Computer games in educational contexts – didactic challenges

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Abstract

The overall aim of the study has been to gain knowledge about computer games used in an educational context. In our research we have analyzed and interpreted the game’s characteristic interactive dramaturgy exposed in the interplay between the game and the gamer and integrated in the medium itself. We have looked specifically at the challenges that the educator faces in the didactic interaction when computer games are introduced in Norwegian kindergartens as a medium for learning and exploration. The first documents, interprets and explains style and genre aspects of the medium computer games as it currently exists and the latter documents, interprets and analyzes the roles participants in the educational communicative process take.

The entire study draws from an interdisciplinary methodological frame that combines a hermeneutic approach with phenomenology and ethnography when studying the medium of computer games and its implementation in kindergartens.

Because we consider the game itself and the didactic situation as a staging involving different roles and courses of action in time and space, we based our study and analysis on dramaturgic concepts and theories. The theatre shares a number of common features with interactive multimedia narratives, such as computer games, because of their joint multimodal forms of expression. Computer games have some media-specific features that stem from the dynamic interactive relationship between the game and the player, and dramaturgy has proved to be an appropriate tool for analyzing this complex whole because of its understanding of the dynamic relationship between the structure and the user. The first part of the presentation outlines dramaturgy as a potential theoretical framework in analyzing computer games as a learning tool in a child’s interactive game play and thus serves as a backdrop to crystallise my own theoretical and analytical position.

The following part focuses on the didactical implications when educational computer games are used in kindergartens by analysing the dramaturgy and the didactics of a game in use in a pedagogical context. Our data material shows that the pre-school teacher is more or less absent during the children’s playing with the computer games, but when the pre-school teacher involves her/himself, she/he finds it difficult to realize her/his ideal socio-cultural didactical project in which dialogue is a central medium for exploration and learning. Through our analysis of the data material we found that there are two different dramaturgies at stake; the built-in interactive dramaturgy of the game materialized in the gaming situation and the dialogical dramaturgy that the pre-school teacher tries to create in the didactic situation. This implies that there is a didactic dissonance between the learning space which the game and the learning space which the pre-school teacher wants to construct and orchestrate.

The presentation is concluded with a description of different teacher roles the practitioners alternate between in computer gaming situations in kindergartens. The pre-school teacher’s function can be viewed in a continuum. On one extreme, is the teacher who takes an intervening role and, on the other extreme, is the teacher who chooses to restrict herself/himself to an organizing or distal role. This study shows that both the intervening
position and the organizing or distal role are challenging. An intermediate position, in which the teacher is a contributor and encouraging bystander, is an alternative role.

The term didactic dissonance emerged from the study and highlights the didactic challenges that educators encounter when computer games are implemented in educational contexts and where teacher and child participate with conflicting roles and expectations. The model of the extended didactic triangle and the concept of didactic dissonance might be a useful topos, a position from where to view didactic challenges and didactic relations and thus represent a potential to support research in other sectors of education. By putting the medium in the centre of the didactic triangle, we emphasize the role of media and form in didactic settings, a factor that is often paid little attention to in pedagogical literature.