THE SCHOOLIFICATION OF COMPUTER GAMING – IDENTIFYING THE ROLE OF ESPORT IN SCHOOL SYLLABI

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Abstract

The aim of this project is to examine the educational dimensions of esport as part of the course syllabi in secondary education. An increasing number of schools on the upper secondary level (in Sweden: gymnasium) are offering three-year programs with an "esport profile" within aesthetics and media. School marketing suggests that esport can work as a bait for potential students who are interested in playing computer games, but the scholastic values of computer gaming remain to be clarified. Whereas "gamification" is an established term for transforming educational (and other formal) practices into game-like activities, little has been said about its counterpart "schoolification": how originally playful and informal practices are transformed to fit within school curricula and syllabi for achieving academic goals. A number of unanswered questions follow. For example, teachers have observed that students in the esport program are less motivated in schoolwork but are highly motivated gamers. Is this a question of what students learn, or how they learn? How do the students themselves perceive esport performance in relation to academic performance? What are their driving factors and can motivation in one domain transfer to another? How do students perceive fear of failure, gains of winning, competition and success, across esport and traditional school topics? Here, we address the challenges and procedures of setting up a practice-based research program where the practitioners (i.e. students, teachers, an esport coach and school leaders) collaborate with researchers in investigating the relationship between computer gaming and traditional teaching-and-learning activities in the classroom.

Keywords: Esport, secondary education, computer gaming, gamification, schoolification.

1. Introduction

This project takes its point of departure in the intersection between learning and education in the broadest sense, and the cultural phenomenon of e-sports. Esport is used as a collective name for all competitions that take place in a virtual environment. It can thus be about video games, computer games, Virtual Reality (VR), Augmented Reality (AR) or mobile games. Globally, it is estimated that close to 200 million people practice or follow competitions that take place in virtual, electronic environments. In Sweden, it is estimated that approximately 100,000 young people are organized and active in esports. Considerably more – and not only young people – engage in e-sports on their own and yet more people consider themselves "gamers".

Research on esports has increased exponentially in recent years and since the seminal book on video games and learning by Gee (2003), but only exceptionally is education weighed into the discussion of this phenomenon's culture, industry and/or ecology (depending on which metaphor is used). Therefore, there are good conditions to begin the mapping of how esports and education can fit together at different levels and forms of education. A number of variants have emerged on how e-sports can constitute both goals and means in education at different levels, both in Sweden and internationally (Harvey & Marlatt, 2021; Jenny et al. 2021; Scott et al. 2021). The term "scholastic esport" (Harvey & Marlatt, 2021) is a theoretical starting point. Above all, the literature on scholastic esport has focused on what it is learned in computer games, how digital tools contribute to the motivation of learning, and what possible career paths it offers (and thus how curricula, courses and training plans should be designed). Here, we address some challenges with and procedures of setting up a practice-based research program, in the local context of an upper secondary school in Sweden (gymnasium) which offers a three-year program with an "esport profile" within aesthetics and media.

Our overall aim is to develop a practice-based collaborative research project between researchers and practitioners – students, teachers, an esport coach and school leaders – for investigating the relationship between computer gaming and traditional teaching-and-learning activities in the classroom. This collaboration is planned to be carried out over the years 2023-2025, and is under development at the

time of writing, starting with this opportunity for input from the educational research community. First, we describe the motivation and theoretical rationale for setting up the project with respect to the scholastic role of esport in the present, national and local, context. We then discuss the concept of "schoolification", as the theoretical reverse of "gamification", with respect to how the informal practices of computer gaming are transformed to fit within formal school curricula and syllabi for achieving academic goals.

2. Motivation and rationale for the project in the present context

Based on national statistics, there should be approximately 1,000 actively organized esports players just in the immediate vicinity of the university where the authors of this paper are based. Since 2021, the university itself hosts an "esport lab", which besides to the interest of researchers and students, is adapted to young people with disabilities. A nearby school offers a three-year program on the upper secondary level (high school) with a particular esport profile, where computer gaming has a pronounced role. For example, on the school's website, their educational program is marketed as stemming from "knowledge of a gamer's needs" in order to "…create a gamer profile linked to a training program to make you the best gamer you can be" (translated from Swedish, www.lbs.se/programinriktning/e-sport/). In short, the vast general interest in esport, its scholastic relevance and local conditions beneficial to research, triggered our interest in further investigating the relatively recent role of computer gaming in traditional educational programs and processes.

2.1. From gamification to schoolification

Two types of transformative processes, significant of the digitalisation and the 21st century and important for the present discussion, are those of *gamification* and *schoolification*. Both terms were coined in the aughties, at the start of the millennium. The former, gamification, has gained more fame, as a process pervading many societal sectors, from education to marketing. The latter, schoolification, is lesser known. Mostly as a pendant to the increasing academic character of early childhood education, schoolification is a term coined to described to denote when curricular content begins to pervade educational institutions, where prior freer forms of learning had reigned. An intensification of adult transfer of knowledge is also part of the definition of schoolification (Gunnarsdottir, 2014).

Although well developed as a cultural grassroots phenomenon and potent commercially potent industry, esport lacks formalization and distinction in the education level (Jenny et al. 2021; Scott et al. 2021). This creates a need to understand how features and efforts attract its target group, manage and develop the target group's knowledge, as well as prepare it for further studies, and professional practice within different parts of the sector. In addition, an investigation of these relationships with a focus on specific cognitive concepts and principles (cf. Gee, 2003/2007) could map and discover what scholastic esports has to offer that is not done within the framework of educational programs without computer games and gaming in the syllabus.

2.2. From learning "what" to learning "how"

Whereas formal education is typically divided into subject areas (e.g. math, history, biology) and domain-specific skills (e.g. sports, handicraft, creative arts), it can be argued that the scholastic values of computer gaming is more about *how* students learn than *what* they learn. The factual content of a game, whether in an historically apt setting or a futuristic fantasy, is seldom important for learning skills or making progress in the game. Still, the gamer needs to attend to, process and take proper action to various informational sources and events on screen. Above all, students need to make choices (sometimes within fractions of a second, depending on the type of game) as to what, when, where and how to learn.

The function of instant feedback to the player's choices likely has a vast impact on the player's motivation and willingness to make efforts, especially in contrast to non-interactive, non-social environments where no or much delayed feedback is given (such as when reading a book is eventually followed by a test, and a subsequent test result). It was therefore not surprising when our initial contacts with teachers revealed that students in the esport program were highly motivated gamers, but less motivated in traditional schoolwork. Such observations motivated us to look further into how the students approached the different domains of gaming and schoolwork. Research in this field is scarce, but one study (Trotter et al, 2022), allegedly the first longitudinal study of its kind, found that the positive psychological development of students enrolled in a school esport program did not decrease when compared to a control group. However, because the study was impacted by the COVID19 lockdown, the specific effects on motivation are hard to distinguish. This points to that the virtual context of esport education has some pedagogic potential to unpack (or: some unlocked levels to explore).

Perhaps most importantly from an educational point of view, we wondered whether students could learn to apply some principles from their gaming activities also to improve their schoolwork, not by transforming the actual school tasks (reading, writing, doing math, etc.) but rather transforming how students think about, and hence approach, the same tasks. For example, constructs such as winning/losing may be explicit and repeatedly present in a computer game (and often crudely so, as the game character survives/dies), with a clear effect on the player's efforts and motivation to try again. On the other hand, in school subjects such as math or physics, one's construct of success/failure may be an implicit, even unconscious, motivating factor of performance. Hence, the differential effects on students' motivation and skills might not be due to the topic itself, but to the process of how students approach and learn the material. The role of esport in school in school syllabi – its schoolification – would then reside in its potential to offer more, and previously non-existent, ways of interacting with learning material that ideally broaden students' study skills. A precondition to such successful learning is, however, that there are opportunities to apply similar goals and strategies across settings and disciplinary boundaries.

3. Challenges to setting up a practice-based esport research program

If there is a common message from the recent literature on integrating esports in education (Harvey & Marlatt, 2021), it seems to be the importance of active involvement and engagement of the relevant stakeholders in the gaming ecosystem. This makes a complex challenge for researchers, not to detach research activities from educational goals and interests. We took the following steps:

1. Resource identification: what physical resources and competences are needed and available.
2. Establishing contact with stakeholders: students, teachers, mentors, esport coach and headmaster.
3. Invested interest: formal agreement on co-financing of the project by the school and university.
4. Maintaining collaborative practices: regular meetings with teachers, mentors and school leaders.
5. Co-design with stakeholders: pilot testing of instruments using mixed methods, such as interviews, questionnaires and quantitative data of gaming practices and school performance.
6. Communication plan: involving the research community at an early stage (e.g. conferences and other collaborative assemblies), research findings to be published in open access journals.

3.1. Conclusions for discussion

As researchers, rather than esport program developers, we conclude that some major questions about the scholastic role of esport remain unanswered and thus warrant further investigation. For the research project ahead, we will focus on the following:

- How do the students themselves perceive esport performance in relation to academic performance?
- What are the students' driving factors and can motivation in one domain transfer to another?
- How do students perceive fear of failure, gains of winning, competition and success, across esport and traditional school topics?
- How does the identified knowledge, acquired and developed within esport programs on the upper secondary school level, correspond to the Digital Competences Framework by the EU?

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