Chapter 96

A Systematic Literature Review on the Use of Games for Attitude Change:
Searching for Factors Influencing Civil Servants' Attitudes

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ABSTRACT

Governments are increasingly using games for civic engagement, decision making, and education. Serious gaming is a type of game that has often been advocated as a means for changing the attitude of its players and can be used for changing the attitude of civil servants. However, the relationship between games and attitude change in civil servants remains unexplored. This paper aims at identifying factors leading to attitude change of civil servants. As hardly any paper is focused on civil servants' attitude change through games, the authors broaden their research to attitude change through games in general. Out of 483 documents, 19 reference papers were analyzed in detail. Eighty-one games were found, and more than 13 different theories were identified containing 30 different influencing factors, which were found mostly to be unrelated and context-dependent. The conceptual dispersion between studies indicates that the resulting overview of factors is a first step towards creating a uniform theory. The results can help governments to design better games.

1. INTRODUCTION

Governments are increasingly using games for civic engagement, decision-making, policy communication, and in a variety of other areas (Hassan, 2016; Sgueo, 2018; Vasconcellos, Carvalho, & Araujo, 2017). The history of games used in public service dates back centuries, but the importance of such activities has only recently been recognized (Mayer, 2009; McGonigal, 2011; van de Ven, Stubbé, & Hrehovcsik, 2013). Together with this increased practical use of games, understanding is needed to improve the effect of games.

Gaming in governments can be considered as the use of game elements in different aspects of public administration (Janssen & Helbig, 2016; van de Ven et al., 2013). It ranges from complete tailor-made interventions for training and decision-making to governmental actions towards engaging citizens, employees, and other public-policy stakeholders (Mayer, 2009; Sgueo, 2018). Studies on policy-gaming, education, and even the use of gamification techniques by governments are well-known.

Games can be used to change servants' attitudes. However, there is a lack of systematic approaches for accomplishing attitude change (Boyle et al., 2016; Connolly, Boyle, MacArthur, Hainey, & Boyle, 2012). Games have been successfully used to change general players' perceptions or even to have them engage in different behaviors, as reported in many studies in various domains (Antle, Tanenbaum, Macaranas, & Robinson, 2014; de Caluwé & Geurts, 1999). This idea originates from an *experiential learning* perspective, which states that attitudes are influenced by experience, and this might lead participants to engage in different behaviors (Kolb, 2000).

Attitude and behavior are closely related, as behavior entails the actual actions, whereas attitude entails the beliefs or opinions of a person towards the actions. Attitudes can be shaped by the experiences in which the desired behavior is practiced. The games that aim at changing players' attitudes can be designed specifically for civil servants, the professionals implementing public policies (Chen & Bozeman, 2014; Nam, 2016). In the face of challenges to the operation of public programs and actions, civil servants tend to stick to their existing habits. Lipsky (1971) already found a "tendency on the part of street-level bureaucrats to develop defense mechanisms in order to reach accommodation and resolution of stress tendencies, that results in a distortion of the perceived reality" (p. 396). More broadly than street-level bureaucrats, we can assume that the resistance to change is a kind of defense mechanism. This behavior is to ensure stability and has the disadvantage that new policies requiring a change of attitudes require great effort. Concrete limitations, such as lack of resources, physical and psychological threats, and ambiguity of role expectations, make change difficult for civil servants.

Willems (2020) found that "the public sector is often typified as being bureaucratic, slow, and inefficient" (p.9). However, he also found that a pro-social motivation on public servants is relevant to understand their behaviors and the perceptions of others towards them (p.19). It may contrast with definitions, such as the ones coming from the Bureau Voting Model, which assumes that government employees always seek an increase in their salary or job security by supporting more substantial budget expenditures (Tepe, 2012).

As suggested by Lipsky, dependence on routines for security, unfamiliarity with new procedures for operating differently, and being shielded from awareness of the impact of one's behavior are major reasons for resisting change. This underscores Gould-Williams (2004) findings that the desires of public managers to enhance civil servants' positive attitudes would make good use of team-working activities with appropriate individual training programs. Hence, resistance to change can be influenced by new

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