Team participation and online gamer loyalty

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ABSTRACT

Online games have emerged as popular computer applications and gamer loyalty is vital to game providers, since online gamers frequently switch between games. Online gamers often participate in teams also. This study investigates whether and how team participation improves loyalty. We utilized a cross-sectional design and an online survey, with 546 valid responses from online game subjects. Confirmatory factor analysis was applied to assess measurement reliability and validity directly, and structural equation modeling was utilized to test our hypotheses. The results indicate that participation in teams motivates online gamers to adhere to team norms and satisfies their social needs, also enhancing their loyalty. The contribution of this research is the introduction of social norms to explain online gamer loyalty.

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1. Introduction

Online games have become one of the most popular online activities. In China in 2008, 59.3% of Internet users—120 million subscribers—played online games (CNNIC 2008). Moreover, just one popular online game netted over twelve million subscribers worldwide (Blizzard Entertainment 2010). However, gamers frequently switch between online games (International Data Corporation 2008), reducing the revenue of individual game providers, highlighting the importance of gamer loyalty to providers.

One determinant of online gamer loyalty is gamer interdependence (Teng et al. 2012), which is closely related to team participation (defined as joining groups whose members have a clear shared goal). Gamers form teams or partnerships that increase gamer interdependence and teams typically outperform individuals (Mankin et al. 1996) and increase productivity (Parker 1990), thus positively contributing to team performance and member satisfaction (LePine et al. 2008). A review of the recent literature on electronic commerce and information systems showed that previous studies had investigated various antecedents of online customer loyalty (Fernández-Sabiote and Román 2012, Sanchez-Franco and Rondan-Cataluña 2010) but few had investigated social influence in determining customer adoption and loyalty (Glass and Li 2010, Hsiao and Chiou 2012). Also it has still not been shown whether and how team participation influences online gamer loyalty. Research which deepens our understanding of how teams affect gamer behavior is needed to investigate the relationship between team participation and gamer loyalty.

Our aim is to examine whether and how team participation impacts gamer loyalty. We consulted theories and findings in the literature to identify relevant constructs that should be included. Team participation reflects intentions toward attaining certain gaming goals (objectives to be achieved in games) and, to do so, gamers must comply with team norms, formalized rules and regulations governing teamwork, which increase the likelihood of achieving goals (Wang et al. 2010). According to social cognitive theory (Bandura 1973), achieving goals provides positive feedback (or reinforcement) which reinforces gamer loyalty (reoccurrence of gaming behavior). Moreover, team participation facilitates strong attachments, affection, and friendships (Ommundsen et al. 2005) and thus likely satisfies individual social needs, which further fuel loyalty. To sum up, the literature indicates that compliance with team norms and social needs satisfaction are relevant to explaining whether and how team participation impacts gamer loyalty.

We investigate whether and how team participation influences compliance with team norms, social needs satisfaction, and gamer loyalty. This study is unique to the literature in proposing and examining the role of team participation. The literature has proposed that role expectation and team culture positively contribute to team performance (Wong and Burton 2000) and, while the present study follows the literature in addressing these issues, it uses a different construct: compliance with team norms, which embodies the essence of role expectation and team culture to a degree. The present study contributes to the literature by providing empirical evidence supporting the influence of compliance with team norms on online gamer loyalty.

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2. Literature

2.1. Customer loyalty

Loyalty is the tendency of a customer to purchase a product or service repeatedly from the same firm (Anderson and Srinivasan 2003), a definition that has been used frequently in studies of online games (Choi and Kim 2004). We adopted this definition of online gamer loyalty. Customer loyalty is critical to firms' success in online settings. Loyal customers reduce business costs for acquiring customers and can generate considerable revenue (Reichheld and Schefter 2000). Moreover, loyal customers are less likely to be influenced by low prices offered by competitors, and are more likely to refer new customers (Reichheld 1996). Customer loyalty's association with revenue generation demonstrates the importance of such research to firms.

Both willingness to recommend (Reichheld 2003) and customer satisfaction (Bodet 2008, Chandrashekaran et al. 2007) have been recognized as critical predictors of customer loyalty. Customer satisfaction can also increase future sales (Fornell et al. 2010), indicating that a strong relationship exists between customer satisfaction and customer loyalty. Moreover, commitment (Cater and Zabkar 2009) and trust (Sanchez-Franco et al. 2009) are also antecedents of customer loyalty. However, customer loyalty literature has seldom addressed whether customer interaction contributes to loyalty. This study fills this gap in online gaming settings by investigating the roles of participation in teams, and compliance with team norms, in customer loyalty formation.

2.2. Team norms

Online games have become extremely popular, partly because of network effects, when user utility obtained from an application is positively related to the number of users using equivalent or compatible applications (Teng et al. 2006). Thus, game designers often design games that encourage teamwork, further enhancing user interactions and attracting additional users. Such an emphasis on teamwork in games motivated us to focus on team-related issues.

Among the many issues related to gaming teams, team norms comprise formalized rules and regulations governing teamwork that clarify missions and reduce role confusion (Wang et al. 2010). A similar term, *social norms*, has been defined as perceived expectation of significant others (Fishbein and Ajzen 1975), including parents, relatives, classmates, and friends. To analyze gamer interactions during gaming, we use the construct *team norms*.

Team norms can regulate team member behavior. Previous studies (Dworski-Riggs and Langhout 2010) indicate that norms can help stakeholders regulate or restrain the behavior of others when making decisions. Subjective norms apply social pressure for the execution or non-execution of a certain behavior and are positively related to attitudes and intention to share knowledge (Hau and Kim 2011). These findings indicate that norms can influence associated behaviors markedly. Thus, team norms likely impose social pressure on gamers to share gaming knowledge with team members to enhance team effectiveness. Such effectiveness enhances team member performance (Wang et al. 2010) and demonstrates the influence of team norms on the psychology and behavior of online gamers.

Team norms also increase team cohesiveness (Høigaard et al. 2006), which further enhances teamwork (Yoo and Alavi 2001), likely leading to the retention of team members. Therefore, compliance with team norms likely impacts online gamer loyalty. Consequently, we include compliance with team norms in our research framework.

2.3. Social needs satisfaction

Online gamers play games for numerous reasons, including immersion, as a social activity (Jansz and Tanis 2007), and to alleviate negative feelings (Hussain and Griffiths 2009). Yee (2006) developed a comprehensive typology of gaming motivation, which included sociability, immersion, and achievement, while Williams et al. (2008) further verified the validity of this typology. Among the various online gaming motivators, sociability has been a focus of gaming literature (e.g., Jansz and Tanis 2007, Lo et al. 2005). Thus, we focus on how social motivation is associated with online gaming.

Social needs comprise needs for acceptance and affiliation (Maslow 1970) and, in the online gaming context, these needs or motivations include the need for socialization, relationships, and teamwork (Yee 2006). Hence, we define *social needs satisfaction* as fulfillment of these needs for socialization, relationships, and teamwork. Lo et al. (2005) demonstrated that solid interpersonal relationships and social links helped motivate online gamers to repeatedly play the same game. Social interactions as well as enjoyment and achievement generate gamer gratification, further fueling gamer loyalty or continuance motivation (Wu et al. 2010). These findings suggest that the fulfillment of social needs plays an important role in generating online gamer loyalty to specific games. To satisfy their social needs during games, gamers also can interact with others on a one-to-one basis or join a team to interact with team members. Since teams help individuals complete tasks via teamwork (Hackman 1987), which involves intensive social interactions, participation in gaming teams can serve as a means of satisfying the social needs of online gamers.

2.4. Team participation

Teams, which are defined as having two or more members, complete tasks via coordination and collaboration (Shnok 1982). Teams are also defined as groups that complete tasks associated with shared goals (Hackman 1987), and online gamers frequently form teams to complete shared gaming tasks. Teams generally outperform individuals (Mankin et al. 1996), increase productivity (Parker 1990), and facilitate learning, and skill development (McIntosh-Fletcher 1996).

Lo et al. (2005) determined that online gamers enjoy participating in game organizations and teams and the process by which gaming teams complete gaming tasks. This research defines *team participation* as the degree to which an individual participates in a team with members having a common goal.

Online gamers enjoy the social activities in games (Jansz and Tanis 2007) that fulfill their social needs and serve as positive reinforcement of gaming. Social cognitive theory (Bandura 1973) posits that positive feedback or reinforcement can encourage recurrence of the behavior. Therefore, participation in gaming teams is likely associated with online gamer loyalty, an aspect of gaming.

In the literature on virtual teams, a study by Wong and Burton (2000) appeared to be the one best related to the present study. They proposed that clear role expectation and team culture could positively contribute to team performance. The present study uses compliance with team norms to embrace the essence of the roles gamers are expected to take. The originality of the present study is to apply compliance with team norms to formation of online gamer loyalty.

The literature on virtual team management has a distinct focus on how virtual team performance and member satisfaction can be improved (LePine et al. 2008, Lim and Klein 2006, Lin et al. 2008a). Specifically, Lim and Klein (2006) found that a team's mental