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Satisfaction Levels of Sport Sciences University Students in Online Workshops for Substituting Practice-Oriented Activities during the COVID-19 Lockdown

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Abstract: Laboratory teaching in sport and exercise sciences universities is of fundamental importance as it provides students with the necessary hands-on skills that are indispensable to future kinesiologists. However, due to the COVID-19 pandemic, students in lockdown missed the opportunity to acquire laboratory skills. Here we report the solutions adopted by a blended exercise science Master's degree program of an online Italian university to ensure didactic continuity in the practice-oriented activities during the period of the COVID-19 lockdown. In order to mitigate this issue, laboratory sessions were replaced with online workshops and students' satisfaction levels in this regard were investigated in the present study using an online survey conducted on 101 students during lockdown. The survey consisted of 7-point Likert scale items focusing on computer usage (CU), learning satisfaction (LS), social interaction (SI), and perceived value (PV). The analysis of the results revealed a good level of learning satisfaction of the students. Conversely, students perceived a moderate level of social interaction and had a moderate perception that online workshops can enhance their learning abilities. In conclusion, the results of the present study seem to indicate that online workshops can be considered a good and acceptable compromise during an emergency, although face-to-face activities remain the preferable learning delivery modality when dealing with the acquisition of hands-on skills.

Keywords: distance learning; online teaching; practical lessons; physical activity courses

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1. Introduction

The COVID-19 lockdown has heavily impacted the world of higher education [1]. Except for online universities or blended university programs, traditional universities all over the world have had to hastily switch to distance learning while trying to simultaneously maintain a high academic standard [2]. In this process, the readiness of education institutions in implementing e-learning methodologies has played a significant role in boosting the educational process during the pandemic [3].

The large body of survey-based literature produced during the pandemic showed the feasibility of this transformation both in terms of student's perception and performance in various disciplines and countries [4–14]. While face-to-face lectures have been substantially turned into synchronous (i.e., live) and asynchronous (i.e., streamed) videoconferences, the problem arose for those courses characterized by practice-oriented activities that require teacher–student interaction and the use of laboratory tools [15]. For some disciplines, such as engineering, physics, biology, chemistry, and human anatomy and physiology, laboratory activities have been replaced, where possible, by using different solutions with different levels of complexity and student engagement. These solutions typically consist of video demonstrations of experimental work; analysis of simulated or previously collected data; or visualizing and performing experiments by using virtual scientific resources [7,11,16–21].

While there is evidence that video conferences are not inferior to face-to-face education [22], it has also been proven that virtual and remote laboratories are able to instruct students as effectively as traditional laboratories, at least in terms of learning outcome [23]. This is because virtual and remote laboratories are able to provide an even more collaborative learning environment thanks to the higher level of interaction between students and teachers which can be achieved relative to traditional laboratories [15].

While switching to online lectures and virtual/remote laboratories has been a viable and accessible alternative to traditional teaching modalities during the COVID-19 pandemic, the lockdown completely surprised all those conducting activities requiring the student to closely interact with their teacher and peers. This was particularly the case for sport and exercise sciences university programs whose courses frequently involve the practice of physical activity in equipped spaces and the testing of physical performance on the field under teacher supervision. Simplistically, such courses aim at teaching students how to prescribe and deliver a physical activity intervention (with different aims and addressed to different populations), and how to test an individual's physical performance. In Italy at least, these activities have essentially been suspended during the lockdown. Here we report the solutions adopted by a blended exercise science Master's degree program of an online Italian university to ensure didactic continuity to the practice-oriented activities during the COVID-19 lockdown. Briefly, we ran an experimental teaching modality where some selected learning objectives of the practice-oriented activities (normally carried out face-to-face) were delivered through online workshops. However, the adoption of such a solution places the need of assessing the effectiveness and the students' satisfaction of such a teaching approach compared to the traditional methodology. Unfortunately, the literature lacks studies investigating the effectiveness and student's satisfaction of online practice-oriented workshops, particularly in sport and exercise sciences university programs. To the best of our knowledge, only one study compared student's achievement and satisfaction levels between a traditional and online health and wellness course [24]. For the purpose of this study performed by Block et al., traditional lectures and physical activity laboratories were turned into asynchronous online lectures and weekly logs of assigned physical activity performed by the student, respectively. This study suggested that an online health and wellness class can be considered an adequate alternative to a traditional class as no statistically significant differences were found both in student's grades and satisfaction levels. Unfortunately, it is not clear where the assigned physical activity was performed (at home, outside, or in gym facilities), whether these activities aimed at delivering a physical activity intervention rather than being just self-administered exercises, whether these activities were supervised or self-delivered, and, most importantly, how these activities were structured and what their learning objectives were.

The aim of the present research was to compare satisfaction levels of sport and exercise science Master's degree program students participating in pre-COVID-19 practice-oriented classes to those participating in supervised and structured online workshops during lockdown.

2. Materials and Methods

2.1. Background: Master's Degree Program Structure

The present study focused on a Master's degree program in Exercise Science for Health and Wellness of an online Italian university. This program typically runs in blended modality, which means that the practice-oriented activities are delivered face-to-face while everything else is accessible on the university's virtual learning environment (VLE) in the form of slides, recorded video-lectures, live webinars, and a variety of interactive e-tivities (forums, c-maps, quizzes, and assignments). In particular, practice-oriented activities are embedded in four courses. The theoretical content of these courses is accessible through the VLE while practice-oriented activities are normally delivered face-to-face in the form of workshops. These four courses can be grouped into two main typologies according to their aims: providing knowledge on how to prescribe and deliver physical activity

interventions (TYPE-A) and providing knowledge on measurement and testing procedures (TYPE-B). Specifically, TYPE-A aims at teaching how to prescribe and deliver physical activity interventions for fitness and wellness purposes (TYPE-A1, in the first year of the Master's program) and for preventive and adapted physical activity purposes (TYPE-A2, in the second year of the Master's program). TYPE-B aims at teaching how to assess anthropometric characteristics and body composition (TYPE-B1, in the first year of the Master's program), and how to assess an individual's physical performance (TYPE-B2, in the second year of the Master's program) (Table 1).

Table 1. Workshop typologies.

TYPE-A: prescription and delivery of physical activity interventions	TYPE-A1: physical activity interventions for fitness and wellness purposes (in the first year of the Master's degree program).
	TYPE-A2: physical activity interventions for preventive and adapted physical activity purposes (in the second year of the Master's degree program).
TYPE-B: measurement and testing procedures	TYPE-B1: measurement of anthropometrical characteristics and body composition evaluation (in the first year of the Master's degree program).
	TYPE-B2: testing of physical performance (in the second year of the Master's degree program).

2.2. Participants

Participants were students who, during the lockdown, were enrolled in the second year of the Master's degree program. This cohort of students had the peculiarity of participating in traditional practice-oriented activities during the first year (TYPE-A1 and TYPE-B1) before attending TYPE-A2 or TYPE-B2 remotely (online workshops). In fact, while a comparison between the traditional and the online modality of the same course was unfeasible, this condition gave us the opportunity to at least compare courses of the same typology but performed with different modalities (traditional vs. online) by using the same cohort of students.

The Master's degree in Exercise Science for Health and Wellness has 159 students enrolled in the second year. Of these 159 students, 101 students met the eligibility criteria of the study. All the 101 eligible students (age = 32 $\pm$ 8) agreed to participate in the study and answered the questionnaire. Of these 101 students, at the time of data collection, 43 students (age = 34 $\pm$ 9) attended only TYPE-A2 online and were thus included in the TYPE-A subgroup, whereas the other 58 students (age = 33 $\pm$ 8) attended only TYPE-B2 online and were thus included in the TYPE-B subgroup. For the sake of clarity, the criteria that were used to select the eligible participants are illustrated in Table 2.

2.3. Description of the Practice-Oriented Activities: Turning from Face-to-Face to Online Workshops

In the traditional modality, activities are condensed into a 1-day workshop with a single learning objective. Students are divided into 3 or 4 groups of 7–9 persons each and each group has to plan and practically demonstrate a series of training (TYPE-A) or testing (TYPE-B) programs. Irrespective of the course typology, the workshop is typically structured into five phases: (1) background (the teacher introduces the learning objective and the theoretical foundation of the workshop); (2) demonstration (a teacher's example of programming and delivering a testing or training program); (3) collaborative learning (each group of students works together in programming and conducting testing or training program); (4) evaluation (each group of students demonstrates the results of their work to the teacher); (5) discussion (each group illustrates its program to the other groups and, under the teacher's supervision, discuss eventual problems and difficulties they found, i.e., supervised collaborative learning).

Table 2. Criteria used to select the eligible participants.

Eligibility Criteria	
Overall comparison between face-to-face and online modality	Students must have attended: • both workshops in the first year in face-to-face modality and • one online workshop in the second year (regardless of the type of workshop)
TYPE-A sub-group inclusion	Students must have attended: • both workshops in the first year in face-to-face modality and • TYPE-A2 online
TYPE-B sub-group inclusion	Students must have attended: • both workshops in the first year in face-to-face modality and • TYPE-B2 online
Participants Enrolled in the Study *	
Overall comparison between face-to-face and online modality	101 students aged 32 ± 8 y
TYPE-A vs. TYPE-B	A total of 43 students aged 34 ± 9 y were considered eligible for TYPE-A sub-group, and 58 students aged 33 ± 8 y were considered eligible for TYPE-B sub-group.

* All the eligible participants agreed to participate in the study.

In the remote modality, briefly, the online workshop allows the teacher to deliver technical contents prior to supervising his students in structuring a "home-compliant" physical activity program or performing data analysis tasks at home. The online workshop has the same duration and learning objective as its traditional counterpart, and it is conducted using a conferencing application. The structure remains similar to a face-to-face workshop except that, as students are at home, TYPE-A2 is limited to no-equipment exercises and TYPE-B2 entails the analysis of previously collected data and the simulation of a testing session according to a specific target and population. Three/four groups of 5–6 students each are created (a lower numerosity is necessary to avoid technical issue with the conferencing app) and the collaborative learning phase within each group is carried out using another piece of meeting software as multiple parallel sessions. The main virtual meeting room is left open to allow the teacher to supervise the students work when needed.

2.4. Procedures

Participants were contacted by email and asked to complete an online survey within one week after the online workshop. The survey was conducted between April and October 2020. The email contained the informed consent for the study including detailed information on the aim of the study, the description of the survey, the instructions to complete the survey, and information concerning the processing of personal data, as well as contact details of a supervisor. In this email, the participants were also informed that they had the right to withdraw from the study at any moment before completing and submitting the survey. A hyperlink named "I agree to participate" was included at the end of the email to direct the student to the webpage of the survey. A "Submit" button was placed at the end of the survey and its use was considered confirmation of the final agreement to participate to the study. The information obtained from the participants was collected and analyzed anonymously in accordance with the European privacy policy. The aim of the survey was twofold: (1) assessing students' satisfaction levels of online workshops relative to traditional face-to-face delivery mode regardless of the workshop typology; and (2) assessing whether the topic of the workshop influenced the satisfaction of the students when these workshops were shifted to the online modality.

2.5. Survey Description

The survey consisted of 29 items preceded by 6 questions concerning information on age, gender, and actual participation in the workshops, as well as the modalities of participation. The survey was in Italian and its 29 items, although not validated, were selected from two previously published studies on the same topic [24,25]. A translation of the survey in English is available in the Appendix A. The 29 items of the survey were 7-point Likert scale items (excluding the first item that was a 5-point Likert scale item) [26] investigating the opinion and the satisfaction of students concerning participation in the online workshop(s) in comparison to the face-to-face modality delivered before the COVID-19 lockdown. In particular, the items sought to discover the opinion of the students in the following areas:

- Items #1 and #29 (the first and the last) were two stand-alone items and were not included in the computation of the indexes described below. Item #1 asked to students indicate the importance attributed to the online workshop(s) using a specific 5-point Likert scale item, whereas #29 asked whether students overall preferred face-to-face or online workshop(s), using a specific 7-point Likert scale item.
- Computer usage (CU) includes items investigating the participants' self-efficacy and concerns in using the computer and the functionality of the meeting software before starting the workshop (8 items: #2–8, 10).
- Learning satisfaction (LS) includes items investigating the student's feelings and attitudes resulting from the combination of all the benefits that a student received from workshop(s) in online mode (7 items: #9, 16–17, 21–23, 28).
- Social interaction (SI) includes items investigating either the possibility for the student to interact with other students, professor, and academic tutor (7 items: #11–15, 26–27).
- Perceived value (PV) includes items investigating the degree to which a student believes that attending workshop(s) in online mode would improve his or her learning ability (5 items: #18–20, 24–25).

The survey included items formulated both with a positive (in these items, the answer "strongly agree" indicated a preference or a good opinion on online workshop mode) and a negative connotation (conversely, in these items, the answer "strongly agree" indicated a preference for face-to-face workshop mode). In Appendix A, items are grouped by areas (CU, SI, PV, or LS), connotation (positive or negative), and typology (comparative or non-comparative). Overall, three types of items were included:

- Non-comparative items with positive connotation: in these items, the participants had to indicate their level of agreement with a sentence concerning the online workshop mode. No comparison with the face-to-face mode was asked for. The answer "I strongly agree" indicated a very good opinion of online workshop mode, whereas the answer "I strongly disagree" indicated a very negative opinion. The other answers indicated an intermediate opinion between the two opposite opinions.
- Comparative items with positive connotation: for these items, participants had to indicate their level of agreement with a sentence concerning a comparison between online and face-to-face workshop mode, and the answer "I strongly agree" indicated a strong preference for the online workshop mode compared to the face-to-face mode, whereas the answer "I strongly disagree" indicated a strong preference for the face-to-face mode. The other answers indicated an intermediate opinion between the two opposite opinions.
- Comparative items with negative connotation: for these items, participants had to indicate their level of agreement with a sentence concerning a comparison between online and face-to-face workshop mode, but in these items, the answer "strongly agree" indicated a strong preference for the face-to-face workshop mode compared to the online mode, whereas the answer "I strongly disagree" indicated a strong preference for the online mode. The other answers indicated an intermediate opinion between the two opposite opinions.

Note that non-comparative items were used to investigate the students' opinion irrespective of the comparison with other workshops' modalities. Comparative items were used, instead, to compare the "new" online modality with the "classic" face-to-face modality and evaluate whether the students perceived an advantage or a disadvantage in shifting to the online modality.

2.6. Statistical Analysis

The analysis of the results was performed using descriptive statistics. For the overall comparison between face-to-face and online modality, the results of each item were plotted using a diverging stacked bar chart (excluding items #1 and #29 that were plotted using multiple bar charts). Then, the following points were assigned for each answer of the Likert scale: Strongly disagree = 0; Disagree = 1; Slightly disagree = 2; Neither agree nor disagree = 3; Slightly agree = 4; Agree = 5; Strongly agree = 6.

Using the 7 points of the Likert scale, a summary index was calculated for all the items (excluding items #1 and #29) and named Global index. Other summary indexes were also calculated independently for CU, SI, PV, and LS areas, for non-comparative items (to have an overall evaluation of students' opinion on online workshop mode without taking into account the comparison with the face-to-face modality), and, finally, for comparative items (to have an overall evaluation of the preference of the students between the two modalities).

Each summary index was computed using the formula:

$$\text{Index} = \frac{\text{Sum of the scores obtained in items of the considered area}}{\text{Maximal scores obtainable in the considered area}} \times 100$$

This formula allowed the attainment of seven indexes (Global index; CU, SI, PV, and LS indexes; non-comparative and comparative indexes) that ranged from 0 to 100 with higher scores indicating a satisfactory opinion or a preference for online workshops.

It is important to note that, for the computation of the indexes, the score of the items with negative connotation was inverted (i.e., Strongly disagree = 6; Disagree = 5; Slightly disagree = 4; Neither agree nor disagree = 3; Slightly agree = 2; Agree = 1; Strongly agree = 0). Cronbach's Alpha (α) was also computed to assess the internal consistency of the survey, and of each area CU, SI, PV, and LS.

Concerning the comparative items, the Chi-squared goodness of fit test was used to evaluate whatever there were significant differences in the number of students reporting favorable opinions for the face-to-face modality (participants that indicated "I definitely disagree", "I disagree", and "I slightly disagree" for items for positive connotation and "I definitely agree", "I agree", and "I slightly agree" for items for positive connotation), and those reporting favorable opinions for the online modality (who instead indicated the opposite answers). Finally, items #1 and #29 were considered separately. The answers to these items were plotted using histograms and the frequency of each answer was computed. As previously indicated, these items were not considered in the computation of the indexes. For the comparison between TYPE-A vs. TYPE-B workshops, two stacked bar charts were used (excluding items #1 and #29 that were plotted using grouped multiple bar charts). Chi-squared test of homogeneity was used to compare the observed frequencies in each item from TYPE-A vs. TYPE-B sub-groups. Furthermore, the 7 indexes described in the previous paragraphs were computed for TYPE-A and TYPE-B sub-groups separately. Then, the indexes obtained for the 2 sub-groups were compared using one-way ANOVA to evaluate the presence of eventual statistical significance between workshop typologies. Finally, the level of accepted significance for all the analyses was set at $p < 0.05$.

The analysis was performed using Microsoft Excel 365 (Microsoft Corp., Seattle, WA, USA) and SPSS Statistics for Windows, Version 23.0 (IBM Corp., Armonk, NY, USA).

3. Results

For an easier interpretation of the data, results are reported in a graphical form (Figure 1). Concerning the overall comparison between face-to-face and online modality

(n = 101), the results of the analysis are shown in Figure 1. In particular, the summary indexes relative to the different areas considered in this study were, on average, as follows: Global index = 57.7%; CU index = 62.5%; LS index = 67.8%; SI index = 49.4%; and PV index = 47.6%. The index relative to non-comparative items was 65.5%, while the index of the comparative items was 44.4%. The Cronbach's α value for the entire survey was excellent (α = 0.901), as well as the α of LS areas (α = 0.905); the α value of PV areas was acceptable (α = 0.775); and the α of CU and SI were quite acceptable (α = 0.690 and 0.673 respectively).

The Chi-squared goodness of fit showed that the total number of students who declared a favorable opinion for the face-to-face modality was significantly different compared to those reporting a favorable opinion for online modality in 7 of the 10 comparative items, whereas other 2 of the 10 items were close to the significance (Table 3).

Table 3. Results of the Chi-squared goodness of fit used on comparative items.

Items	Connotation	Face-to-Face Preferences	Neutral Answers	Online Preferences	*p*-Value (Chi-Squared) Face-to-Face vs. Online
Item #07	Positive	59	23	19	<0.001 (Face-to-face preferred)
Item #08	Positive	40	33	28	0.347 (Face-to-face preferred)
Item #11	Positive	57	20	24	0.001 (Face-to-face preferred)
Item #12	Positive	63	16	22	<0.001 (Face-to-face preferred)
Item #18	Positive	27	15	59	0.003 (Online preferred)
Item #19	Positive	59	23	19	<0.001 (Face-to-face preferred)
Item #24	Negative	21	21	59	<0.001 (Online preferred)
Item #25	Negative	76	7	18	<0.001 (Face-to-face preferred)
Item #26	Negative	55	13	33	0.064 (Face-to-face preferred)
Item #27	Negative	54	15	32	0.060 (Face-to-face preferred)

Concerning the analysis of the sub-groups TYPE-A and TYPE-B, the Chi-squared for homogeneity test did not show any differences between the 2 sub-groups for all the 29 items of the survey as it is possible to see in Figure S1 (available as Supplementary Materials). The summary indexes obtained from the TYPE-A sub-groups were on average: Global index = 56.3%; CU index = 62.3%; LS index = 65.4%; SI index = 48.7%; and PV index = 44.6%; non-comparative items = 65.0%, comparative items = 41.5%. The summary indexes obtained from the TYPE-B sub-groups were on average: Global index = 58.7%; CU index = 62.4%; LS index = 69.5%; SI index = 50.4%; and PV index = 49.5%; non-comparative items = 65.9%; comparative items = 46.6%. The one-way ANOVA performed on these indexes showed no significant differences between TYPE-A and TYPE-B in any of the considered indexes. The detailed results are reported in Table 4.

Table 4. Results of the statistical comparisons between the indexes' scores obtained by TYPE-A and TYPE-B sub-groups.

Summary Indexes	Overall	TYPE-A	TYPE-B	*p*-Value (ANOVA) TYPE-A vs. TYPE-B
	Means ± SD	Means ± SD	Means ± SD	
Global index	57.7 ± 13.3	56.3 ± 13.2	58.7 ± 13.3	0.362
CU—Computer usage	62.5 ± 14.0	62.3 ± 13.7	62.4 ± 14.3	0.952
LS—Learning satisfaction	67.8 ± 18.6	65.4 ± 18.6	69.5 ± 18.6	0.295
SI—Social interaction	49.4 ± 14.9	48.7 ± 14.6	50.4 ± 15.1	0.430
PV—Perceived value	47.6 ± 19.8	44.6 ± 19.6	49.5 ± 19.9	0.244
Non-comparative items	65.5 ±13.5	65.0 ± 13.6	65.9 ± 13.5	0.731
Comparative items	44.4 ± 16.8	41.5 ± 16.0	46.6 ± 17.2	0.136

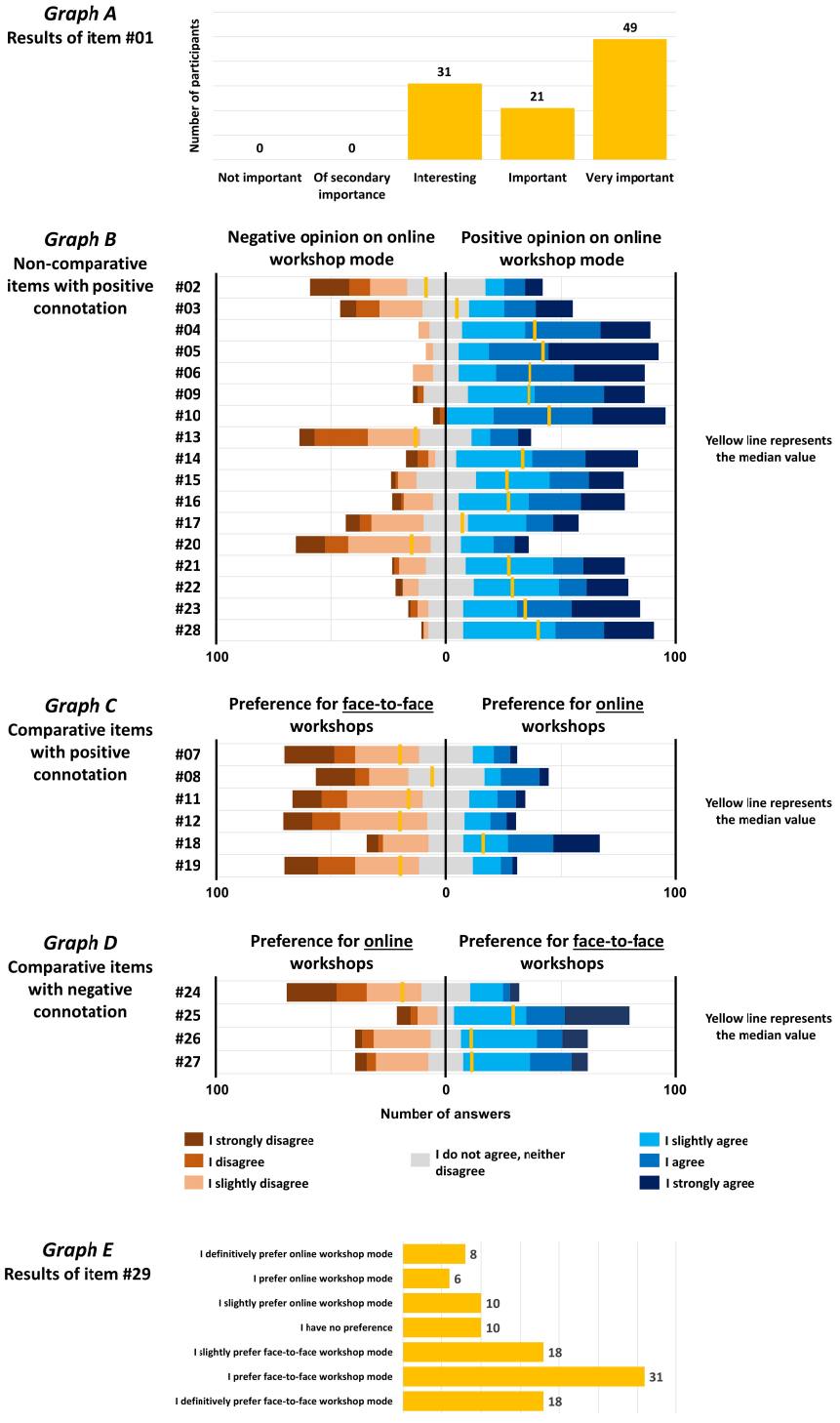

Figure 1. In the five graphs of the figure, the results obtained by all the participants analyzed together are reported: Graph A—item #1; graph B—non-comparative items with positive connotation; graph C—comparative items with positive connotation; graph D—comparative items with negative connotation; and graph E—item #29. More specific results with all the participants divided in TYPE-A and TYPE-B can be seen in Figure S1.

4. Discussion

Laboratory teaching in sport and exercise sciences higher education is of fundamental importance as it provides students with the necessary hands-on skills that are indispensable to future kinesiologists. As a result of the sudden transformation to remote teaching,

students missed the opportunity to acquire laboratory skills. In order to mitigate this issue, laboratory sessions were replaced with online workshops and students' satisfaction levels in this regard were investigated in the present study using an online survey. Numerous studies have been conducted during the COVID-19 pandemic to analyze the effects of this transition on a multitude of courses, and most of these studies were focused on students' satisfaction levels and their psychological response to this condition of uncertainty. To the best of our knowledge, this is the first study that assessed satisfaction levels of students of a sport and exercise science university program in attending online laboratory sessions that are typically delivered face-to-face.

Prior to discussing the results of the survey, it is worth stressing that all students declared an interest in the topic of the workshop(s) with opinions that ranged from "interesting" (n = 31) to "important" (n = 21) to "very important" (n = 49) (Graph A, Figure 1). The Global index as computed from all the items of the survey reveals a level of satisfaction of the students equal to 57.7% in changing from face-to-face to online workshop modality. With regard to the indexes relative to the different areas considered in this study, a CU index of 62.5% indicates that students did not have particular concerns in the use of the computer and of the meeting platform for the workshop(s). The LS index was, on average, equal to 67.8%, indicating a good level of learning satisfaction obtained by attending the online workshops/s. An SI index of 49.4% indicates, instead, that students perceived a moderate level of possibility to interact with the other students, professor, or tutor. Finally, the PV index was 47.6% on average, indicating a moderate perception of the students that online workshop(s) can enhance their learning abilities. Considering these summary indexes as a whole, a potential discrepancy may appear between the good score observed in the level of satisfaction index (LS = 67.8) and the moderate score observed in the perceived value index (PV = 47.6%). This discrepancy may be explained by the fact that students probably perceived the online workshops as a useful tool limited to the pandemic situation, but this modality of workshop is not considered as valuable as the face-to-face modality. This conjecture is confirmed by the two summary indexes concerning the non-comparative and comparative items. In particular, the summary index of the non-comparative items (=65.5%) indicates that students overall had a good opinion of the online modality, but, at the same time, the summary index relative to the comparative items (=44.4%) indicates that this opinion is downsized when they are asked to compare the online workshop with the traditional face-to-face modality. In support of this, the answers to the final item #29 clearly revealed that 67 students out of 101 (66.3% of participants) declared, overall, a preference for face-to-face workshop(s), 10 students (9.9%) declared having no preference, and only 24 students (23.7%) declared a preference for online workshop(s).

Moreover, Table 3 shows that the number of students who declared a favorable opinion of the face-to-face modality was significantly higher than the number of students reporting a favorable opinion of online modality in five of the ten comparative items, while the difference between two other items was close to the significance level. It is important to note that we found the opposite situation for the items #18 and #24, where the number of participants who indicated a preference for the online modality was significantly higher than those who declared a preference for the face-to-face modality. This offers at least a couple of pieces of interesting information about the students' point of view: (1) online workshops are considered a learning modality that allows students to save time; (2) despite students declaring a preference for face-to-face workshops, they do not consider the online modality a waste of time.

The results of the comparative analysis related to sub-groups based on workshop typology confirmed the results obtained from the overall analysis. In particular, the scores obtained by the two sub-groups and relative to the seven summary indexes were very similar to those obtained from all the participants. In addition, the comparisons between TYPE-A vs. TYPE-B relative to these seven summary indexes did not show any significant differences between the two sub-groups (see Table 3). This absence of significant differences in the seven summary indexes under consideration and in the frequencies of the Likert

scores for the two subgroups (Figure S1 available as a Supplementary Material) seems to suggest that the topic of the workshops did not impact the opinions of the students on the workshop delivery mode.

A better understanding of the satisfaction levels in attending online workshops could have been achieved by allowing the student to attend the same course in both modalities, but we were not allowed to in order not to overload the student's teaching plan during his academic year. Moreover, the present research is limited to the assessment of satisfaction levels, though it would have been interesting to also analyze the effectiveness of online workshops in regard to the student's acquired knowledge through a comparison of the grading achieved through the two delivery modalities. Unfortunately, this was not possible as the exam changed with the pandemic. A further limitation of the present study entails the lack of any analysis about the attention span of students during the online workshop and their level of involvement, both factors that the teacher can easily manage face-to-face but hardly monitor remotely. Attention span can be analyzed through ad hoc questionnaires [27] or even monitored during the workshop adopting meeting platforms hosting interactive engagement functionalities. It is worth pointing out that we used a non-validated survey as there were no questionnaires in the literature that responded to our specific needs (although most of the items were selected from two previously published studies on the same topic [24,25]). Finally, as we conducted our survey on a very specific population, the small sample size cannot be considered as representative of all the students of sport and exercise sciences at Italian universities. For the same reason, the results of our survey are limited to the prescription and delivery of physical activity interventions and to measurement and testing of physical performance and they cannot be extended to courses with different topics.

The lesson learned from this pandemic is the need for a reconfiguration of teaching in higher education systems and the COVID-19 emergency has been a valuable opportunity to rethink the processes of teaching and learning [28]. This emergency has, in fact, clearly boosted theories and practices of distance learning in higher education, and this was proven by the response of the higher education research community in defining frameworks and models for distance learning that may even become standard also in non-pandemic periods [29]. Conversely, while it is not unfair to think of virtual laboratories as an integral part of teaching activities even after the pandemic for their ability to enhance learning outcomes [16], there is also the risk of cohorts of students, having studied through the lockdown, graduating without adequate skills for practice-oriented activities. In fact, although it has helped students having hands-on laboratories turned into online workshops, to gain conceptual understanding, students may be still deficient in the hands-on skills (this aspect would require a proper experimental construct to be investigated). These students may find themselves at a disadvantage with respect to students of the pre-COVID-19 era when moving to a higher level of educational program or when entering the labor market [15,30]. Moreover, no consensus exists yet regarding best practices for virtual and remote laboratories in sport and exercise sciences higher education. A possible solution to overcome such a crucial limitation may arise from the use of easily accessible technological solutions that could allow students to collect, straight from their homes, movement-related data that can be integrated into the virtual learning environment and used by the teacher to assess the acquisition of specific skills [31]. Along those lines, a very promising perspective is that provided by the use of augmented reality for immersive learning of hands-on skills [32,33].

5. Conclusions

The present study aimed at assessing satisfaction levels on supervised online workshops for substituting practice-oriented activities during COVID-19 lockdown in students of a sport and exercise sciences Master's degree program. Online workshops were able to deliver the same learning objectives with good satisfaction levels of the students. The results of the present study seem to indicate that online workshops can be considered

a good and acceptable compromise during emergency, although face-to-face activities remain the preferable learning delivery modality when dealing with the acquisition of hands-on skills.

Supplementary Materials: The following are available online at https://www.mdpi.com/article/10.3390/educsci11100600/s1. Figure S1—In the five graphs of this figure, the results obtained by all the participants divided in TYPE-A and TYPE-B are reported: Graph A—items #1; graph B—non-comparative items with positive connotation; graph C—comparative items with positive connotation; graph D—comparative items with negative connotation; and graph E—item #29. All the p-values reported in the figure were calculated with Chi-Squared analyses on the frequency of answers.

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Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Here are reported the items of the survey.

1. How do you consider the topics covered by the workshop with respect to your interests?						
Not important	Of secondary importance		Interesting		Important	Very important
2. Before starting the workshops, I preferred to have no one around to tell me what to do as I go.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
3. Before starting the workshops, I knew that I could manage the online workshops even without knowing the software and/or platforms used.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
4. Before starting the workshops, I supposed that I would receive evaluations and suggestions for improvement on the exercises performed during the workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
5. I had the resources and the knowledge necessary to manage the online workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
6. Guidance and instruction concerning the workshops was available to me online or on the software used for the workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
7. Online workshops allow students a higher control over learning activity compared with the face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
8. Online workshops allow using more multimedia contents compared with the face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree

9. The evaluations and suggestions received during our online group activities were helpful.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
10. The interface and the software we used for the exercises were easy to use.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
11. Online workshops allow an easier communication between professor (or tutor) and students compared with the face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
12. Online workshops allow an easier communication among students compared with the face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
13. Online workshops are an excellent medium for social interaction.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
14. During the group activities, I received feedback from the teacher related to the activities we were carrying out.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
15. I had the opportunity to give my feedback to the professor (or tutor) on how to improve the workshop activities.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
16. After attending the online workshops, I think it would be easy for me to continue using this online mode.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
17. After attending the online workshops, I think it would be useful for me to continue using this online mode.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
18. Online workshops can optimize the learning process, allowing me to save time compared to face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
19. Online workshops can improve the learning process, allowing me to learn more than face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
20. Online workshops are useful even if we do not do any exercises in practice.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
21. I am satisfied that online workshops met my needs.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
22. I am satisfied with online workshops' effectiveness (considering the new knowledge I acquired during the online workshop(s)).						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
23. I am satisfied with online workshops' efficiency (considering the time I spent in the online workshop(s)).						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
24. I think that online workshops are a waste of time compared to face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
25. I prefer face-to-face workshop mode to online workshops mode.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
26. Online workshops make participation in the lesson activities difficult compared to face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree

27. Online workshops make it more difficult to exchange my point of views and knowledge with professors and other students compared with face-to-face workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
28. Overall, I am satisfied with the online workshops.						
I definitely disagree	I disagree	I slightly disagree	I neither agree nor disagree	I slightly agree	I agree	I strongly agree
29. Overall, I can affirm that:						
I definitely prefer online workshop mode	I prefer online workshop mode	I slightly prefer online workshop mode	I have no preference between face-to-face and online mode	I slightly prefer face-to-face workshop mode	I prefer face-to-face workshop mode	I definitely prefer face-to-face workshop mode

Computer usage (CU): items investigating the participants' self-efficacy and concerns in using the computer and the functionality of the meeting software before to start the workshop (8 items: #2–8,10). Learning satisfaction (LS): items investigating the student's feelings and attitudes that result from combining all the benefits that a student received from workshop(s) in online mode (7 items: #9, 16–17, 21–23, 28). Social interaction (SI): items investigating the possibility for the student to interact with other students, professor, and academic tutor, and collaboration in learning (7 items: #11–15, 26–27). Perceived value (PV): items investigating the degree to which a student believes that attending workshop(s) in online mode would enhance his or her performance (5 items: #18–20, 24–25). The items #02–06, 09–10, 13–17, 20–23, and 28 are non-comparative items with positive connotation; the items #07–08, 11–12, and 18–19, are comparative items with positive connotation; items #24–27 are comparative items with negative connotation.

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