Academic Game Design Education: A Comparative Perspective

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Abstract. This paper outlines a model of game design education that considers not only the creative and technological design and development of digital games, but also their broader aesthetic, historical and cultural contexts and implications. The model is derived from a comparative analysis of several undergraduate programs in Australia, Germany, Great Britain and the United States which was presented by the author at JCSG 2018.

Keywords: Digital Games, Game Design, Game Design Education, Higher Education.

1 Introduction

More and more universities offer undergraduate and postgraduate programs in game design and/or game development. The expansion of academic game design and game development education is a global trend which can be observed across Western countries. On the one hand, universities exchange curricular and didactic approaches beyond institutional and national borders. On the other hand, the field can be characterized by a diversity of approaches and local particularities. According to a 2014 study by the Higher Education Video Game Alliance, classes offered in game design and game development programs "span more than 240 subjects ranging from Advanced Drawing and 3D Modeling to Artificial Intelligence and Computer Programming in C++ to Marketing Principles and Business Law" [1].

This paper, as well as my talk at JCSG 2018, focuses on Bachelor of (Fine) Arts and Design programs, rather than their Bachelor of Science counterparts or postgraduate programs. My presentation at JCSG 2018 compared concepts from programs in Australia, Germany, Great Britain and the United States: the Bachelor of Design (Games) at RMIT University in Melbourne; the Digital Games BA at TH Köln; the Game Design BA at the University of the Arts London; and the Game Design BFA at New York University (NYU).

This comparative analysis reconstructs a common model of academic game design education that does not only aim at short-term employability, but also provides sustainable preparation for the labor market of the 21st century, in and beyond the gaming industry. This model also facilitates students' intellectual and creative abilities, which hold value beyond the workplace.

2 A Model of Academic Game Design Education

In the following, the model of academic game design education, derived from my comparative analysis delivered at JCSG 2018, will be outlined along the following criteria: generalist and specialist education, variety of contents, design over technology, student body diversity, variety of games, learning in collaborative projects and general education. A more comprehensive account of this model as well as a similar comparative analysis can be found in an earlier article [2]. In "Games studieren – was, wie, wo? Staatliche Studienangebote im Bereich digitaler Spiele," a book on German game design and development education, I published the results of a broader comparative analysis including Bachelor of Science as well as graduate programs [3].

Generalist and Specialist Education: The programs featured in this paper pursue an approach to game design education that aims to educate its students as both generalists and specialists. The curricula of all programs imply the assumption that academically educated game professionals should own: (a) a basic understanding of the work done in all departments involved in game development as well as its media-theoretical contexts and economic conditions, and (b) a specialization in one of the departments, such as Game Design, Game Arts, Game Programming or Game Producing—though the depth and degree of formality of specialization strongly varies between study programs. An individual student's specialization might include a further, more in depth specialization in a certain sub-field, which is especially true in the domain of Game Arts, where some students specialize as Character Designer, Environment Artist, 2D or 3D Animator, or 3D Modeler at an early stage. At the end of their studies, graduates are either generalists with an informal specialization in one of the departments involved in game development (e.g., NYU) or specialists in one of these departments with a solid understanding of the other departments (e.g., TH Köln).

Variety of Contents: In their generalist philosophy, all programs offer an enormous variety of classes, ranging from Figure Drawing to Artificial Intelligence to Publishing. Overall, courses can be classified to the following five core areas of study: Game Design (understood as the design of gameplay, mechanics and narration); Game Arts (including CG Art, Animation, Sound Design, etc.); Game Programming & Engineering; Game Economics & Producing; and Media & Game Studies (including approaches from the humanities as well as social sciences).

Design over Technology: Above all, the described programs target the education of designers who create gameplay, mechanics and narration (Game Designers); interface, characters and environments (Game Artists); or source code (Game Programmers). In this sense, technology is primarily seen as a means to an end. In the case that programs are concerned with the education of programmers, they do not aim to educate computer

scientists, but creatively trained programmers who work at the intersection of design, arts and technology—as gameplay programmers, for instance.

Student Body Diversity: The observed programs set diversity as a central goal. This certainly includes the integration of female students, though this mission is more broadly concerned with the inclusion of those who are typically excluded from the core target group of AAA games. This trend towards a diversified student body fits to broader developments such as a changing market of digital games and the opening of the gaming industry to new target groups. Programs assume that a diverse student body—accompanied by the inclusion of new perspectives—helps to think outside the box of traditional game development and contributes to the diversification of game concepts (concerning aesthetics, mechanics and narration). An increase in diversity of digital games (including new innovative forms of games and play), in turn, allows for greater reach to new broad and diverse audiences.

Variety of Games: In accordance with the above-mentioned trend towards the diversification of the student body, the programs described in my presentation at JCSG 2018 not only encourage students to deal with long-established genres (based on well-known aesthetics, mechanics and narrative forms; sold by the AAA industry to the former core audience of digital games), but also support engagement with new genres and game forms, as well as those that often go overlooked, such as virtual reality games, experimental games, art games and serious games. Overall, programs intend to promote a broad game literacy based on the engagement with a variety of genres and game forms.

Learning in Collaborative Projects: When it comes to didactics, the programs exhibit an art school style project orientation. This implies the notion that learning in game school should not be based on ex-cathedra teaching and top-down instruction. Instead, it relies on constructivist theories of learning, on learning-by-doing and peer-to-peer learning, among other things. Learning in projects, as applied in the respective programs, usually rests up-on a collaboration of individuals in interdisciplinary teams.

General Education: Although the examined programs work with the gaming industry and usually consider its needs in curriculum development, they pursue an approach that goes beyond the short-term tailor-made creation of specialists for the gaming industry. Their model of game design education can be clearly differentiated from solely vocational approaches. Programs' curricula usually entail a set of classes from the humanities, social sciences and in some cases natural sciences. Theoretical perspectives are valued through the comprehensive inclusion of respective professorships and a high ratio of theory classes. The NYU program is part of the tradition of liberal arts education and thus includes a broad choice of classes (from anthropology to neuroscience) that are not necessarily linked to game development in an obvious way. In all cases, programs aim at academic education in general: the facilitation of a broad store of reference knowledge as well as analytical and critical thinking skills; the broadening of students' horizons; and the support of an intellectual and creative mindset, among other things—all of which are assessed as valuable for game development as well as personality and identity development.

3 Conclusion

All four programs considered in my presentation at JCSG 2018 combine a vocational higher education and a broader academic education including contents from the humanities and social sciences. On the one hand programs teach a range of necessary generalist and specialist skills for immediate employability in the gaming industry. On the other hand programs take into account that "if the fit [to the current industry] is too narrow and the program too short-sighted in serving the immediate hiring needs, its graduates might find their skills losing value when the needs of the industry shift in response to new technologies" [4]. Thus, programs aim to impart enduring and transferable 21st century knowledge and skills including communication and collaboration competencies as well as an academic and creative mindset and habitus—valuable for a constantly changing work life, but also a fulfilling creative and intellectual life beyond the workplace.

In general, programs are highly concerned with the short- and long-term employability of their graduates as well as the short- and long-term needs of the gaming industry. Different from pure vocational programs, they pursue an approach of game design education that forms their students as both specialists and generalists—assuming that a combination of specialism and generalism based on an interdisciplinary practical and theoretical game design education will improve employability in general, but even more so in the long run. In contrast to programs in traditional academic disciplines, there is a strong focus on interdisciplinary collaborative practices, as they are required in the gaming industry. Finally, programs are keen on facilitating students' entrepreneurial spirit and competencies.

To sum up, it can be said that the programs' shared model of academic game design education focuses on the interdisciplinary and collaborative design and development of digital games as well as a reflection of their wider aesthetic, historical and cultural contexts and implications. In doing so, the model intends to educate well-rounded game designers who have even more to offer than their comprehensive specialized artistic and technical skills.

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