out to dependence on digital media, which is becoming an increasingly serious problem of the 21st century. The necessity of constant checking of incoming notifications, chatting, having more than one account on various social networking sites, the ever-lowering average age of mobile device users, constant checking of the smartphone display, regular publishing of private updates, checking the number of likes and comments, trying to outdo others in the number of virtual friends should all become a matter of concern among (Skibińska, 2017, p. 3-5) *both adult and immature online users*" (Kozak, 2011, p. 61).

Have social networking sites dominated the lives of their users? This question will remain open for a long time. Nowadays, it is difficult to function in the world without the Internet, which requires being continuously in touch with other people, sending and receiving messages from different places in the country and abroad and, finally, facilitates doing the shopping or paying bills.

According to Jarosław Kordziński, the cyberspace should not replace the real world, since although it makes daily existence easier, it also restricts the possibility to build social relationships in a direct way (Kordziński, 2007, p. 18).

Analysis of the research results. For the purposes of the article, research has been conducted concerning *the role of social networking sites in students' private life*. The studied population included students of full-time and part-time courses at UJK Branch in Piotrków Trybunalski. The questionnaires were completed by 77 people: 73 women and 4 men. The majority of respondents were below 20 years old – 41 people, 22 people between 21 and 25 years old, 6 people between 26 and 30 years and 8 people above 31 years old.

In the first question the respondents were asked if they have an account on a social networking site. The results were presented in Table 1.

Table 1

Having an account on social networking sites

No.	Answers	Number	%
1	Yes	77	100 %
2	No	0	0 %

source: own research

All of the 77 respondents (100 %) confirmed having an account on a social networking site.

Table 2

Reason for having an account on a social networking site

No.	Answers	Number	%
1	Possibility to quickly contact other people	74	96 %
2	I like reading about other users	28	36 %
3	I like sharing information/pictures related to my life	13	17 %
4	I created an account because my friends also have such accounts	12	16 %
5	Other	3	4 %

source: own research

As many as 74 respondents (96 %) created their accounts on a social networking site because it offers them a possibility to quickly contact other people. 28 people (36 %) recognised that they enjoy reading about other social media users and having an account is a great facilitation and an easy way to gather information about another person. 13 people (17 %) admitted that social networking sites allow to share private information and pictures with others. 12 respondents (16 %) opened their social media accounts because their friends also have such accounts. 3 people (4 %), of whom one opened their account because they started studies and belonged to a new group, which facilitates access to materials needed for studying, one person obtains information about cooking and interior design, and one person has the possibility to find information about the world in the form of short films.

Table 3

Social networking sites most frequently visited by the respondents

No.	Answers	Number	%
1	Facebook	69	90 %
2	Instagram	56	73 %
3	Snapchat	17	22 %
4	Messenger	3	4 %
5	Twittter	6	8 %
6	YouTube	3	4 %
7	Zszywka	1	1 %
8	WP.pl	1	1 %
9	Interia. Pl	1	1 %
10	Netflix	1	1 %
11	Onet.pl	1	1 %
12	No answer	1	1 %

source: own research

Among social networking portals most frequently visited by the respondents, the most popular is Facebook (90 %), Instagram was second

(73 %), Snapchat – third (22 %), the fourth place is taken by Twitter (8 %), Messenger and YouTube got 4 % each. One person did not give an answer (1 %), and one person visits each of the following portals: Zszywka, WP. pl, Interia. pl, Netflix, Onet. pl.

Table 4

Frequency of visiting social networking sites

No.	Answers	Number	%
1	Every day	70	91 %
2	Several times a week	4	5 %
3	Other	3	4 %

source: own research

The answer to the question about the frequency of visiting social networking sites, given by as many as 70 people (91 %) was that they visit such sites every day. Only 4 people – just 5 % of the respondents – visit social networking sites several times a week, and 3 people (4 %) follow social media sporadically.

Table 5

Number of hours spent daily browsing social networking sites

No.	Answers	Number	%
1	Up to one hour	27	35 %
2	2-3 hours a day	20	26 %
3	More than 3 hours a day	10	13 %
4	Cannot determine the amount of time	20	26 %

source: own research

In response to the question about time spent by the respondents browsing social networking sites, 27 people (35 %) said that they spend less than one hour per day, 20 people (26 %) answered that they spend between 2 and 3 hours, and the same number of people, i.e. 20 people (26 %) cannot determine the amount of time, which is an alarming tendency which basically means that the respondents have no control over their activity on social media. 10 people (13 %) spend more than three hours per day browsing social networking sites.

Table 6

Number of friends in the virtual world

No.	Answers	Number	%
1	Up to 50	9	12 %
2	51-100	4	5 %
3	101-200	9	12 %
4	201-300	14	18 %
5	More than 300	41	53 %

source: own research

More than a half of the respondents – 41 people (53 %) have more than 300 friends in the virtual world, 14 people (18 %) have between 201 and 300 friends, 9 respondents (12 %) between 101 and 200 friends. Also 9 people (12 %) answered that they have fewer than 50 friends in the virtual world, and 4 respondents (5 %) have between 51 and 100 friends.

Table 7

Number of respondents who post information on their private life on social networking sites

No.	Answers	Number	%
1	Yes	40	52 %
2	No	37	48 %

source: own research

More than a half of the respondents, i.e. 40 people (52 %) share information about their private lives on social media. 37 respondents (48 %) replied that they do not publish information about their lives on social networking sites.

Table 8

Forms of publishing information about themselves

No.	Answers	Number	%
1	Pictures	59	77 %
2	Written entries about private life	5	6 %
3	Comments about posts/pictures published by friends	23	30 %
4	Comments about posts/pictures published by strangers	1	1 %
5	I run a blog	2	3 %
6	Other	6	8 %

source: own research

The respondents most often publish pictures on social networking sites: 59 people (77 %). 23 people (30 %) mark their activity with comments on posts and pictures from other users. 5 people (6 %) post updates on their private lives. 2 people (3 %) write blogs. 1 person (1 %) admitted that they comment pictures shared by strangers. 6 people (8 %) replied that they publish links to songs or post quotes which describe their moods, of whom 1 person does not publish any information about themselves.

Table 9

Topics most frequently commented on social networking sites

No.	Answers	Number	%
1	Daily/private life	51	66 %
2	Work	12	16 %
3	School	18	23 %
4	Other	16	21 %

source: own research

The most frequently commented topics on social networking sites included: private/daily life (66 %), 18 respondents (23 %) comment on topics related to school, 12 people (16 %) “talk” about work, and the remaining 16 people (21 %) comment on topics related to politics, of whom 3 people do not comment posts on social networking sites and 2 respondents do it very rarely.

Table 10

Frequency of posting information about themselves on social networking sites

No.	Answers	Number	%
1	Every day	0	0 %
2	Once per week	3	4 %
3	Depending on the events	53	69 %
4	I have no control over it	1	1 %
5	I do not know	20	26 %

source: own research

To the question about frequency of posting information about themselves on social networking sites, 53 respondents (69 %) replied that they do it depending on the events, 20 people (26 %) do not know how often they post information about themselves on social networking sites, of whom 2 respondents do not share information with friends, 1 person (1 %) openly admitted that they do not have control over the frequency of posting personal information. Nobody marked the “every day” option.

Table 11

The truth of the saying “I do not exist if I am not on a social networking site”

No.	Answers	Number	%
1	Yes	18	23 %
2	No	50	65 %
3	I do not know	9	12 %

source: own research

50 respondents (65 %) did not agree with the saying “I do not exist if I am not on a social networking site”, 18 people (23 %) believe it to be true, 9 respondents (12 %) have no opinion on this.

Table 12

Place where they browse social networking sites

No.	Answers	Number	%
1	At home	17	22 %
2	At work	3	4 %
3	Anywhere	57	74 %

source: own research

For 57 respondents (74 %) any place is good to check what is happening on social networking sites, 17 people (22 %) browse social media at home, 3 people (4 %) do it at their workplace.

Table 13

Using computer/smartphone/social networking sites as a restriction in contacts with others in the real world

No.	Answers	Number	%
1	Yes	29	38 %
2	No	45	58 %
3	I do not know	3	4 %

source: own research

More than a half of the respondents – 45 (58 %) believe that using the computer, smartphone or social networking sites does not constitute a restriction of contacts with other people in the real world, 29 people (38 %) think that using the computer, smartphone or social networking sites does restrict their contacts with other people in the real world, 3 people (4 %) do not have an opinion on this topic.

Table 14

Remarks of people close to the respondents regarding their excessive use of computer/smartphone/social networking sites

No.	Answers	Number	%
1	Yes	43	56 %
2	No	34	44 %

source: own research

To the question “Has anyone in your close circles ever pointed to your excessive use of the computer/smartphone/social networking sites?”, 43 people (56 %) answered that their close ones have pointed that out to them, whereas 34 respondents (44 %) said that nobody has mentioned their excessive use of the computer, smartphone or social networking sites.

Table 15

Taking steps in order to reduce the amount of time spent using smartphone/computer and browsing social networking sites

No.	Answers	Number	%
1	Yes	45	58 %
2	No	32	42 %

source: own research

More than a half of the respondents – 45 people (58 %) admitted that they have taken steps in order to reduce the time they spend using the smartphone/computer and browsing social networking sites, whereas 32 people (42 %) have not taken any such steps.

Summary of results. Analysis of research results concerning the topic “social networking sites and our private life” allowed for formulating the following conclusions.

All the respondents (100 %) have at least one account on a social networking site. The vast majority of them have created their accounts because it gives them a possibility to quickly contact other people (96 %). As many as 91 % replied that they browse social networking sites daily. More than a half of the respondents (52 %) admitted that they share information about their private lives on social networking sites.

Among the most frequently visited social networking sites, the most popular is Facebook (90 %). More than a half of the respondents (53 %) admitted to having more than 300 friends in the virtual world.

74 % of the respondents said that any place is suitable for browsing what is happening on social networking sites. More than a half of the respondents (58 %) believe that using computer, smartphone or social networking sites does not restrict them in contacting other people in the real world. 56 % of the respondents admitted that their close ones have pointed out their excessive amount of time spent online. More than a half of the respondents (58 %) admitted to having taken steps in order to reduce the amount of time devoted to using the smartphone, computer and browsing social networking sites, whereas 42 % have not taken any such action.

Conclusions. Having a social networking site account certainly facilitates contacting people who live far away from us or are unable to pick up the phone at a given moment. It is one of the fastest means of conveying information. Nevertheless, students must take into account the frequency of tracking what is happening online. Several hours spent daily browsing social networking sites may have a negative influence on the users' private or family life and career. An additional threat may be posed by too frequent posting of private life information and adding people who students do not really know as online friends. This is the reason why it is important to take some measures as early as possible with a view to preventing network dependence, which is currently an important problem not only among the youngest users of social networking sites but also among adult people.

REFERENCES

- Białecka, B. (2019). *Czy twój smartfon cię tresuje*, „Wychowawca”, nr 5, s. 29.
- Błada, E. (2005). *Negatywny wpływ komputerów na życie ludzkie*, „Lider”, nr 1, s. 18-19.
- Brzezińska, M. (2008). *Twoja kopia w innym świecie*, „Charaktery” 2008, nr 5, s. 9-16.
- Całe życie w Sieci*, (2008). ed. Barbara Szmigielska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków.
- Chocholska, P., Osipczuk, M. (2009). *Uzależnienie od komputera i Internetu u dzieci i młodzieży*, Wydawca Hachette Polska, Warszawa.
- Kaliszewska-Czeremska, K. (2012). *Dzieci i młodzież w sieci*, „Remedium”, nr 7/8, s. 6-7.
- Kordziński, J. (2007). *Uzależnienie od Internetu*, „Wychowawca” , nr 2, s. 18-21.
- Kotyśko, M. (2013). *Buszujący w Sieci*, „Psychologia w Szkole”, nr 3, s. 5-9.
- Kozak, S. (2011). *Patologie komunikowania w Internecie. Zagrożenia i skutki dla dzieci i młodzieży*, Difin SA, Warszawa.

- Lelonek-Kuleta, B. (2011). *Wirtualne natogi*, „Charaktery”, nr 10, s. 84-87.
- Mardofel, A., Iwanowski, Z., Chudzik, B. (2005). *Czy Internet uzależnia?* „Remedium”, nr 7-8, s. 34-35.
- Miotk-Mrozowska, M. (2009). *Komunikacja interpersonalna w Internecie*, Wydawnictwo Uniwersytetu Kazimierza Wielkiego, Bydgoszcz.
- Pyżalski, J. (2012). *Agresja elektroniczna i cyberbullying jako nowe ryzykowne zachowania młodzieży*, Oficyna Wydawnicza „Impuls”, Kraków.
- Skibińska, M. (2017). *Uzależnienia od mediów cyfrowych-problem XXI wieku?* „Wychowanie na co Dzień”, nr 5 (266), s. 3-9.
- Wojtasik, Ł. (2009). *Internet to nie tylko zabawa*, „Głos Nauczycielski”, nr 43, s. 8.

АНОТАЦІЯ

Келтик-Заборовська Ізабела. Етичні аспекти використання соціальних мереж.

У статті розглядається питання про важливість соціальних мереж у житті студентів. Звертається увага на можливість виникнення певної форми звикання до соціальних мереж. Аналіз результатів досліджень дозволив сформулювати такі висновки: студенти все більше часу витрачають на перегляд того, що відбувається в мережах; соціальні мережі є одним із найшвидших засобів обміну інформацією між студентами; наявність аккаунта в соціальних мережах полегшує зв'язок студентів з людьми, які живуть далеко від них; мережі є джерелом, з якого студенти отримують інформацію про близьких і далеких родичів, висловлюють власні думки, розміщують фотографії; не всі студенти усвідомлюють можливі небезпеки розміщення в соціальній мережі приватної інформації; активність у мережі може негативно впливати на приватне життя і професійний розвиток студентів, якщо вони нехтують етикою поведінки в мережі.

Беручи до уваги кількість часу, витраченого студентами на перегляд веб-сайтів у соціальних мережах та швидке збільшення місць доступу до Інтернету, можна стверджувати, що досить часто віртуальний світ переважає у щоденному студентському житті. У віртуальній реальності студенти мають кількість друзів, яка значно перевищує число друзів у реальному світі. Користувачі таких електронних мереж, як Facebook чи Instagram мають у своїх акаунтах сто, двісті, а то і більше тисячі друзів. Варто акцентувати увагу студентів на етичному питанні про те, чи дійсно вони хочуть, щоб їх приватні справи, місця, які вони відвідують, чи коментарі, які вони публікують про фотографії, записи інших користувачів, читали люди, які в реальному світі є для них незнайомими.

Загрози, викликані надмірною щоденною активністю в мережі, неконтрольованою публікацією приватних інформаційних повідомлень у віртуальному просторі або додаванням незнайомих до числа друзів, є проблемою, яка в майбутньому може принести негативні результати як у приватному житті, так і в навчанні та професійній діяльності.

Ключові слова: електронні соціальні мережі, реальність, віртуальний світ, етика поведінки, залежність від мережі.

РЕЗЮМЕ

Келтик-Заборовская Изабелла. Этические аспекты использования социальных сетей.

В статье рассматривается вопрос о важности социальных сетей в жизни студентов. Обращается внимание на возможность возникновения определенной формы привыкания к социальным сетям. Анализ результатов исследований позволил

сформулировать следующие выводы: студенты все больше времени тратят на просмотр происходящего в сетях; социальные сети являются одним из самых быстрых средств обмена информацией между студентами; наличие аккаунта в социальных сетях облегчает связь студентов с людьми, которые живут далеко от них; происходящее в сети может негативно влиять на частную жизнь и профессиональное развитие студентов, если они пренебрегают этикой поведения в сети.

***Ключевые слова:** электронные социальные сети, реальность, виртуальный мир, этика поведения, зависимость от сети.*

УДК 530.145

Ірина Клімова

Харківський національний автомобільно-дорожній університет

ORCID ID 0000-0003-1965-8577

Лариса Ричкова

Харківський національний автомобільно-дорожній університет

ORCID ID 0000-0003-2052-0196

DOI 10.24139/2312-5993/2019.08/077-086

МЕТОДИЧНИЙ МАЙСТЕР-КЛАС ІЗ КРЕАТИВНОЇ ШКІЛЬНОЇ МАТЕМАТИЧНОЇ ПІДГОТОВКИ РОЗДІЛУ «ЕЛЕМЕНТИ КОМБІНАТОРИКИ ТА ТЕОРІЇ ЙМОВІРНОСТІ»

Проблема технічного й освітнього забезпечення середньої та вищої школи постає з кожним днем усе серйозніше. Україна готується повністю реформувати свою політику заради того, щоб стати самостійним учасником міжнародних відносин. Це потребуватиме вдосконалення існуючої системи освіти, а для цього потрібно пройти не лише по очевидних частинах цієї системи, як-то вдосконалити систему кадрового відбору та оснастити навчальні заклади передовою технікою, але й піти далі та замінити застарілі аспекти у викладанні математичних дисциплін. Це дослідження має теоретично, а потім і експериментально, довести, що, по-перше, проблеми в «сучасній» методиці викладання такі є і, по-друге, вони мають шляхи рішення, які можуть бути впроваджені на базі будь-якого закладу освіти силами викладачів, які в ньому працюють. Звичайно, що в межах однієї праці неможливо розглянути всі наявні питання, тож ми проаналізували лише деякі, що, на наш погляд, найбільше потребують негайного вирішення.

***Ключові слова:** комбінаторика, проблема, навчальний заклад, елемент комбінаторики, умови існування*

Постановка проблеми. Проблема технічного й освітнього забезпечення середньої та вищої школи постає з кожним днем усе серйозніше. Україна готується повністю реформувати свою політику заради того, щоб стати самостійним учасником міжнародних відносин. Це потребуватиме вдосконалення існуючої системи освіти, а для цього потрібно пройти не лише по очевидних частинах цієї системи, як-то вдосконалити систему кадрового відбору та оснастити навчальні заклади передовою технікою, але й