

This paper is based on a study I have been conducting during the last 8 months on different colleges and universities around the world that focus on Game Theory and/or Game Development. Key universities of my study so far are highlighted below, and are divided into four main categories that surfaced through my interviews with faculty and students. The qualitative analysis using respondents of faculty and students allowed me to better capture the intended philosophy, values and skill sets of the graduating students.

### The Film School Approach

A Film School approach embraces the values of excellence that have been paramount in the creation of the film industry. This entails bringing together all of the art forms with the intent of creating a product that is superlative in every measure, and thus is the underlying goal of the school. Pedagogically this necessitates the availability of quality faculty members in each discipline as well as a significant investment in the technology infrastructure. Accordingly it also presupposes a strong relationship with the industry to validate both the school's instructional approach as well as bringing a sense of reality to the career target of the students. Since games are interactive and branching, the base line of linearity that was the cornerstone of film, leaves some of the curricula involving storyline, pacing, and continuity in a limbo state. The medium of games is often more like web development which currently falls under computer science and informatics. In other words, what makes a good film does not necessarily translate into what makes a good game. Academic Institution Examples: University of Southern California – LA, CA : <http://interactive.usc.edu/> ; Gotland University – Visby, Sweden: <http://www.hgo.se/sg/index.htm>

### The Art School Approach

The Art School approach focuses on creating innovative new forms in the game contexts that stimulate the senses and engage the player. The player's reaction and perceptions within these new environments are highly regarded and observed, and often are critically compared to traditional art experiences. Individual student expression is encouraged, as is group brainstorming and development. Pedagogically the problem to be solved through the development of a gaming experience is loosely defined and allows considerable freedom for the design individual or team. There is much less, if any, association with the game industry as they are viewed as too rigid in their design approaches, and correspondingly the game industry often view students from these programs as being too idealistic, non-team players, and difficult to assimilate into the work environment. The argument from the Art School is that the freedom allowed in the design environment is what develops the creative capacity and greater scope of problem-solving skills. Academic Institution Examples: Aalborg University – Copenhagen, Denmark : <http://media.aau.dk/> ; Interactive Institute – Kista, Sweden : <http://w3.tii.se/en/> ; MIME Program – Indiana University - <http://www.indiana.edu/~slizzard/dmd/>

### The Design School Approach

The Design School approach is reminiscent of the Bauhaus Curriculum created in 1923 which directed the organization of the faculty and instruction to be collaborative and targeted at a final product. All students in this paradigm are required to be exposed in the design and development process of all disciplines involved in game design prior to specialization in one or two. Such a curriculum also requires a collaborative faculty and spaces for a wide variety of small group and plenary dialog. Production spaces are less defined and restricted since more of the student body has been trained in their use. The sequences of courses in a "D-School" are defined more in terms of projects than in topics that are related to skill or content acquisition. Although the student exiting from a D-School is more of a renaissance person with the ability to do many things, they are often difficult to place into an industry position, especially if the game company is using a more compartmentalized organizational design. However, there are opportunities that many D-Schools offer for internships and other collaborations with the industry that allow for appropriate specializations during the student's final years. If this relationship with the industry is strong, then the student coming from a Design School is often the easiest to assimilate into a productive status within a game company. Academic Institution Example: Utrecht University of Art & Design – Hilversum, The Netherlands: <http://www.hku.nl/web/English/BachelorProgrammes/BachelorOfArtAndTechnology.htm>

### The Game Studies Approach

The Game Studies approach is reminiscent of traditional film or media studies approaches mixed with a bit of comparative literature. It is primarily analytical and reflective about how games "are" and how they are "played" instead of how to make them. Often in these schools are special tracks that associate with computer science students who wish to build prototypes of games. However, even these students must follow the prime directive which is that design must be justified through supporting theory, principles, and comparisons to existing games and genre. Such an approach prepares the students to be extremely conversant about what has been created to date, as well as assisting in the development of the language to define these evolving genres. There is a stress on publishing research, and the focus is as varied as the faculty and students who work and attend each school. Associations with the industry are more for the purpose of understanding "the why" of any design approach, rather than providing understanding to their students of how the industry works, or how games are developed. Because of the strong analytical training these students receive, they often are identified as excellent usability testers or QA employees. Academic Institution Example: IT University – Copenhagen – Copenhagen, Denmark : <http://www1.itu.dk/sw5211.asp>

## Interdisciplinary Predispositions to Collaborative Design

GAME FOCUS	ACADEMIC DISCIPLINE	PEDAGOGICAL VALUES	NON-COLLABORATIVE ISSUES
STORY	<ul style="list-style-type: none"> <li>• Literature</li> <li>• Drama</li> <li>• Creative Writing</li> <li>• Film &amp; Game Studies</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Audience Directed</i></li> <li>• Storyline</li> <li>• Character Development</li> <li>• Pacing</li> <li>• Continuity</li> </ul>	<ul style="list-style-type: none"> <li>• Delineation of specifics within the story that overlap other domains</li> <li>• Too "prescriptive" of what "should" be designed</li> </ul>
ART	<ul style="list-style-type: none"> <li>• Fine Art</li> <li>• Graphic Design</li> <li>• Illustration</li> <li>• Sculpture</li> <li>• 3D Modeling</li> <li>• Photography</li> <li>• Costume Design</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Self Expression &amp; Gallery Directed</i></li> <li>• Expressive Form</li> <li>• Innovative Form</li> <li>• Communicative Form</li> </ul>	<ul style="list-style-type: none"> <li>• The form is generated to satisfy self, rather than player</li> <li>• Innovation more important than group need</li> <li>• Lack of ability to translate a description of functional form into a corresponding visual solution</li> </ul>
ENGINEERING	<ul style="list-style-type: none"> <li>• Engineering</li> <li>• Computer Science</li> <li>• Informatics</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Product Directed</i></li> <li>• Process Design</li> <li>• High Functionality Design</li> <li>• Elegance of Architecture</li> <li>• "Smart" Design (AI)</li> <li>• Technical Quality</li> </ul>	<ul style="list-style-type: none"> <li>• Tendency to create own architectural approach, rather than existing or collaborated design</li> <li>• Lack of ability to translate a description of functionality into engineering solution</li> </ul>
AUDIO	<ul style="list-style-type: none"> <li>• Music</li> <li>• Audio Engineering</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Self Expression &amp; Audience Directed</i></li> <li>• Expressive Form</li> <li>• Innovative Form</li> <li>• Communicative Form</li> <li>• Technical Quality</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of ability to translate a description of functional form into a corresponding audio solution</li> <li>• Innovation more important than group need.</li> </ul>
MANAGEMENT	<ul style="list-style-type: none"> <li>• Business</li> <li>• Accounting</li> <li>• Marketing</li> <li>• Organization Analysis</li> <li>• Pipeline Analysis</li> <li>• Production Mgmt</li> <li>• Design Mgmt</li> <li>• Usability &amp; Assessment</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Organization: Bottom-Line &amp; ROI Directed</i></li> <li>• Efficient Development</li> <li>• Productive Labor Force</li> <li>• Generating Profit</li> <li>• Innovative Product Generation</li> </ul>	<ul style="list-style-type: none"> <li>• Too quick to apply traditional models of workflow onto a non-traditional industry</li> <li>• Tendency to isolate individuals instead of creating collaborative work groups</li> <li>• Focus on ROI versus Player Experience</li> </ul>
GAME STUDIES	<ul style="list-style-type: none"> <li>• Game Studies</li> <li>• Film &amp; Media Studies</li> <li>• Communication &amp; Culture</li> <li>• Sociology</li> <li>• Psychology</li> <li>• Learning Sciences</li> <li>• Instructional Systems</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Understanding of How, When, and Why People Perceive &amp; Play Games</i></li> <li>• Micro Analysis</li> <li>• Meta Analysis</li> <li>• Game Play Analysis</li> <li>• Group Dynamics</li> <li>• Cognition</li> <li>• Strategic Decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on individual research agendas versus a programmatic thrust of inquiry</li> <li>• Researchers do not do grounded research using rigorous quantitative or qualitative methodologies.</li> </ul>