

Combining Personalization, Tailoring, Persuasive Design and Gamification – Where Do We Stand?

Heidi Enwald^{1,2}

¹Information Studies, P.O.Box 8000, FI-90014 University of Oulu, Oulu, Finland

²Information Studies, Åbo Akademi University, Tuomiokirkontori 3, FI-20500 Turku, Finland

ORCID: 0000-0003-1953-2157

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1 Introduction

The same *one-size-fits-all* dilemma, and the idea of taking personal characteristics into account in attempts to change behavior, have arisen in different research fields. This position paper explores this phenomenon and highlights the opportunities for interdisciplinary approaches.

Most of the gamified applications are designed with a *one-size-fits-all* approach, which assumes that individuals are a homogenous group that reacts similarly to game elements [1]. Recent empirical results have shown that in gamification personalized approaches can potentially achieve better results than generic approaches [2,3]. Furthermore, in persuasive system design the key challenge in many cases is that the target audiences are large and heterogeneous, and users differ in their goals, needs, habits and preferences. The importance of understanding the individual user in designing persuasive systems have been highlighted already for a while (e.g., [4-9]). To continue, the dilemma has also been observed in health communication and taking individual characteristics into account is the fundamental idea of tailoring health communication in digital services and applications (see e.g., [10]).

Altogether, these research approaches share common aspects of aiming at influencing attitude and behavior, increasing end-user engagement and adherence and making the content more relevant and interesting for the user. The most often used concepts for taking personal characteristics into account are personalizing and tailoring. However, these concepts might also mean different things in different research fields and this can sometimes be confusing. Through approaching the same phenomenon from different angles, concepts such as tailored gamification, tailored persuasive gamification, personalized gamification, personalized gamification systems, personalized gameful applications, persuasive game design and gamified persuasive system design have emerged.

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2 Background

Gamification, that by Kapp [11, p.10] is “using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems”, aims to improve individuals' motivation to perform tasks by making those mundane tasks more playful. According to Knutas et al. [12] “personalization is an upcoming trend in gamification research, with several researchers proposing that gamified systems should take personal characteristics into account”. Orji and her colleagues have investigated applying this to health games referring the approach as “tailoring persuasive games” already at years 2013 and 2014 [13,14].

Furthermore, based on a systematic analysis of gamified health behavior change support system literature Alahäivälä and Oinas-Kukkonen [15] state that “future health gamification should pay more attention to the user context and provide tailored services for different needs. For example, some people might dislike the idea of competition, while others see it as motivating. For future research, it is essential to pay attention to the participant demographics: age, gender, experiences with technology and games, attitudes, and lifestyles all may potentially have an impact on the outcomes.”

Some characteristics and preferences that have already been discussed in the literature are e.g., user preferences (e.g., [16]), personality (e.g., [17,18]), learning styles in educational context (e.g., [19]) and player types (e.g., [17, 20-22]).

Personality trait models can be understood as a high-level conceptualization of individual differences not focused on any specific domain or behavior, whereas player type models are more specific and focused on the differences of individuals' behavior and attitudes in relation to game elements and game applications [23]. In some studies personality traits have also been referred as user types (e.g., [18]). In addition, it has been stated that there is a need for distinguishing between types of players and play styles [24]. Nacke and Deterding [2] argue that little is still known about the effectiveness of designing with player types in mind, let alone individual differences beyond them. Tailoring gamification based on player types can, however, be seen as the first step towards personalization [22].

3 Discussion

According to Martin & Kwaku [25] “gamified persuasive system design refers to design solutions at the intersection of gamification and persuasive technology aiming at influencing attitude and behavior change”. Despite of the amount of research on both of the issues, the results are often mixed and highly context specific. Generally speaking, research on personalized gamification systems is still in its infancy, with only few studies on the design of such systems (e.g., [21,26]). Martin and Kwaku [25] argue that “we believe that design solutions at the intersection of gamification and persuasive technology reveal promising potential. Solutions such as the consideration of different types of persuasive messages within gamified environments, particularly in combination with the gamification feedback mechanic, have often been neglected.”

Knutas et al. [12] highlight also the difference between adaptive gamification, which is the gamified system reacting to different situations, and personalized gamification, “which is the system being able to respond more structurally to the situation and the characteristics of individual users”. I think that maybe in the future we shall see also adaptive personalized gamification attempts.

The main point of this position paper is to remind us, that there is no need to reinvent the wheel. Learn what is already known and done in other research fields and be brave in aiming at multidisciplinary or even interdisciplinary research approaches.

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