Games that Motivate to Learn: Design Serious Games by Identified Regulations

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ABSTRACT
It is commonly acknowledged that intrinsically motivated learning makes for better students. Yet, facilitating students to become intrinsically motivated to learn is difficult, if not, impossible to accomplish. As every student has different and personal intrinsic needs, the design of regulations that satisfy intrinsic needs may seem an unfruitful approach to serious game design. Inspired by research to the beta-version of the second language game CheckOut!, we propose a different approach to serious game design, based on identified regulations.

Identified regulations are negotiations with personal valued rules. The regulations can be positioned between external regulations (based on punishments and rewards) and intrinsic regulations (based on a personal willingness to act). To develop identified regulations, game designers should create a correspondence between the game regulations and the student’s perceptions about the educational instruction.

To accomplish this fit, game designers could not conceal the learning within a game, but explicitly communicate the constructed knowledge to the player. Progressive feedback, the availability of various learning styles in the game, and the embedding of the game in a social environment, might satisfy students’ needs for competence, autonomy and relatedness to significant others. When these needs are satisfied within the context of the educational instructions, students might become motivated to learn during play, and even when the game is over.

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**Ludology**

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**Key words**

need theory, self-determination theory, intrinsic motivation, extrinsic motivation, identified regulations, external regulations, regulatory fit, core concepts, competence, autonomy, relatedness, games, serious games, education, CheckOut! (game), motivational change, playing styles, scaffolding, progressive feedback.

**Key words and definitions**

**Autonomy**
The ability and the opportunity to make decisions that are of significance to an activity and the person’s self.

**CheckOut!**
A second language learning game, developed by Ranj Serious Games, to enhance the willingness of Dutch students to speak English.

**Competence**
The beliefs in one’s capabilities to organize and execute the course of action required to manage prospective situations.
Core concept
The fundament of a game concept, it describes the most basic activity need to play, such as rules, goals, activities, strategies, aesthetics, etc.

External regulations
The use of punishments, and rewards to motivate individuals.

Identified regulations
Consciously valued rules, procedures, activities and goals. The individual has the opportunity to identify the regulations and is able to identity with the regulations.

Intrinsic motivation
A willingness to act that originates for the greater part from ‘the self” of an individual.

Need theory
An approach to motivational research in cognitive psychology, stating that (possible) need satisfaction is an essential condition to act.

Playing styles
A personal style of learning and gaming.

Progressive feedback
A reflective and activating style of feedback. Progressive feedback makes people aware of what is accomplished and what is to come.

Relatedness
The relationship between the activity, the individual, and significant others.

Scaffolding
Breaking down the content of an instruction to manageable pieces that are only a little above students’ cognitive level.
Endnotes