Participating in Competitive Online Games: Analyzing Competitive and Hedonic Decision Elements

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Agenda
- Research Background and Question
- Research Approach
- Data Collection and Analysis
- Results
- Conclusion

Research Background
Participation in competitive online gaming:
By definition with competitive and hedonic decision elements

BUT
Not aware of decision models that include hedonic and competitive elements

Literature on modeling online gaming
- Cooperation and dependency among players and
- Role of experience

Research Question
Which competitive and hedonic decision elements drive play time in competitive online games?

'Play time' as dependent variable
[in hours per day]

Research Approach
Exploratory Survey (March '08)
- 10 qualitative interviews with ESL players,
  (e.g., Humphreys et al. '96 for extracting decision elements via field research)

Content Validity Tests (March '08)
- 35 of 60 questionnaires received from ESL players (incl. prior 10)

Pre-Test (April / June '08)
- 60 of 80 questionnaires received

Survey
Research Framework

Uses and Gratifications Model (e.g., Rayburn, Paligreen ’84; Rosengren ’74; Sherry et al. ’03)

Perceived Gratifications Obtained

Media Consumption

Gratification Sought

Beliefs

Evaluation

Decision elements regarding media use

Transfer to decision elements for participation in competitive online gaming

Potential Decision Elements

Competitive

- Competition
  (Floyd, Taylor ’99; Van Wart)
- Achievement
  (Wasko, Faraj ’05; Kankanhalli et al. ’05)
- Challenge
  (Smelser ’80; Davenport, Prusak ’98)
- Reputation Gains
  (Frank, Fang ’00; Lasheen, S. ’06; Lin et al. ’03)
- Monetary Rewards
  (Bhat et al. ’91; Lin et al. ’03)

Hedonic

- Social Relationship
  (Sherry et al. ’07; Vasko, Raheja ’07)
- Escapism
  (Nabi, Krcmar ’04; Yee ’07)
- Self-Fulfillment
  (Lin et al. ’00; Sherry et al. ’05)
- Fun
  (Griffiths et al. ’03)
- Virtual Identity
  (Sherry et al. ’01)

Selected Decision Elements (2)

Competitive Elements

- Competition, i.e., playing to compete
- Challenge, i.e., playing to challenge oneself
- Social Relationship, i.e., playing to gain social recognition

Hedonic Elements

- Escapism, i.e., playing to escape real life
- Fun, i.e., playing just for fun

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Data Collection

Survey (Nov. ’08)

360 questionnaires received from players during World Cyber Games in Cologne, Germany

All five decision elements (competition, challenge, social relationship, escapism, fun) measured on 7-point Likert Scale

Survey Participants (in %)

Gender

- male (95), female (5)

Age

- 22 and older (65)
- 18 - 21 (26)
- 12 - 17 (9)

Education

- Apprenticeship or college degree (47)

Play Time

- 1 - 3 hours per day (75)
PLS Regression

Average Game Time =
\[ \alpha + \beta_1 \times \text{Competition} + \beta_2 \times \text{Challenge} + \beta_3 \times \text{Social Relationship} + \beta_4 \times \text{Escapism} + \beta_5 \times \text{Fun} \]

Results: PLS-Regression (N=360)

- F-value: 5.982
- p-value: 0.000 [\(< 0.001\)]
- R²: 0.084
- VIF: 1.092 [\(< 10.0\)]

Sample size: 360 [\(> 91 \text{(req.)}\)]

PLS-Regression model: Model Fit

- Competition
  - Standard. \(\beta\): -0.140
  - t-value: -2.373
  - p-value: 0.018
  - Sig.: \(< 0.05\)
- Challenge
  - Standard. \(\beta\): -0.142
  - t-value: -2.125
  - p-value: 0.034
  - Sig.: \(< 0.05\)
- Social Relationship
  - Standard. \(\beta\): -0.038
  - t-value: 0.047
  - p-value: 0.963
  - Sig.: \(> 0.05\)
- Escapism
  - Standard. \(\beta\): -0.084
  - t-value: -1.556
  - p-value: 0.121
  - Sig.: \(> 0.05\)
- Fun
  - Standard. \(\beta\): 0.026
  - t-value: 1.370
  - p-value: 0.175
  - Sig.: \(> 0.05\)

Results: PLS-Regression

- Sample
  - All: 360 [\(> 91\)]
  - Age 12-17: 32 [\(> 30\)]
  - Age 18-21: 94 [\(> 64\)]
  - Age \(\geq 22\): 234 [\(> 77\)]
  - w/o college degree: 191 [\(> 152\)]
  - w/ college degree: 169 [\(> 59\)]

- R²: 0.084
- Sig. Decision Elements:
  - Competition: 0.018 [\(< 0.05\)]
  - Challenge: 0.034 [\(< 0.05\)]
  - Fun: 0.009 [\(< 0.05\)]
  - Competition: 0.044 [\(< 0.05\)]
  - Competition: 0.019 [\(< 0.05\)]
  - Model Fit not given

Conclusion

Competitive Online Gaming:

- Main decision elements driving participation:
  - \(\text{Competition} and \text{Challenge}\)
  - Competitive elements outweighing hedonic elements

Importance of competition in hedonic gaming participation
(Ford '96)

Importance of striving for power
(Taylor '96)

Future modeling/ investigation:

- Competitive elements of assuming 'hedonic' social networks?
... Questions, Comments, Complaints?

Thanks for your attention!

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References


