

## Sports in college – opinions of generation Z about physical education during the COVID-19 pandemic

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### Abstract:

**Purpose:** The purpose of the study was to understand how students perceive online physical education in the higher education environment. Secondary goal was to gauge the effectiveness of the aforementioned online courses in maintaining physical shape of the students. **Methodology:** A quantitative study was performed leveraging the diagnostic poll method in a form of a questionnaire. A proprietary online questionnaire was used. Deliberate sample selection targeted students of the first three semesters of Pedagogy at the Social Sciences Department of the Warsaw University of Life Sciences. The author is a faculty member of the department therefore access to the respondents was a key factor in choosing the test group. The reason the first three semesters were chosen is a result of the University policy which makes physical education mandatory for all students during these semesters. **Findings:** Most students are satisfied with how online physical education was organized. However, at the same time the physical shape of respondents deteriorated. Over 90% were happy with the choice of a specific course within physical education. Most popular choices were volleyball, weight lifting and functional training. 43% of the sample students would like to continue physical education online which given the course seems to be a surprisingly high result. **Research and practical limitations:** The study was conducted on a relatively low sample (N=70). Pedagogy students were the only one sampled. Since the questionnaire was online the responsiveness was lower than it would have been had the study been done in a face to face mode. Given these limitations the results should be treated as an introduction to a wider study in this area. Course instructors were adequately prepared and motivated to organize the activities of the students. It can be reasoned that regardless the challenges of conducting physical education online it is possible to make the courses attractive to the participants. The effectiveness measured as physical shape of the students is inferior to the standard physical education courses. **Originality:** The study in one of the first empirical analysis in this field.

**Keywords:** online learning; COVID-19; generation Z; physical education; higher education

### Introduction

For months Poland and other countries have been struggling with the COVID-19 pandemic. Universities educating hundreds of students had to undertake decisive measures. In order to protect health and life while continuing educational activities higher education institutions decided to shift to online courses. One of these online courses was physical education.

In my opinion it was physical education that induced the most emotional response among students. It was difficult to imagine partaking in physical education online. Education is mostly attributed to stationary activities which is not reflective of classical assumptions of physical education courses (Momot et. al., 2020). Although literature captures the idea of e-learning (Szczepaniak-Sobczyk, 2016; Wierzbicka, 2019), the benefits of technology in higher education (Mokwa-Tarnowska, 2015; Jancarz-Łanczkowska, 2016; Turula, 2018; Novopysmenny et. al., 2020) and guidelines for proper online education UNICEF, 2020) to this day very little attention was given to physical education online in higher education settings and to effective means of achieving online physical education goals.

Among the factors which influence the perception of online courses by students (Eom, Ashill, 2018) the following are mentioned: a) the attitude of the teacher (attitude towards technology, level of commitment, easy of communication), b) the quality of information (educational materials used – clarity of materials, their usefulness, attractiveness, availability, the information on the conditions of passing), c) quality of the service and d) the attitude of the student (motivation, commitment to the course, perception of usefulness).

George Veletsianos and Royce Kimmons (2020) leveraged the method of collecting data from social media and analyzed the opinions of thousands of students (from Canada and the US) on the transition from stationary to online education. The source of these opinions were tweets (Kimmons, Veletsianos, 2018). They reached the following conclusions:

- students value teachers that has a positive approach and a calm disposition;

- students would like the teachers to present a healthy approach (education is important but given the pandemic students are stressed and are worried about their health, which impacts their daily routines including education);
- students need support of the teacher with the troubleshooting the technology used.

The report prepared by FLOW (2020) on students' opinions on online courses (N=1232, 76 universities in Poland, August 2020) concludes that only 13.2% of respondents value online education over stationary. Only 23.6% of respondents have a positive opinion on teachers' competencies (high competencies – 20.2%, very high competencies – 3.4%). Similarly, only 22% of participants rated their own effectiveness higher compared to that prior the pandemic.

Students partaking in online education prefer courses which allow for interactions with the teacher. This willingness to stay in direct contact with the teacher is in line with the trend described as humane online education (EduHack, 2021). Researchers from University of Adam Mickiewicz having performed a study „Online education and adaptation to social circumstances during the COVID-19 pandemic” have reached the following conclusion: „amongst students clearly visible are symptoms of overuse of digital media. Fatigue, information overload, unwillingness to use the computer and the internet combined with irritability due to constant use of communication technology and the most common symptoms of digital fatigue” (Ptaszek et. al., 2020b). The authors make the case for deterioration physical and mental degradation of students during the pandemic. The respondents complain of reduced well-being and poor physical condition. Around 10% of the study group showed clear symptoms of depressive disorders. Only 20% of the respondents stated that their physical and mental health has improved during the pandemic (Ptaszek et. al., 2020a).

The respondents suffer from psychosomatic complications (abdominal pain, headache, trouble falling asleep, nervousness, irritability, decreased mood, lack of energy). 18% have admitted to having had lack of energy more than ten times in the previous month. 16% have admitted to having had decreased mood in the space of the last 30 days. 60% of youth had trouble falling asleep during the last 30 days at least once (Ptaszek, 2020a).

For the sake of maintaining a positive frame of mind and physical condition motivation to undertake physical activity is crucial (...) and this motivation is lacking amongst the study group. Physical activity is understood as „any body movement associated with muscle contraction, which increases energy expenditure above the resting level (...) it entails all activity forms such as: recreation (which include most sports disciplines and dancing), professional sports, physical activity associated with transport and physical activity at home and in the vicinity of home” (Kościuczuk et. al., 2016). Physical activity is considered as one of basic human needs, is the condition of keeping and strengthening once health. Barbara Gieorby is of the opinion (2019) that physical activity „entails almost all sports disciplines, including dancing, understood as recreational physical activity, professional sports, physical activity at home and in the garden and physical activity associated with transport”.

Available research on the state of physical activity of Polish students concludes that the young (60%) give high importance to physical activity on which 39% spend more than two hours per week (Korwin-Szymanowska, 2017). It's worth mentioning that the students are driven to engage in physical activity not just by health concerns but also the willingness to look good and release stress. In the opinion of Admin Korwin-Szymanowska (2017): „students are aware of the role of physical activity in daily life. Unfortunately, regardless this knowledge not enough young people participate in sports which may have negative influence on their physical condition and a result on the society as a whole”. This is underlined by the health concerns among the students and the general population. Hence the importance of awareness of the positive influence of sports on almost all aspects of life. It is understood that physically active individuals are less likely to experience negative effects of online work, while 79% of physically active Poles claim that sports improve their mood and effectiveness at work (MultiSport Index, 2020). Literature suggests that the school should be the main source of physical activity for the youth via initiating and facilitating physical education classes (Belley-Ranger et al., 2016).

Self-assessment is regarded as a set of opinions that an individual regard to themselves (Szpitalak, Polczyk, 2015). These opinions may concern the current and potential physical, psychological or social abilities. The individual assesses oneself and the potential either from the perspective of meeting own needs or meeting the expectations of others (...). The assessment is performed on one hand by comparing the „realistic me” (opinions on how the individual is doing in reality) with the „ideal me” (the expectation of the individual towards how they should be doing and how they would like to perform), on the other by comparing own qualities, behaviors or results with opinions expressed by other people that possess the aforementioned and desired qualities (Biernat, 2016). Self-assessment entails both cognitive (descriptive) elements, which are the set of information on oneself and self-evaluation elements, which as a result shape the opinions of oneself. In the cognitive realm we can highlight identity data which refers to the physical, psychological and social spheres. Self-awareness is the basis of assessing oneself with regards to true potential (Velotti et. al., 2017).

Krystyna Garstka (2000) is of the opinion that the physical activity undertaken by an individual not only increases motor skills but also influences the psychological perception of one's body. In line with the above it is reasonable to conclude that self-assessment of physical condition is a function of regular physical activity (Bidzan-Bluma, Lipowska, 2018). The abovementioned interdependence is confirmed by researchers studying teenagers engaging in sports. These researchers observe that individuals regularly partaking in physical activity

have higher self-esteem in comparison to those who do not train at all (Gałuszka, 2017). What's more there is observed increase in self-esteem as a result of learning new motor skills and improvement of physical condition (Galderisi, 2015). There is a lack of current data exploring online physical education courses. The author decided to gather data on online physical education courses in higher education. The main goal of the study was to gather opinions of Pedagogy students of Warsaw University of Life Science on online physical education and to learn how the participants evaluate their own physical condition following a year of online courses. Below are the research problem, main questions asked and research hypothesis.

The main research problem: the assessment of the quality of academic physical education courses.

Main question: – P<sub>0</sub>: how pedagogy students evaluate the level of preparation and commitment of the physical education teacher.

Specific questions:

P<sub>1</sub>: Did pedagogy students engage in regular physical activity on top of the physical education course?

P<sub>2</sub>: what is the self-assessment of physical condition of the participants following a year of online physical education courses?

P<sub>3</sub>: would the study group want to continue online physical education after the pandemic is over?

Hypothesis:

H<sub>0</sub>: Pedagogy students of the Warsaw University of Life Science have a negative opinion of online physical education.

H<sub>1</sub>: Those within the study group that undertake regular physical activity have a higher self-assessment of their physical condition.

H<sub>2</sub>: Pedagogy students do not want to continue online physical education.

## Material & methods

*Procedure.* It was decided to take the quantitative approach. The study was carried out via a diagnostic survey which included a questionnaire and an online survey. The questionnaire consisted of multiple-choice survey with a hidden option and with a five level Likert scale. Students received a link to an online survey. Students participated on voluntary basis and no gratification was provided.

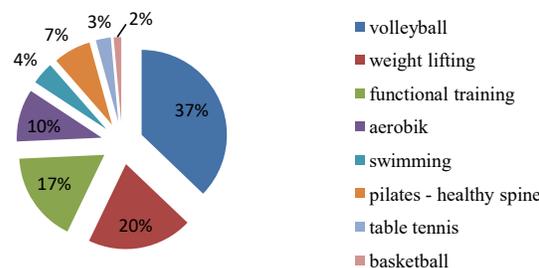
*Participants.* The test group consisted of representatives of the Z generation. The generation born after 1993 is called in the literature the generation of screens or generation of new technologies (Wrzochul-Stawinoga, 2016). We can risk a statement that the digital world is very natural to generation Z (Jamka, 2019; Fry, 2019). They are not familiar with the analog reality only (Hrehorowicz, 2021; Gęsicki, 2017). The Z generation has a natural ease of use when it comes to apps downloaded to smartphones or computer programs which are commonplace at work today (OC&C Strategy Consultants, 2019). It precisely the digital competencies meaning the ease with which they build and maintain relationships online which are considered the strong suit of generation Z (Pyżalski et. al., 2019). The test group was chosen deliberately. The author included students of the first four semesters of Pedagogy on the Social Sciences Department of the Warsaw University of Life Science. There reasons for this group choice were twofold; the participants had to part take in physical education online course and the fact that this group was easy to reach for the author. The reason why the first four semesters were chosen is the fact that only in those timeframes the is required to attend physical education courses. The group (N=70) consisted of 65 women (93%) and 5 men (7%). The study was conducted in January 2021.

The author is aware that the group size is not representative therefore this study is considered a pilot to other studies with both larger groups and more in-depth analysis. Given the above the author does not intend to generalize the outcome to generation Z as a whole but is focusing on the participants only.

## Results

The students attending the class could choose which sport they want to practice any given semester. The most popular choice was volleyball (n=26) and weight lifting (n=14). Functional training (12), aerobicik (7) and pilates (5) were also popular choices. Figure 1 visualizes sport choices.

**Fig. 1. Sports in the physical education course**

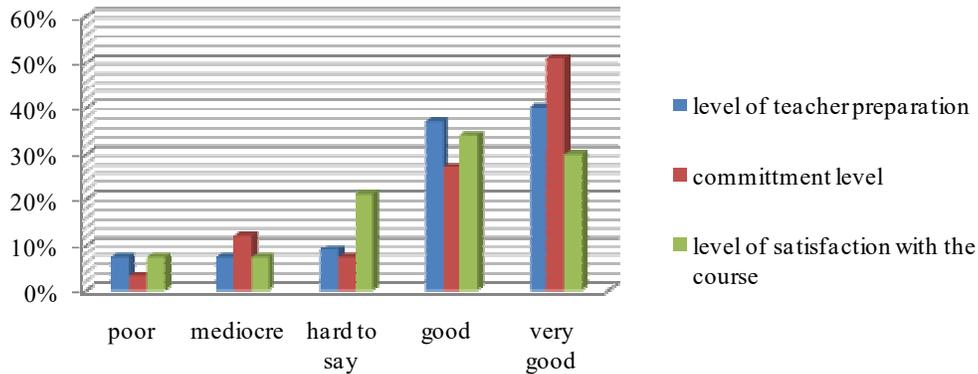


83% (n=58) of the participants were happy with their choices while 12 of the respondents would have not chosen the same sport again. Importantly almost 1/3 of the group (n=22) participated in the same course in the previous semester. For the rest (69%) the chosen sport was new.

Pedagogy students evaluated three categories: a) the preparation of the teacher to the course, b) how involved was the teacher in the course and c) general satisfaction with the way the online course was conducted. Each category was rated on a scale from 1 to 5 where 1 was poor, 2 was mediocre, 3 was hard to say, 4 was good and 5 was very good.

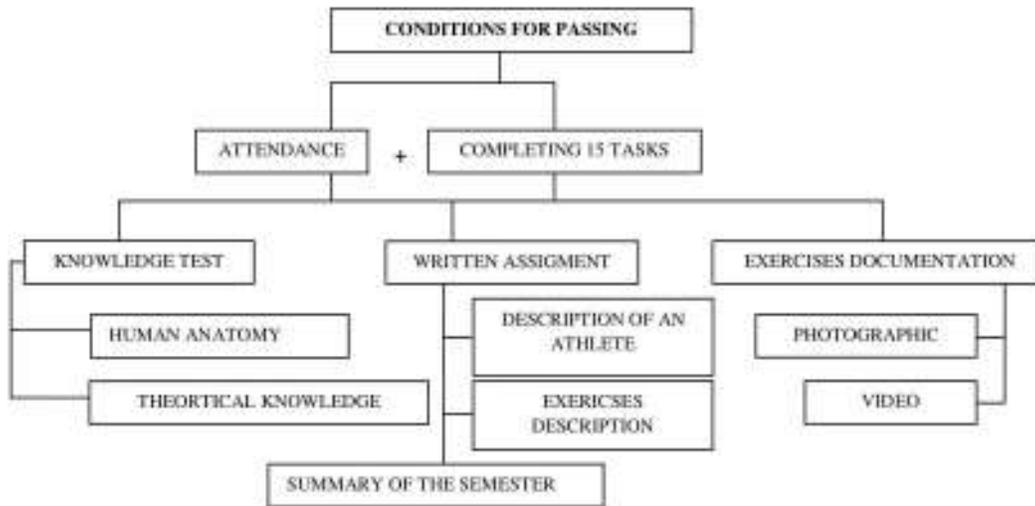
The level of preparation of the teacher was rated negatively by 10 participants out of which 5 rated it as poor and another 5 as mediocre. Positive marks were given by 54 participants. Another 5 rated the level of preparation of the teacher as hard to say. The general satisfaction with the course was rated positively by 45 students, negatively by 10 and 15 were undecided. The distribution of the responses is shown below in Figure 2.

**Fig. 2. Quality of the course assessment**



As a next step students were asked to share how the course was evaluated by the teacher. 100% of the study group pointed to the fact that the attendance was a key metric used. Additionally, during each of the classes the students had to perform one task. As a result, in order to complete the course, the students had to complete 15 different tasks each. The responses are shown in Figure 3.

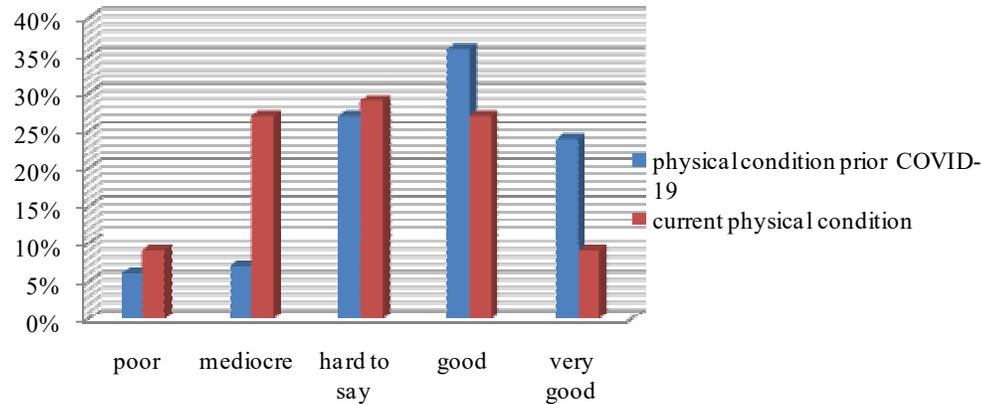
**Fig. 3. Conditions for passing**



The most frequent responses (over 80%) centered around written tasks that had to be completed by students. In these tasks the particular exercises had to be described with the information on which muscle groups were most active during these exercises. Other frequent responses were: recording exercises (62%) or making photos during exercising (49%).

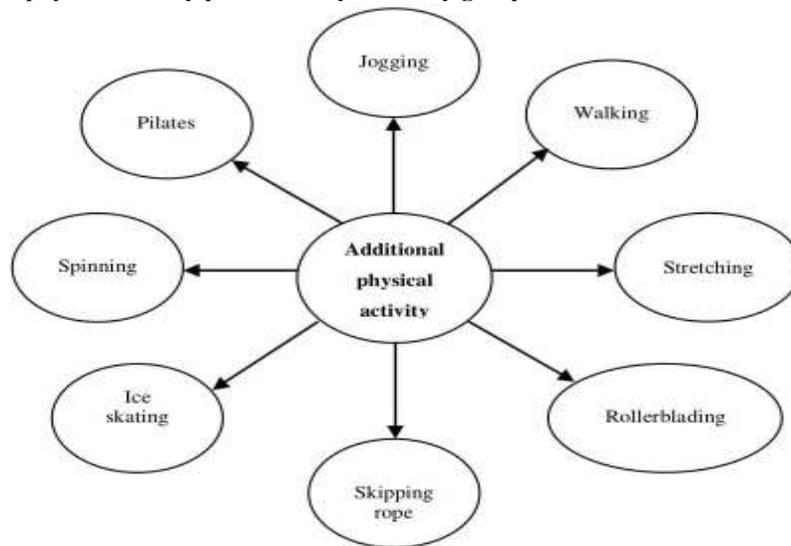
This form of completing the course was satisfactory to 80% of the students (n=56). Only 6 respondents (8%) were not happy conditions of completing the course – 3 rating it as poor and 3 as mediocre. 12% did not have an opinion. Equally interesting are the results on physical condition of the group before and during the COVID-19 pandemic (second wave January 2021). The students were asked how would they evaluate their physical condition a year prior and currently. The responses are shown in Figure 4.

**Fig. 4. Self-assessment of physical condition**



43 participants (61%) stated that they partook in some sort of physical activity prior to COVID-19. Only 13% (9 respondents) assessed their physical condition as poor prior to the pandemic, 27% did not have an opinion while 60% (42 respondents) was happy (25) or very happy (17) with their physical condition prior the pandemic. The distribution of responses on the current physical condition was interesting. A high 58% (40) declared to be training on top of the physical education courses. Regardless only 25 students (36%) is happy with their current physical condition out of which 19 (27%) are happy and 6 (9%) very happy. The same amount of respondents is not happy with their current physical condition. Almost 30% (20 respondents) did not have an opinion. Pedagogy students shared which activities on top of the physical education course they took part in Fig. 5.

**Fig. 5. Additional physical activity performed by the study group**



## Discussion

Most students are satisfied with how online physical education was organized. However, at the same time the physical shape of respondents deteriorated. Over 90% were happy with the choice of a specific course within physical education. Most popular choices were volleyball, weight lifting and functional training. Course instructors were adequately prepared and motivated to organize the activities of the students. It can be reasoned that regardless the challenges of conducting physical education online it is possible to make the courses attractive to the participants. The effectiveness measured as physical shape of the students is inferior to the standard physical education courses. Furthermore 43% of the sample students would like to continue physical education online which given the course seems to be a surprisingly high result. Similar conclusions were reached by researchers Piotr Długosz and Grzegorz Forys (2020), who have conducted studies on students and teachers

of the Pedagogy University in Cracow. The data from their study reveals that students view online education positively (very positively – 7%, positively – 33%).

The high evaluation of competencies of physical education teachers and their level of preparation and commitment is translated into their ability to activate pedagogy students. It's important due to sedentary studying mode which is typical to online teaching. They refer to additional physical activity on top of the physical education classes. A little more of the group (61%) declare that they trained regularly prior to the pandemic. What is important is that the physical condition from one-year prior is perceived as non-satisfactory by only 13% of the respondents (9). Therefore, we can see a much lower self-assessment of physical condition among the participants regardless of training regularly. The responses on the current physical condition seem interesting. Only 25 participants (36%) are happy with their current physical condition. This is particularly interesting as 58% (40 respondents) declares to be physically active. In my opinion the low self-assessment of physical condition is not so much the result of the factual state but rather the function of the psychological condition of the participants. Existing studies show poor frame of mind of students, lower motivation to study and undertake physical activity: "64% of students think that studying during the pandemic is not as good as studying in normal circumstances. A burnout with online education can be observed: 64% of respondents are tired, 62% show symptoms of psychological exhaustion, 60% experience mood swings, 59% have lower motivation to study, 56% are not rested even after weekends, 50% are stressed by showing their image during online classes" (Długosz, Foryś, 2020) The change in self-assessment of physical condition is even more visible when we look at the results of studies from 10 years back. Anna Winiarska-Mieczan and Tomasz Dymek (2009) while studying youth from Lublin University concluded that students have a high opinion of the physical condition of their bodies (almost 80% of women and 90% of men had a good or very good opinion).

In my opinion generation Z – current higher education students – were able to find their way in the current reality of academia. Moreover, they showed a lot of understanding to the physical education course teachers which is evident in the high scores given to the teacher on several metrics such as preparation for the classes as well as level of involvement. I think that conducting physical education classes online is very challenging for organizers. It requires ingenuity, the ability to keep the students interested and creating good healthy training habits. Additionally, it is worth mentioning that the generation Z has coped well. The students regardless of the lockdown and online courses are actively training. They often do it on top of the physical education course. This shows a high motivation to take care of their health, reduce the stress levels and keep a general well-being.

### Conclusions

Based on the study the following can be stated:

1. Pedagogy students rated the online physical education course positively
2. The participants of the study have rated their physical condition low regardless that they have been training on top of the physical education course.
3. Pedagogy students have expressed their willingness to continue online physical education courses after the COVID-19 pandemic is over.

**Conflicts of interest** - The author declares no conflict of interest.

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