

Influence of Primacy, Recency and Peak effects on the Game Experience Questionnaire

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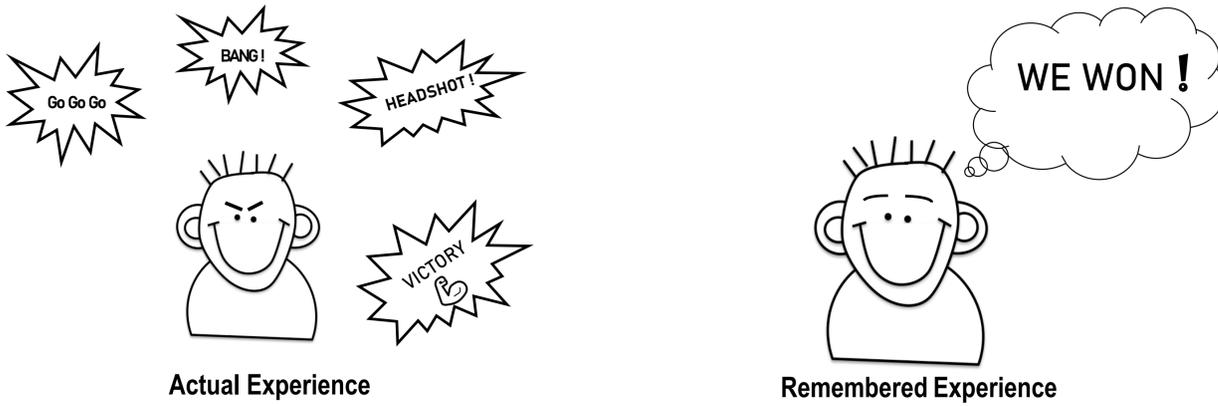
ABSTRACT

When a participant is asked to evaluate a stimulus, the judgment is based on the remembered experience, which might be different from the actual experience. This phenomenon happens according to the theory that some moments of an experience such as the beginning, peak and the end of the experience have more impact on the memory. These moments can be recalled with a higher probability than the other parts of the experience, and some minor bad moments of experience might be forgotten or forgiven due to the rest of the good experiences. This paper, using a subjective study and emulating an artificial delay on participants' gameplay investigates the influence of these serial-position effects on the Game Experience Questionnaire (GEQ). The result shows that GEQ does not suffer from either recency, primacy or peak effects. However, when users are asked about the controllability and responsiveness of the games, the recency effect exists. The paper also shows that GEQ has the forgiveness effect and participants forgive or may forget a bad experience if it coincides with a considerable duration of a good experience.

Research Questions

- Does Game Experience Questionnaire suffer from serial-position effects ?
- Do we find serial-position effects on the perception of interaction quality?
- If it does which aspects and from which effect?!

Actual Experience vs Remembered Experience



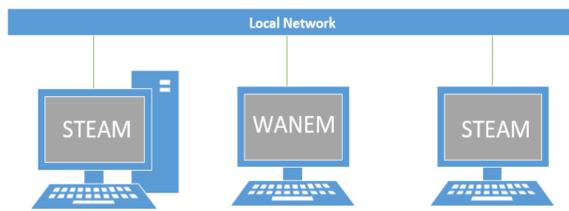
Serial-Position Effects

- Primacy Effect
- Recency Effect
- Peak Effect
- Duration Neglect
- Forgiveness effect

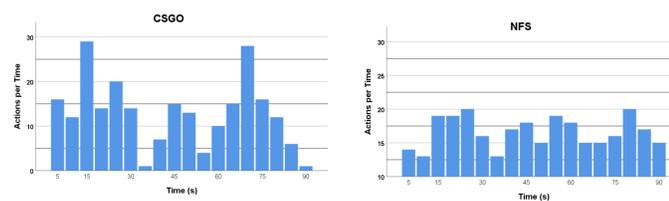
Demographic of participants

- 27 Participants
- Casual gamers
- 14 females and 13 males
- Aged between 20 and 29 (median 23.48) y/o

Test Setup



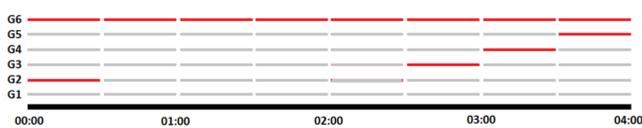
Game Selection Process



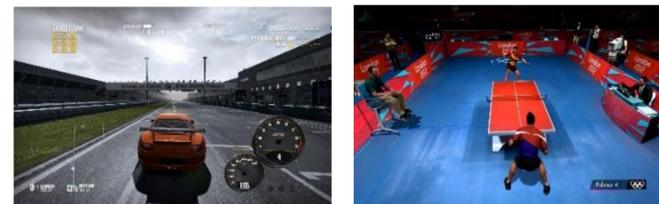
GEQ

- 33 Questions
- Assessing seven aspects of gaming QoE
- Peak Effect
- Very popular and widely used
- ITU-T P.Game

Test Conditions



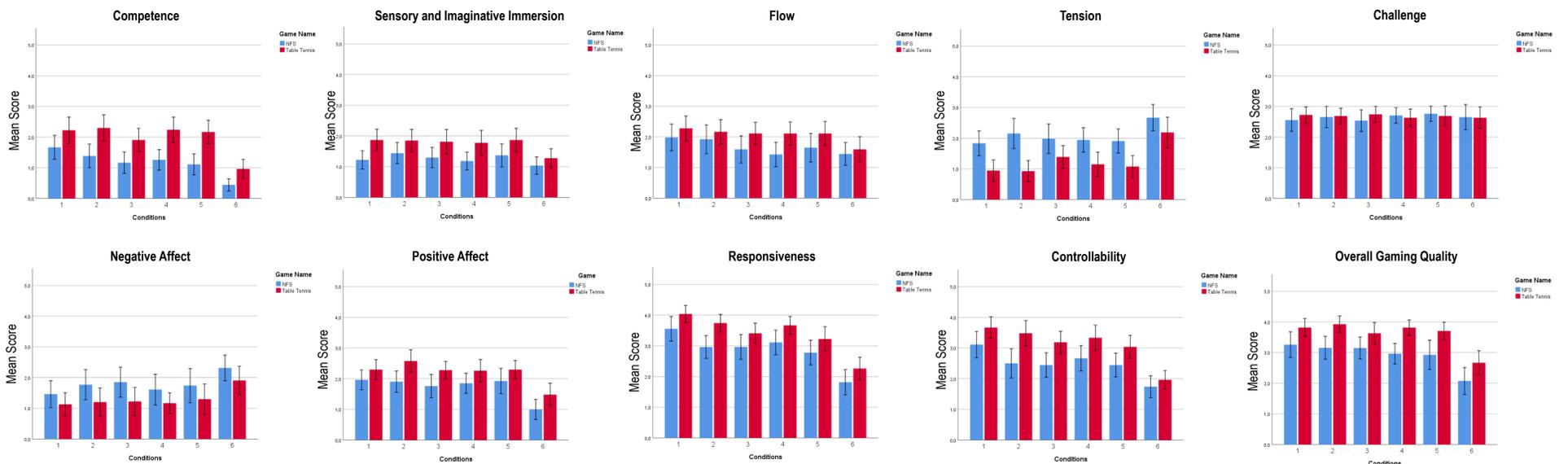
Games



Questionnaire

- iGEQ
- How do you rate the overall quality of your gaming experience? (Overall Gaming Quality)
- The game has responded as expected to my inputs. (Responsiveness)
- I had control over the game. (Controllability)

Data Analysis



Conclusion

- The results showed that although the recency effect exists on controllability and responsiveness, it does not exist on GEQ.
- The result did not indicate any evidence for the existence of primacy and peak effects.
- However, the forgiveness effect existed, and participants forgive or possibly forget a minor delay that occurs early in their gameplay if it is alongside with a good experience.

Discussion

- GEQ as the most used method for gaming QoE assessment, suffers from the forgiveness effect.
- The result indicates that using a questionnaire to assess gaming QoE leads to a result that is not based on the actual experience that the participant has while playing.
- Therefore, GEQ should either not be used for long duration tests where the participants might forget parts of the experience, or it should just be used under conditions where participants experience the same condition throughout the entire test session.