Development of the Kids Game Experience Questionnaire

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Children and Digital Game Experience

Playing digital games is a **popular leisure activity** for children across gender and age groups. To date, the majority of studies focus on **effects of playing games**, both positive (e.g. mental rotation tasks) and negative (e.g. aggressive behaviour) ones. How children actually **experience** playing digital games is still underrepresented in most of these studies. It is impossible to come up with a single, all embracing word or concept that describes what children feel or experience when playing digital games. Children can have great *fun*, but can become *frustrated* if things don't work out. Some children enjoy being *immersed* into the fantasy world of a game, others prefer the *physical exercise* some games require. Given the great variety in game genres, game players, and game devices, game experience has to be studied as a **multi-dimensional concept**.

The Kids Game Experience Questionnaire

The Kids Game Experience Questionnaire (KidsGEQ) is **a self report instrument** to assess **in-game experiences in young children** (8-12 years).

We **aim** for a measure that is:

- able to capture the **full spectrum of digital game experiences**
- can be filled out by children in a **convenient, time-efficient** and **independent** way
- **robust**, agnostic to the type of game, platform, or gamer
- **non-disruptive** to the gameplay itself

Item generation

When generating and formulating items for the KidsGEQ, we based ourselves on:

- existing **game experience literature**
- **in depth interviews** with children of varying ages (8-12 years)
- a brainstorm session by an **expert group** of game developers and social scientists specialized in research with children

Preliminary Structure

The structure of the KidsGEQ is largely based on the Game Experience Questionnaire (GEQ), developed for adults, but is adapted to a child friendly format and wording. The core questionnaire consists of **21 items** divided in **7 game experience dimensions:**

1. **Immersion:** e.g. *I could use my fantasy in the game*
2. **Tension:** e.g. *I was nervous during the game*
3. **Competence:** e.g. *I was good at it*
4. **Flow:** e.g. *While playing, I forgot everything around me*
5. **Negative affect :** e.g. *I found it boring*
6. **Challenge:** e.g. *I had to put a lot of effort in the game*
7. **Positive affect:** e.g. *Playing the game was fun*

We developed **two extra modules:**

1. **Social experiences** (10 items): playing with others
2. **Physical experiences** (5 items): physical activity during the game

Field test: TreasureHunter

31 children (10 boys), aged 11-13, played two versions of Treasure Hunter, an **outdoor, physical game**—related to *tag* and *hide and seek*—that makes use of a **mobile device** enabling **wireless communication** between the players. The **KidsGEQ** was administered after each play session. Additionally, focus groups probed the user friendliness and understandability of the KidsGEQ. Children had no problems understanding the KidsGEQ but generally found it too lengthy. Further, **reliability analysis** showed moderate reliability for four core dimensions (immersion, competence, challenge, flow) and the extra modules. We did have low reliability for three core dimensions (positive affect, negative affect, tension).

Future steps

We plan additional studies to finetune the KidsGEQ, focusing on the **length** and **formulation of the items**. A broad scope of studies are then needed for **validation** of the questionnaire. We are also preparing a KidsGEQ in English and other languages.

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