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ON THE USE OF ESPORTS IN EDUCATIONAL SETTINGS. HOW CAN ESPORTS SERVE TO INCREASE INTEREST IN TRADITIONAL SCHOOL SUBJECTS AND IMPROVE THE ABILITY TO USE 21ST CENTURY SKILLS?

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Abstract

The rise of interest of Esports combined with the interest of spectating other people playing games has increased immensely over the last years. For example, according to a study conducted in 2019 on behalf of Austrian Entertainment Software Association, 5.3 million people currently play games in Austria alone, 2.6 million of them daily. To compare this with the number of inhabitants, 8.8 million people live in Austria. The rapid developments in 2019 show that Esports is no longer a marginal phenomenon but has found its way into the middle of society. Even in the pandemic year 2020, Esports and digital gaming seem to have received a boost. During the time when no sports were allowed, Esports games, especially those that are similar to classic sports, were broadcast on regular television. Games, often condemned, were recommended by institutions such as the WHO to promote emotional and psychological health. 50% of Austrians under the age of 25 are interested in Esports and every 7th Austrian currently consumes Esports content. More than 38,000 registered players according to Austrian Esports Federation (ESVÖ), numerous new teams and companies related to the topic show that Esports is on the road to success. Classic sports clubs are increasingly focusing on the topic of Esports in order to win young people over to becoming fans of the club and also to become interested in classic sports through Esports.

Therefore, it was only a logical step that first attempts were made to integrate the topic of Esports into everyday school life. The first school leagues were established very early in Germany, often initiated by individual console manufacturers. In America there is the North American Scholastic School league as a prime example of the combination of 21 century skills that can be acquired through esports.

This article deals with the topic of Esports in the scope of pedagogical work in both school and after school settings. The authors initiated the trial season and are now co-responsible for the upcoming first full season of the Vienna Esport School League Floridsdorf+. They share their experience in planning and running the league. Furthermore, they show how Esports can be applied in an educational context, clarify the objectives and non-objectives of Esports in the educational setting and also address the hurdles and problems related to Esports in the school and youth centre environment in general and at the time of the Covid-19 crisis in particular.

Keywords: Esports, School League, 21st Century Skills.

1 INTRODUCTION

The rise of interest of Esports combined with the interest of spectating other people playing games has increased immensely over the last years. For example, according to a study conducted in 2019 on behalf of Austrian Entertainment Software Association, 5.3 million people currently play games in Austria alone, 2.6 million of them daily [1]. To compare this with the number of inhabitants, 8.8 million people live in Austria. The rapid developments in 2019 show that Esports is no longer a marginal phenomenon but has found its way into the middle of society. Even in the pandemic year 2020, Esports and digital gaming seem to have received a boost. During the time when no sports were allowed, Esports games, especially those that are similar to classic sports, were broadcast on regular television [2]. Digital games, once quite often condemned, were recommended by institutions such as the WHO to promote emotional and psychological health [3]. 50% of Austrians under the age of 25 are interested in Esports and every 7th Austrian currently consumes Esports content. More than 38,000 registered players according to the Austrian Esports Federation (ESVÖ) as well as numerous new teams and companies related to the topic show that Esports is on the road to success [4]. Classic sports clubs are increasingly focusing on the topic of Esports in order to win young people over to becoming fans of the club and also to become

interested in classic sports through Esports [5]. The bachelor's thesis by Cassedy (2020 [6]) offers current insights on this topic, which should be taken into account due to the fact that there is still little research on this topic.

Therefore it was only a logical step that first attempts were made to integrate the topic of Esports into everyday school life. In the German speaking area, the first school leagues were established in Germany [7] [8], often initiated by individual console manufacturers. In America there is the North American Scholastic Esports Federation (NASEF) as a prime example of the combination of 21 century skills that can be acquired through Esports [9].

In Austria, the first major Esports school league was implemented in Vienna in the school year 2018/2019 with around 300 participating students aged 10 to 14 years [10]. This league served as a test run for the Esports School League Floridsdorf+, which is now entering its first real season.

Ward et. al. (2020, [16]) show that Esports is a so-called superstars market. This means that there is a certain segment of absolute top earners, while it can be argued that semi-professional Esports have not yet reached the point where some sort of income is assured. The authors compare this to the theatre or film industry. This is particularly interesting with regard to the scouting of top players, which also starts at school age. After all, when a player agent finds the next top talent, his/her margin is of course quite noteworthy.

This conference paper intends to show how an Esports school league can be implemented in an educational context. Thereby, challenges and opportunities are thoroughly debated.

2 METHODOLOGY

On the one hand, the contribution is based on literature research. However, it should be noted that the literature on Esports in the context of Central European school settings is still very limited. On the other hand, the considerations are based on observation analyses and reflections within the team and partners of the test season of the Esports School League Floridsdorf 2018/2019.

3 RELATED RESEARCH

In the course of conceptualizing the Esports School League Floridsdorf+, the North American Scholastic Esports Federation (NASEF) was used as a positive role model. The website nasef.org has a separate section that presents research results in an easily understandable way for the general public. There the focus is on the area of social interaction and community building and, in addition, it is shown how Esports can positively contribute to STEM learning [11].

Smithies et al. (2020, [17]) assume that the actual careers of Esports athletes, especially the period in which they can earn a living by participating in tournaments, are very short. In their opinion-paper, the authors have outlined three professions in which successful Esports athletes have good career opportunities due to the skills they have acquired and confirmed through Esports. These three professions are military drone pilots, air traffic controllers and pilots.

Fletcher et. al. (2020, [12]) addressed the topic of Esports tournaments in schools and possible positive behavioral changes.

In conclusion this study has found that involvement in Esports team activities has a positive impact on interpersonal relationships and as a result builds confidence in young people to tackle other challenges. The perceived increase in their communication, team working skills and resilience has opened up the possibility of new activities and challenges which may not have been considered before thus allowing the positive impact of the tournament to penetrate other areas of their lives. (p 228)

Shum et. al. (2020, [13]) addressed the pros and cons for Esports in schools. Their arguments against are as follows:

- High Time Cost
- Overuse Injuries
- Problematic Psychological Functioning
- Gaming Disorder

- Exposure to Mature Content
- Extreme Emotional Responses

According to the authors, the following argues in favor of applying Esports in a school context:

- Better Physical Fitness
- Enhancement of Cognitive Skills
- Exploration of Roles
- Enhancement of Communication Skills
- Gaming and Friendship

In their conclusion, the authors clearly advocate Esports in the school context. One particularly positive aspect for the authors is the opportunity for international exchange between the players. Nevertheless, they point out that further research is absolutely necessary.

4 DISCUSSION

First, we would like to address the counter arguments regarding Esports in schools by Shum et al. and which learnings we have drawn from them to counteract them for the School League Floridsdorf+.

High Time Cost: Digital games can, of course, be a time-eater. Especially when it comes to the dedicated training to become a professional Esports athlete. At this point we would like to talk about the first non-goal of the Esports School League Floridsdorf+. We integrate Esports as a positive and lifeworld-oriented topic in everyday school life intended to be offered as an afternoon activity as part of special project weeks and as an offer within the educational work in youth centres. However, we do not have the intention to train professional players. Should a special talent stand out, the connection to the National Esports Federation, clans or sports clubs with Esports sections can of course be established, but we assume that this will be the exception rather than the rule. Therefore, at the Esports School League Floridsdorf+ we pay a lot of attention to the balance between the gaming sessions and other social and sports activities. In particular, we make sure that the regular school activities are not neglected by playing and training for the Esports League, according to the motto *"First work, then play"*.

Overuse Injuries: Similar to the first point, injuries from excessive playing with the game controller are avoided in advance due to the proper balancing of playing and other activities. No "monster sessions" are performed on the console. And even during an intensive gaming afternoon, which is also occasionally possible, breaks are scheduled.

The current case of the professional player Thomas Paparatto (player name "ZooMaa") shows that injuries can happen through computer games. He got a thumb injury while playing and has to be surgically operated, therefore he can't participate in a well funded Call of Duty tournament being one of the top favorites [18].

Problematic Psychological Functioning & Gaming Disorder: The Esports School League Floridsdorf+ takes place under pedagogical supervision. Accordingly, the students are supervised and observed to the best of the teachers' knowledge and belief. If individual students show psychological problems or abnormalities in relation to gaming and the participation in the Esports League, appropriate steps will be taken. In this case, an accompanied break from the game takes place and, if necessary, further professional help and conversation with the parents is pursued. Embedding gaming activities into the everyday school life opens up the possibility of identifying and counteracting potential problems related to gaming disorders (possibly in an early stage).

Exposure to Mature Content: The game selection of the Esports School League Floridsdorf+ has been made very carefully, taking into account age ratings (PEGI) and age recommendations (BuPP.at) as well as the suitability of the games in a competitive setting. We play Rocket League (Psyonix) in the basic version without Season Pass, FIFA 21 (Electronic Arts) in the basic version and in street soccer mode, thus without the F.U.T. game mode and as an extraordinary feature of our league the game Overcooked 2 (Team 17). The reasons behind the choice of the game modes are discussed with the youngsters. This concerns, for example, the omission of the F.U.T. game mode in FIFA although it is played in professional Esports. The first Esports School League Floridsdorf has shown that this openness and cooperation with the kids is the right approach.

Furthermore, challenging and problematic game content, such as the Season Pass, in-game items, Free2Play or the store and transfer market in FIFA, are discussed in teaching units with the corresponding didactic accompanying materials.

Extreme Emotional Responses: Computer games and especially competitive play naturally trigger emotions. And that's a good thing, because just like classic sports, Esports thrives on the emotions of both the spectators in the hall or via the stream, and the players in the tournament setting. Emotions from the game experience can also be an important learning experience, for example, to practice how to deal with disappointments as well as successes. In order to experience this in a goal-oriented way, the pedagogical support of the professional staff is again required. However, emotions in the direction of violence, destructiveness or hatred towards opponents are not tolerated. Here, too, educators must intervene early and take countermeasures.

Next, we would like to discuss the positive aspects of Esports in the pedagogical context of Shum et al., Fletcher et al. and the findings of NASEF. Thereby we would like to demonstrate how we plan to achieve these effects with the Esports School League Floridsdorf+ and finally add additional items.

Better Physical Fitness: In the context of the Esports School League Floridsdorf+ we show that physical as well as mental fitness is part of an Esports training. In our framework, this is achieved with small movement and coordination games in the schoolyard, school gym or classroom. We teach the young people that professional Esports athletes follow a detailed training plan with activities in their game, analysis and sports and, in the case of team games, together with teammates/colleagues.

Enhancement of Cognitive Skills: Esports games like Rocket League or FIFA boost awareness and attention as well as the ability to concentrate and focus. But here, too, the pedagogical specialists have to step in specifically and train these skills with further exercises. In the best case, a transfer effect is achieved. An example of this would be that the students learn how the ability to focus can also be used for other activities, such as school lessons.

Exploration of Roles: Computer games naturally invite you to try out new roles. In FIFA you can play the role of a soccer player or a trainer, respectively in Overcooked the role of a chef in a kitchen. In our case, however, it also means something else. For example, our participants can play the role of a team captain, mentor, substitute player or coach. And this is an optimal preparation for roles that will be performed in the professional world after graduation.

Enhancement of Communication Skills: The four C's of 21st Century skills are Critical thinking, Creativity, Collaboration & Communication. Shum et al. specifically address communication in their list of benefits, while Fletcher et al. show that cooperation is fostered through Esports. Both go hand in hand, of course. We would go so far as to claim, referring to the materials available on the NASEF website, that creativity and critical thinking are also fostered through Esports. These positive aspects can be transferred to the real-world context by the educational staff. And in particular, interest in technical professions can be fostered. Here, a special focus can also be placed on the target group of young women, as the League of Girls project from Picapipe shows [14]. Esports as an offer in school and youth centres can therefore be an optimal tool to train the famous four C's.

Gaming and Friendship: The interviews with the players following our test league have shown that the cross-school tournaments in particular have resulted in new friendships. But also friendships to other classmates within a class or school have arisen. Especially outstanding were the friendships between boys and girls through the teams as a result of the gender mixed teams, which otherwise would not have developed in this way without the Esports experience. The fear of simply chatting with each other has definitely been overcome by playing and training together.

5 CONCLUSIONS

The comparison of our experiences with the current literature has shown that Esports in schools can lead to a positive overall experience. It is important that Esports is applied in a suitable didactic context and that it is accompanied by trained personnel. The experience of the School League Floridsdorf+ so far has shown positively that Esports can be optimally implemented in afternoon care or in the form of voluntary exercises and project weeks.

Done correctly, an Esports Youth League supported and accompanied by school programs and youth centres can result in positive development steps for young people. In addition to the positive impact, for example, on 21st century skills, we will focus on the topic of financial literacy in the coming season. For this purpose, a gamification framework will also be created, which should additionally motivate students

to engage with the learning content. Teams that perform well in the learning part can, for example, choose the specific level/arena in which they play. Pfeiffer et al. have coined the term "Around-Game Gamification" for this specific gamification framework [15].

The Covid-19 crisis and the strict lockdown in Austria have unfortunately postponed the start of the current season of the Esports School League Floridsdorf+ by several months. We hope to write a follow-up paper at INTED2022 and present the results of the player and teacher surveys.

6 OUTLOOK: NEW SETTING OF THE FLORIDSDORF+ LEAGUE

In the outlook we would like to describe the new setting of the league. Originally it was planned to equip the youth centres in the Viennese district Floridsdorf with gaming consoles and to provide the same gear to additional selected youth centres in other districts. On this approach, the "+" sign in the name of the league - Esports School League Floridsdorf+ - is based. The registered teams of the school would get slots in the youth centres, where they can practice. Additionally, the equipment would be available for free and inter-school practice.

The new setting now provides for the equipment to be delivered to various schools and set up by the staff on site, for example in the gym. There, the games are played only within the class or within students who, for example, already form a unit in the lunch and afternoon care. A Covid-19 prevention concept is applied here, i.e. the equipment is regularly disinfected, the mask obligation corresponds to the respective general regulation depending on the Covid-19 traffic light colour.

After four weeks, the equipment changes to other schools in the district. The Esports School League Floridsdorf+ is thus massively extended in terms of time and will be carried out from the start in March 2021 until December 2021. We hope that the situation around the pandemic will allow inter-school tournaments to take place at the end of the year, even if we have to host them with a smaller number of students over several days.

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