Gender Diversity in the Game Industry: an Analysis

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Abstract
This study examines the current state of gender diversity within the GI through a mixed-methods approach, utilizing both qualitative and quantitative research. Results indicate that despite improvements, the GI remains a male-dominated field. The analysis of Dienst Uitvoering Onderwijs data shows that 30% of gaming-studies-only graduates are female, but this drops to 12% when including broader ICT graduates. Comparison with Internation Game Developers Association survey results suggests discrepancies likely due to differing methods of gender reporting. In conclusion, while gender diversity in the GI has improved, the industry still fits the male-dominated categorization, with no significant changes in work culture. Proper accounting for transgender identities is crucial for accurate analysis, as these identities are more common in the GI than in the general population.

Author Keywords
Diversity, Gender, Game Industry, Workplace Harassment, STEM fields

Job description	% female
HR	47%
Writing	30%
Sales	25%
Production	21%
QA	13%
Executive	12%
Visual Arts	***11%***
Design	***10%***
Audio	***10%***
Programming	***5%***

Table 1 - Percentage of females in each job description in the Games Industry (Prescott & Bogg, 2011)

Introduction

STEM (Science, Technology, Engineering, and Mathematics) fields grapple with a lack of workplace gender diversity (Botella et al., 2019; Wang & Degol, 2017). The game industry, (GI) a subset of STEM, is particularly notorious for being hyper-masculine. This manifests as workplace harassment, (Foust, 2023) sexualization of female characters (Dill & Thill, 2007) and toxicity targeted at women in online game chats (Tang & Fox, 2016). These unique circumstances make the GI an interesting case for analyzing gender diversity.

To map the current state of the gender diversity within the GI this paper employs a combination of qualitative and quantitative research. The data will be gathered from works published between 2014 and 2023, including surveys from the International Game Developers Association (IGDA) and reports from Dienst Uitvoering Onderwijs (DUO). This approach has been chosen to discover any potential trends in previous years and the current conditions of gender diversity within the industry.

A male-dominant workplace is categorized as having 0%-39% female-identifying workers. Women working in such work environments are at greater risk of harassment (Raj et al., 2020), (Folke & Rickne, 2022) The GI fits this categorization. Gender parity in addition to cultural changes are necessary to improve these working conditions (Raj et al., 2020). For a perspective on the workplace culture in the GI, one can consider the analysis by Foust (2023), who used a 2021 sexual harassment lawsuit against Activision Blizzard as a case study. Foust's study indicate that sexism is not just present but is considered a core value in the industry.

The GI consists out of multiple disciplines each with their own responsibilities. The distribution of gender among these disciplines is presented in *table 1* and has been taken from Prescott & Bogg (2011). The job descriptions marked in **bold** are considered 'core content creation roles'. The average percentage of females in those roles is ((11+10+10+5) ÷4=) 9%. This paper hypothesizes based on these statistics that the absence of female representation in these roles specifically contribute to a masculine gaming culture, as these are the roles that determine the appearance of the game and the way it is played.

Prescott & Bogg extracted this data from an unarchived International Game Developers Association (IGDA) report published in 2005. Thus, this data may not be representative of the current day situation and needs reevaluation.

This paper is structured into three main sections. The first section provides additional context about the gender diversity problem in the GI by analyzing academic works and hypotheses about the causes and effects of gender disparities. The second section examines the current state of gender diversity within the GI workplace using secondary data sources to assess diversity metrics, employment practices, and cultural dynamics. The concluding section proposes potential strategies for fostering a more inclusive culture within the game industry, highlighting both promising practices and ongoing challenges.

Methodology

The selected works are published by the International Game Developers Association (IGDA) and Dienst Uitvoering Onderwijs (DUO). IGDA is an independent nonprofit professional association that aims to support and empower game developers around the world in achieving fulfilling and sustainable careers (*IGDA – International Game Developers Association*, n.d.). DUO is a Dutch

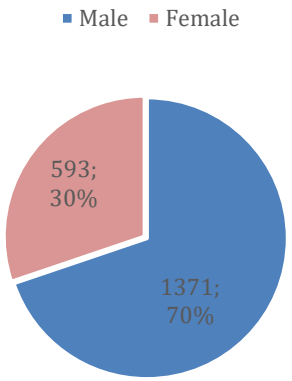

Figure 1 - Gaming study graduates (Dienst Uitvoering Onderwijs, 2024)

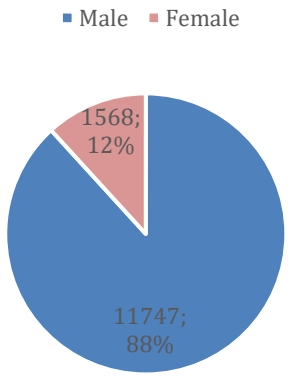

Figure 2 - Gaming + ICT graduates (Dienst Uitvoering Onderwijs, 2024)

agency that provides student financing, recognizes diplomas and organizes exams for students and pupils (Ministerie van Algemene Zaken, 2011).

Even though these organization have differing nationalities and missions, they are selected because both publish relevant statistics that provide insights into the GI over multiple years.

IGDA differentiates gender into ‘male’, ‘female’, ‘male-to-female-transgender’, ‘female-to-male-transgender’ and ‘other' from 2014 through 2017. Surveys from 2019 and onward specify gender as ‘male’, ‘female’, ‘non-binary’ and ‘prefer to self-describe’. The **% non-male** in *table 2* is the sum of all categories excluding ‘male’ and ‘female-to-male-transgender’.

DUO’s published data consists out of a table with number of graduates with either an associate’s, bachelor’s or master’s degree per education, per gender. Gender is determined by official documents as either male or female. The data is from study years 2018 until 2022. If the number of graduates is below 5, the table reports ‘<5’. For these cases, this analysis uses the number ‘3’ to streamline results.

The selected studies are:

- Creative Media & Game Technologies
- HBO-ICT*
- Game Technology
- Serious Gaming

These studies are selected because graduates from these are qualified to enter the GI.

*HBO-ICT is a special case. The GI falls under the same umbrella as ICT; computer sciences. However, just like game development, ICT is a broad term for multiple disciplines. Saxion (n.d.) divides these disciplines into: ‘Business & IT, ‘Infrastructure’ and ‘Software Engineering’. Only graduates from the latter are qualified to work in the GI but are expected to do so less likely compared to any of the gaming studies. Even so, the skillset gained from this discipline is the lowest represented by women; programming (*table 1)*. Given this and the increase in sample size by 11351 up from 1964 makes HBO-ICT a relevant consideration in this analysis.

Results and Discussion

Year	2014	2015	2016	2017	2019	2021	2023
% Non-male	23.8	24.8	27.7	25	29	39	37

Table 2 – Summary of percentage of non-male employees in the games industry from years 2014-2023. Data from biannual surveys retrieved from https://igda.org/dss/

The graphs compiled out of the data provided by DUO show that 30% of the gaming-studies-only graduates is female *(figure 1)*, and 12% when HBO-ICT is included (*figure 2)*. *Figure 2* should be viewed with skepticism due to the unknown distribution of graduates across the different disciplines and genders.

When comparing the DUO graduate analysis’s most optimistic result (30% female) with the IGDA survey’s most recent results (29%, 39%, and 37% non-male), a surprising observation can be made: Even the most optimistic percentage of females is remarkably lower than the IGDA surveys are implying *(table 2)*.

This can be partly explained by the differing ways an individual’s sex is reported. Official documents of transgender individuals,

which includes non-binary identities, might state a different sex which does not align with their gender identity. In the Netherlands it is presumed that only 0.6% of the population is transgender. (Kuyper, 2017)

Even after using 0.6% as a margin of error, the DUO results still do not fully align with the IGDA results. An additional explanation might be that transgender identifying people are overrepresented in the GI compared to the general (Dutch) population; The latest IGDA survey reports that less than 1% of respondents identified as transgender, while 8% of respondents identified as non-binary. The latter being is a notably high amount. Using this 8%-9% as a margin of error the DUO results do align with the IGDA results.

Conclusion

In conclusion, the level of gender diversity within the GI shows significant improvements compared to previous years. However, this paper's quantitative analysis suggests that the GI still fits the description of a male-dominated work field. Although the numbers indicate that the GI is getting close to gender parity, the qualitative research shows no signs of an improved work culture.

Furthermore, it is worth noting that transgender identities can skew results when not accounted for properly. This paper suggests properly accounting for transgender identities is important when analyzing the GI especially, as this category of people seems to be more present in the GI than what is considered average for the overall population.

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