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E-Sailing and Olimpic Games: Impossible Made Real

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E-Sailing and Olimpic Games: Impossible Made Real

Abstract

The confident rapid progress of eSports to world and Olympic recognition gives reasons to consider it a modern cultural and social phenomenon. The lack of consensus among scientists about the place of eSports as a sport causes active debates. However, its increased popularity has turned it into a mass phenomenon of modern society. The use of simulators and virtual reality in sailing, with the support of World Sailing, contributed to the emergence of the Virtual Regatta. Today, Esailing is one of the eSports disciplines selected by the International Olympic Committee for the Olympics Esports Weeks (OEW) and the Olympics Virtual Series (OVS). The eSailing World Championship and eSailing Team World Championship are held annually on an ongoing basis, and in 2024, the 37th Louis Vuitton America's Cup with AC Sailing and the first ever AC eSports Championship were added to eSports. With the support of the IOC, it is planned to expand the competition format and hold a 3x3 Team Racing World Championship, and eSailing is planning to become part of the Olympic Games in eSports in Riyadh. We have found that in order to increase the number of participants in Virtual Regatta, famous yachtsmen-champions are involved, new routes are developed and new classes of yachts are added. It has been shown that electronic games, such as "Virtual Regatta", in their variations can be used by gamers, professional athletes and different groups of the population (youth, people with disabilities, sports enthusiasts, etc.), who, having reached a certain level, can become participants in eSailing in the Olympic Games program.

Keywords: eSailing, Olympic Games program, Virtual Regatta, Development dynamics.

1. INTRODUCTION

In today's world, the popularity of competitive computer games continues to grow. Today, the younger generation is much more invested in the digital world. Some leading sports federations, trying to be at the forefront of the modern sports movement, are creating computer games related to sports. The International Olympic Committee (IOC) has actively supported these innovations and in 2021, the IOC, taking a step towards the digitalization of sports, created the Olympic Virtual Series (OVS). OVS consisted of five different games: "Powerful Pro Baseball 2020", cycling "Zwift", "World Rowing" using a rowing simulator, "Virtual Regatta" and car racing "Gran Turismo". The main goal was to promote the development of virtual sports games and interact with gaming communities around the world. Some scientists have suggested that virtual sports will soon replace traditional sports. The IOC has succeeded in combining traditional elements of physical sports and video games to uniquely introduce physical activity (PA) to a new audience, linking “e” and “sport” through the Olympic Movement. The upcoming Asian Games in Hangzhou will be the first official continental competition to include eight eSports games that can be played on computers, consoles and even smartphones.

The International Sailing Federation has become a leader in this movement, under whose auspices the virtual reality game “eSailing” is increasingly attracting people around the world to sailing, including both amateurs and professionals. Involving eSports in the Olympic Movement will provide a viewer base for many years, since in today's reality we are seeing a decline in viewership, which is especially noticeable at the 2024 Olympic Games in Paris.

This direction of eSailing is relevant and requires further consideration in terms of development in global and Ukrainian eSports.The purpose of our research is to identify global trends in the development of virtual sailing as a component of the Olympic movement.

2. METHODS

Research methods: descriptive analysis, content analysis and systematization of scientific and Internet sources, generalization, synthesis, evaluation and forecasting method.

3. DISCUSSION

3.1. Digital sports games and Virtual reality: evolution of modern sports.

eSports is the sport of the digital generation. Recognition of eSports is also growing in society. More and more people see eSports as a real sport. From its former niche existence, digital sports have long since developed into a mass phenomenon, watched daily by an audience of millions via livestream or in sold-out stadiums.

eSports can be defined as the organized competitive playing of video games. [1,2] One usually distinguishes between three broad game categories: strategy games (RTS or MOBA), Ego-Shooters (FPS), and sport and race simulations. These eSports disciplines differ considerably in their game mechanics on which they are based.

Ansgar Thiel & Jannika M. John (2018) expresses the opinion that in the public discourse, eSport has already established itself as a specific form of a sportive competition, even though the debate about whether eSport can be defined as a sport in the narrower sense or not is far from resolved.[3,4]

Recently, some research in eSports has focussed on psychological similarities and differences between professional eSports and traditional sports. Elite eSport athletes have to be able to sustain high levels of attention and make important decisions under time pressure, underlining the psychological similarities between eSports and established sports.[3]

To succeed in an eSports game, motor abilities and skills, especially the fine motor skills of hands and fingers, as well as eye-hand coordination and local endurance are decisive. In order to achieve top performance in eSports, distinctive game-specific perception and reaction skills are necessary, which are closely linked to the physical-coordinative abilities when action is executed. As in classical sports, systematic eSports training leads to improvement of motor and cognitive abilities and skills that are characteristic of the game. In addition, game-specific tactical knowledge plays a decisive role with regard to success in eSports competitions. Last but not least, an increased calorie expenditure can be observed in players during competition due to the game actions.[5]

Digital sports games are rapidly becoming popular games in the market and already have many advantages. Sports games evoke similar emotions to watching sports in a traditional form, and also allow you to better understand and identify with the sport. In addition, digital sports games influence the participation of sailing fans, so it is a form of increasing brand awareness and creating its value.

Virtual reality (VR) is a computer technology that creates an imaginary world, that is, it recreates reality under different conditions and according to different scenarios.In general, experts highlight a number of advantages of the VR approach in sports activities and in sailing, respectively.[6] First, VR models are based on specified, precisely structured conditions that can be controlled and adjusted until the final product meets user expectations. Secondly, the creation of each VR model summarizes the existing theoretical knowledge and practical experience of developers. Accordingly, the development of VR models stimulates the collection and systematization of available information so that the "virtual world" corresponds to reality. Providing feedback in the form of visual, tactile, acoustic signals to bring the virtual environment closer to the real one. Thirdly, the synchronization of VR visual images with the practical component allows the athlete to master technical and tactical skills and a scheme of competitive behavior in accordance with the given conditions, such as the expected actions of the opponent at the starting line, tactics of bypassing signs, tactics of dueling, responding to changes in wind strength and direction, etc. Fourthly, the creation of virtual clips in combination with images allows for the effective application of psychological practices in the preparation of athletes. Such a synthesis of VR with psychological sessions provides additional opportunities for reducing pre-competition anxiety and increasing the psychological resilience of athletes.

In the field of sports, virtual reality technology makes it possible to create an artificial, fully controlled environment that simulates the real conditions of sports activity. According to the requirements of the specifics of the sport, VR technologies can be combined with practical training. After all, when the virtual world interacts with reality, great prospects arise for improving the process of training athletes, increasing results, and improving the analysis process.[6]

3.2. Use of sailing simulators in sports training of athletes and rehabilitation of disabled people.

In recent decades, leading maritime nations (UK, USA, Australia, Germany and more recently China) with a strong focus on sailing have been using simulators such as VS-Laser, VSail-Trainer, VSail-Access and VSail-Researcher, demonstrating their various applications.[7,8] The initial purpose of VSail-Trainer was for fitness training and physiological assessment of elite athletes. This has shown promise, with several sailors at the recent Olympic Games highlighting the simulator's effectiveness as a useful tool for fitness training and developing racing tactics and strategies.[9,10] Scientists have proven that virtual reality sailing simulators (VRSS) provide the successful transfer from virtual environment to real situation.

The sailing simulator was used in the implementation of the MHYC 2009 junior sailing development program in Australia[11]. Sailing simulators for Optimist, Byte, Mega Byte, Liberty, 29'er and Laser 4.7, Radial and Standard dinghies were widely used in the sport. VSail-Researcher has been integrated into the undergraduate engineering course at AMC to demonstrate the fundamental principles of sailing and simulation. Research Recio et al. (2013), Aprile et al. (2016), Manzanares et al. (2021), Manzanares et al. (2023) has already confirmed Effect of virtual sailing programs on physical and mental outcomes.[12,13,14,15,16] In addition, training in a virtual environment allows for simultaneous monitoring of various physiological indicators of the athlete (ECG, EEG, etc.).[17,18]

Some scientific works by leading scientists from different countries have shown that sailing in virtual reality can be especially useful for people with physical disabilities. Thus, the VSail-Access simulator has been widely used as a means of rehabilitation of yachtsmen after injury and inclusion of disabled children and adults in sailing in Melbourne, Sydney, Miami and Auckland.[19,20,21,22] It should be noted that many specialists focus on the use of virtual sailing more in the rehabilitation direction than in the entertainment or sports direction.

Junhua Xiao (2024) in your research showed therapeutic efficacy of virtual sailing in improving both motor and psychosocial functions. He also expressed his opinion about perspectives on developing virtual sailing as an exercise therapy for treating neurodegenerative diseases, focusing on pre-clinical and clinical evidence as well as the proposed mechanism by which virtual sailing could influence neural plasticity in the central nervous system. Thus, the introduction of innovations allows not only to popularize sailing in the world, expand the audience of spectators and participants, but also to provide practical assistance in the rehabilitation of patients with various nosologies.[23]

However, J. Parry (2018) believes in his work that e-sports are not sports because they are inadequately 'human'; they lack direct physicality; they fail to employ decisive whole-body control and whole-body skills, and cannot contribute to the development of the whole human; and because their patterns of creation, production, ownership and promotion place serious constraints on the emergence of the kind of stable and persisting institutions characteristic of sports governance. Competitive computer games do not qualify as sports, no matter what 'resemblances' may be claimed. [24]

The development of sailing simulators has led to the creation of new series. Italian indie game creator HOOK and Dutch indie game developer Jaxx Vane Studio have announced that their realistic sailing simulator Hydrofoil Generation has been released in Early Access on Steam.

Hydrofoil Generation allows you to virtually control a state-of-the-art sailing vessel traveling at speeds in excess of 50 knots. The player has the opportunity to compete against 10 opponents in a multi-day race, adjusting the sail settings, taking into account the variability of the wind and sea currents in the exciting locations of The Hague and Hong Kong, where capsizing is a constant threat, helping to improve sailing skills.

In addition to the areas of use of VR related to the training of athletes, it is worth mentioning another fairly new popular area related to watching matches from spectator positions using VR technologies - Virtual Reality Spectatorship, which allows you to enhance the impression and pleasure of visually watching a match or game due to interactivity and enhancing the effect of presence.

3.3.The place of e-sailing in the Olympic Games

The path of e-sailing to the Olympic Games began in 2006, when a French company led by Philippe Guinier created an online sailing race simulator called Virtual Regatta. The game simulates real yacht classes with their characteristics and allows you to choose the optimal boat settings (both sails and course) taking into account meteorological conditions (Figure 1).. Since then, the company has been cooperating with the media departments of major ocean races and their sponsors. Such games are increasingly broadcast by TV channels, television and Internet portals.

Sailing has always been perceived as an elitist and technically demanding sport, and in the electronic version its basic principles can be presented in a slightly simplified way, thereby promoting active participation and a better understanding of the sporting events being viewed.

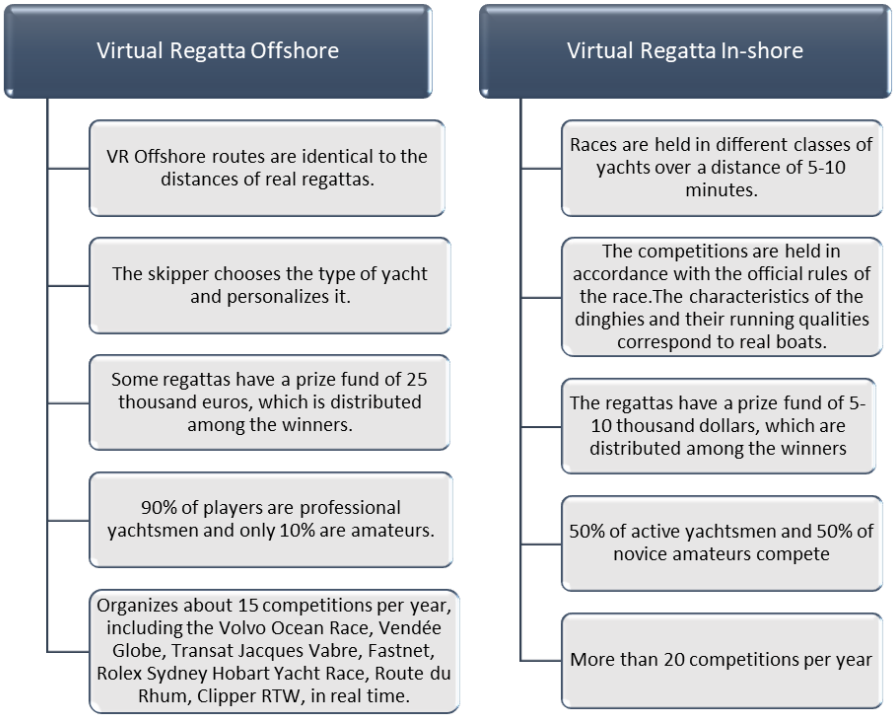

Figure 1. Characteristics of the Virtual Regatta gaming platforms

The game's popularity grew dramatically during the 2008-2009 Vendée Globe regatta, which attracted 340,000 virtual sailors. The winner, Hugo Fournier, took 85 days, 19 hours and 45 minutes to circumnavigate the globe, which is only 36 hours longer than the real winner of the race, Michel Desjoyaux.

In order to attract new participants, Virtual Regatta organized competitions involving famous skippers Louis Peyron in 2009, Samantha Davis in 2010 and Roland Jourdain in 2011. The 2016 Vendée Globe introduced "certified players" for the first time. These "certified players" included world-renowned skippers such as Loic Peyron, Jan Lipinski and Yves Le Blevec, as well as celebrities such as Sylvain Marconne and Estelle Denis, who participated in the race from start to finish.

3.4. E-sailing in the program of international competitions

In 2015, the company developed Virtual Regatta Inshore, a yacht racing game, in partnership with World Sailing. This led to the first eSailing World Championship in 2018 (Figure 2.).

Figure 2. Dynamics of the development of e-sailing in the world.

Analytical studies have shown that as of 2020, the offshore version of the game had 1.5 million active players, representing 193 countries. The organizers held 50 races per year in 13 boat classes. The first version of the game had about 50,000 players, and now there are about 4.5 million players.

After registering for a race, players can choose a yacht type and personalize it. Players compete in real-time from their computers or mobile devices. Each race in Virtual Regatta simulates the real-world weather conditions that skippers face, requiring theoretical knowledge of sail setting and tactical knowledge of choosing a course to sail against each other over the course of the race. Every evening at 8:00 p.m. during the race, participants were able to tune in to "Virtual Regatta News," a 10-minute news show about the virtual regatta, featuring weather information and routing tips. During one race, the vlog garnered over 40 million views, hosted by professional yachtsman Sébastien Destremeau.

The World Sailing Championship (ESWC) is an annual eSports competition officially recognized by World Sailing, the sport's governing body. Esailing is a real-time regatta simulation using a video game. Video game support for the competition has been provided by the French company Virtual Regatta since 2018. Esailing is also one of the eSports disciplines selected by the International Olympic Committee for the Olympics Esports Weeks (OEW) and Olympics Virtual Series (OVS).

Since 2020, the World Sailing Team Championship has also been organised among the World Sailing national federations. Since then, many countries have held national championships using the Virtual Regatta platform, including Italy, Switzerland, the UK, Germany and Sweden. The UK team won the first World Championship (2018, 2024), followed by France in 2021 and 2022 and Italy in 2023. The French (18) and Italians (10) have the largest number of participants in these competitions (Figure 3).

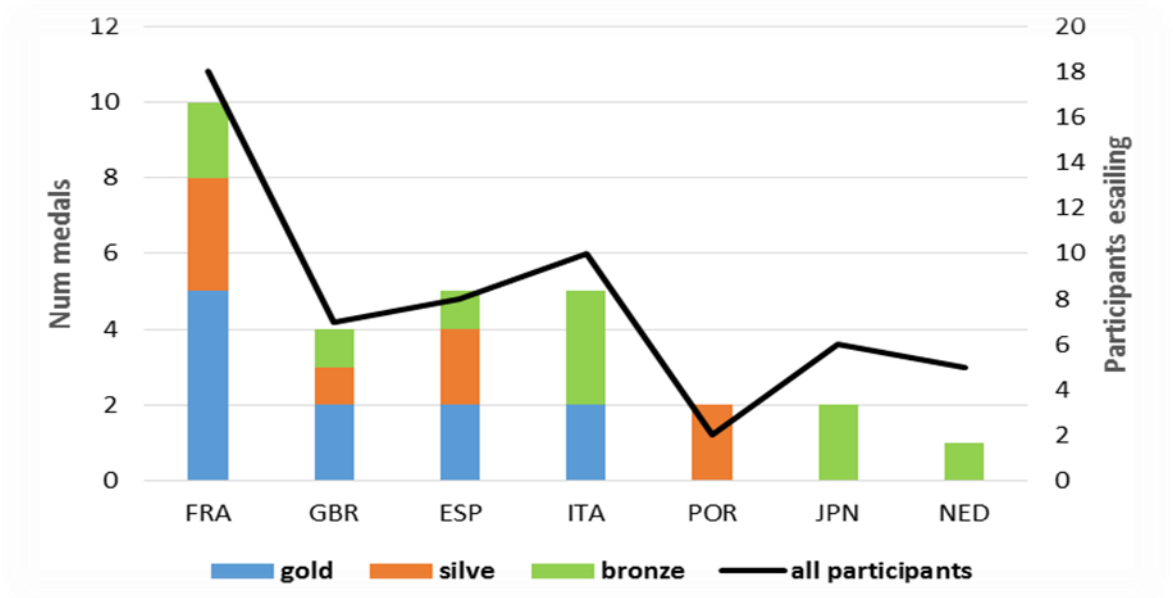

Figure 3. Leaders by number of medals at the eSailing World Championship.

This year's World Sailing Championship (2024) eSailing attracted over 8,000 unique players and 25,000 regular participants from 117 countries, demonstrating the growing scale of the sport. Players competed in 18,000 races, and an impressive 113 days of racing time were recorded on the servers, giving players a combined 1,010 days of racing time. Nearly 900 experienced competitors competed for the top positions, making this season one of the most competitive seasons ever. All of these figures were recorded in just 6 weeks of actual racing.

In 2021, the International Olympic Committee (IOC) partnered with five international sports federations and video game publishers to create the Olympic Virtual Series. The competition was the first in IOC history to feature both physical and non-physical virtual sports. Sailing was among the five disciplines, represented by the Virtual Regatta. The following dinghy classes were contested: 49-er, Laser and Nacra 17.

Fans watched the competition online. The event took place before the start of the Olympic Games in Tokyo. IOC President Thomas Bach commented on the creation of the Olympic Virtual Series: "The Olympic Virtual Series is a new unique experience aimed at expanding direct interaction with the audience in the field of virtual sports. Its concept is in line with the "Olympic Agenda 2020+5" and the IOC digital strategy. It encourages participation in sports and promotes Olympic values, paying particular attention to young people." The ninth recommendation of the "Olympic Agenda 2020+5" states that it is necessary to "encourage the development of virtual sports and further interaction with video game communities."

As a follow-up to the 2021 Olympic Virtual Series (ESWC), the IOC and the National Olympic Council of Singapore hosted the first Olympic Esports Week in Singapore in June 2023, which included e-sailing. The Olympic Esports Series 2023 is a global virtual and simulated sports competition created by the IOC in collaboration with international federations and game developers.

The Olympic Esports Series 2023 featured two categories: a 30-day endurance race around the world on the high seas, and an Inshore competition featuring three dinghy classes including Nacra 17, 49-er, ILCA, and sailing along the coasts of Kiel, Rio de Janeiro and Marseille. The winners were Tim Carpentier (France), Cavan Fayance (Great Britain) and Francisco Melo (Portugal) (Table 1, Picture 1).

Table 1. Winners of the virtual sailing regatta at the Olympic eSports Series in Singapore (Sailing Inshore)

RANK	COUNTRY	PLAYER
1	FRA	Tim Carpentier (UOL Pepitõ)
2	GBR	Cavan Fyans (Cavan Fyans)
3	POR	Francisco Melo (Magic - ChicoPMelo)
4	BRA	Jose Godinho (Magic - JoseGodi)
5	GRE	Yannis Kokonias (GRE-9 LDLN)
6	JPN	Yuko Furukawa (FUNe_Yuko)
7	JPN	Toshiki Kogure (FUNe_KG-R)
8	ESP	Ramón Parejo (CNS Ramón Parejo)
9	BRA	Samuel Solano (Magic - Solano)
10	ITA	Rosalba Giordano (sosi)
11	SGP	Colin Ng (North3DL)

Picture 1. Frenchman Tim Carpentier "UOL Pepitõ" is the first winner of the virtual sailing regatta at the Olympic eSports Series in Singapore.

In September 2024, the 37th Louis Vuitton America's Cup (AC) with AC Sailing and the first ever AC eSports Championship entered eSports. The competition was held using the America's Cup sailing simulation game developed by Emirates Team New Zealand and was held in three stages (Figure 4). In the final, Liam Dimock from New Zealand won after 5 races, receiving a trophy and a cash prize of €25,000, with Robbie Wooldridge (New Zealand) and BengBengFra (France) as the winners.

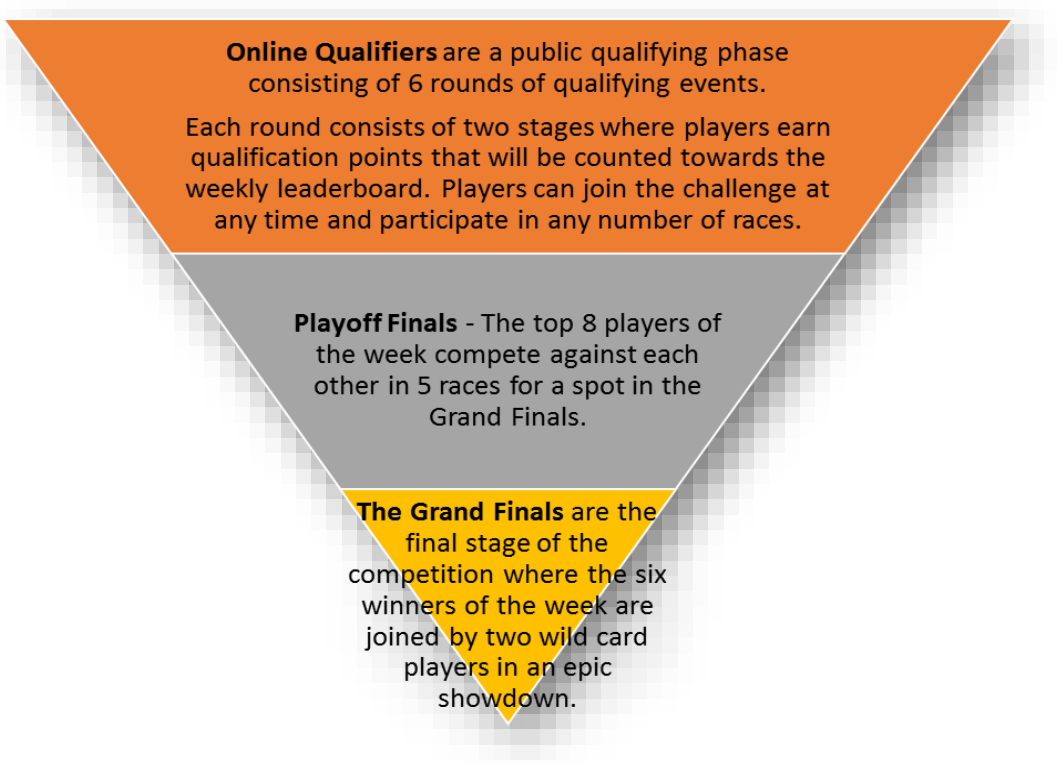

Figure 4. Stages of the 37th Louis Vuitton America's Cup.

Conclusion

1. The confident rapid advancement of eSailing eSports to global and Olympic recognition gives reason to consider it a modern cultural and social phenomenon. The eSailing World Championship is expanding, which is facilitated by this year's Nations Cup and grandiose plans for the future. In the future, it is planned to expand the competition format - to hold a World Championship in 3-on-3 team races. In addition, eSailing plans to become part of the Olympic Games in eSports in Riyadh.

2. We have determined that the introduction of eSailing is not intended to replace the traditional form of this sport, but, on the contrary, to promote its development and increase the potential consumer base (players and yachtsmen-athletes) through synergy. The mutually beneficial partnership between World Sailing and Virtual Regatta allows the development of eSailing around the world and attract thousands of new yachtsmen to the virtual space.

3. The analysis of scientific works has shown that electronic games, such as "Virtual Regatta", in their variations can not only serve professional athletes to improve their sports training, but also contribute to raising awareness of sports and its popularization in new conditions and among different groups of the population (youth, people with disabilities, sports enthusiasts). Therefore, VR technology is a promising instrument to meet the increasing demand on sail education. While VR enriches educational resources for a large class size, the interdisciplinary feature of VR-based sail course can attract students with different study interests and backgrounds to the class.

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