GAMIFICATION IN ADULT EDUCATION: DIDACTIC POTENTIALS AND LIMITATIONS

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ABSTRACT

The use of game mechanics such as points, badges, levels, and achievements in non-gaming settings has become extremely popular in recent years and so is the area of adult education. The conventional educational models tend to overlook the needs of adult learners, which are complex and multidimensional and they lack motivation and engagement in particular. Adults are usually faced with conflicting obligations including those in the work place, family and within the social setup and this may make them not continue with the educational process. The use of gamification as an effective method can be a good answer to this question and will help learners find learning more interactive, entertaining, and inspiring. It can create a learning environment in which it engages people to participate in it and apply their skills through game mechanics. Self-Determination Theory (SDT) is a motivational theory, at the center of a significant number of gamified systems, which focuses on the satisfaction of three psychological needs: autonomy, competence, and relatedness. When these needs are met within the learning environment, they might result in better motivation and involvement in the educational materials. Regardless of the possible advantages, there are some challenges related to gamification, such as the overemphasis on the extrinsic rewards, the high level of difficulty in the creation of successful systems, and the issue of their accessibility. The purpose of the paper is to discuss different aspects of the gamification in adult learning and to estimate its possibilities and challenges. Based on the review of the existing literature and case studies, the paper will explain how gamification may be used to promote motivation, increase the engagement of the adult learners, and results in their intercultural competence development.

Keywords: Gamification, Self-Determination Theory, Intrinsic Motivation, Engagement, Game-Based Learning.

INTRODUCTION

Gamification, which is described as the use of gaming patterns such as points, badges, levels and achievements in non-gaming contexts, has become much trendier of late and especially in adult learning. The conventional models of education cannot always consider various and complex needs of adult learners, particularly regarding motivation and engagement. Competing interests in adult life are usually associated with working, family and social life needs which may cause difficulty on staying active in educational processes. When used in an appropriate way, gamification offers an effective response to this problem, since it makes the learning process more interactive, entertaining, and motivating. With the incorporation of game mechanics, it may help be more participatory and supportive of learning and development in skills. Self-Determination Theory (SDT) is a motivational theory that lies at the heart of many gamified systems, since it

places an added value on the satisfaction of three psychological needs, namely, autonomy, competence, and relatedness. When content in the learning environment speaks to such needs, we might find ourselves being more motivated and learning more. Even though this method can be beneficial, one should note that there are certain challenges relating to gamification, such as over-investment in extrinsic rewards, the intricacy of creating effective systems, and the problem of accessibility. The purpose of this paper is to analyze the multiple aspects of gamification in adult education and examine its prospects and drawbacks. The following paper will analyze the available literature and case studies to explain the opportunities and challenges of using gamification to develop motivation, engage learners, and develop intercultural competence amongst adult students.

LITERATURE REVIEW
Theoretical Foundations of Gamification

Self Determination Theory (SDT), introduced by Ryan & Deci (2020 focuses on three fundamental psychological needs (autonomy, competence and relatedness) that help encourage intrinsic motivation. The needs are said to be essential to ensuring long-term and substantial learning achievement especially with the adult education where motivation may be misled by other extraneous factors such as employment and family obligations. In this regard, gamification provides a feasible solution because it uses game-like features that facilitate such psychological needs to achieve an enjoyable and productive learning experience.

Gamified systems are most persuasive concerning one of the main pillars of SDT autonomy. Gamification allows learners to have more control over learning. The gamified systems have the advantage of being flexible to adult learners who are usually expected to balance professional, personal, and educational demands. As an example, the learners are frequently able to establish the pace of their learning, will be able to pick and choose their tasks in accordance with their interests and may select the challenge to work within. This fact is rather congruent with the principle of autonomy, which positively affects intrinsic motivation because learners feel that they have greater control over the learning processes (Becker & Metz, 2022). Competence which is the second key need is also tackled via gamification effectively. Within a gamified system, learners will be able to know their progress instantly for instance receiving a point, badge or level up. Such feedback systems enhance increasing the learner self-cueing of performance as they are equipped with definite indicators of success. In a traditional education environment, an adult learner may not always get the immediate feedback, and, hence, such immediate tangible feedback can mean a substantial increase in self-efficacy and increased motivation to continue learning among adults (Koivisto & Malik, 2021). The constant feedback influences the learners to remain involved in the content, leading to a sense of achievement. relatedness, the third need in SDT, is improved due to an increased focus on social interaction and collaboration provided by gamification. The learning context is also evident in the form of multiplayer tasks, leaderboards, and social forums, which form a community. These social components are very important to adult learners who might be lonely, particularly in online or non-formal education where they can find a friend and encouragement. Joint tasks and common objectives will encourage the feeling of belonging and support of others, which is essential to stay motivated and active in the course (Samodumska et al., 2022).

Gamification in Adult Education

The efficiency of gamification in adult education has recently been stressed by the studies. As Mironova and Ruonala (2023) note, gamification is especially appropriate to adult learners as it combines the aspects of challenge, competition, and reward, which appeal to the adult learner in their motivations and practical learning requirements. Serious games and game-based learning may be used to keep the learners motivated, particularly in situations of juggling of several roles in life. Gamified systems help to make learning more interactive and entertaining thus encouraging prolonged activity. According to Rieckhoff (2022), gamification in his work suggests a way of personalizing learning in adult learners. Adult learners are able to learn at their own convenience through customization of learning path and through instant feedback, learning is flexible and productive. Such customization is more important, because adult learners can have varying backgrounds and levels of already acquired knowledge. In a term, systematic literature review designed by Koivisto and Malik (2021), author noticed how elements of gamification, including rewards, challenges, and progression, have been successfully implemented to engage and educate older adults. They discovered that adults, who frequently take on practical and meaningful learning experiences, are receptive to gamified learning environments delivering transparent targets and incentives. The motivation level that gamified systems give is particularly useful within a non-traditional learning environment, where adults might encounter difficulties in staying focused and might lack motivation. Although there are these positive results, a number of difficulties that emerge during application of gamification in the teaching of adults also exist. Barth (2024) also addresses the issue of so-called stealth gamification, which involves introducing game components into the learning experience in a low-key manner, so that the educational process no longer seems like a game and more like an ordinary process involved in learning. Although stealth gamification is very effective, it is important that it is well designed and does not flood learners with extrinsic rewards which will eventually lower the intrinsic drive.

Technological Challenges

The technological expertise of learners is the factor that can create a successful implementation of gamification but may greatly differ in the adult learning environment. More importantly, Mohring (2025) explains that digital platforms can be very complicated, which may challenge learners, especially those not conversant with digital mechanisms or the gaming culture. To deal with this, courses in gamified systems should be developed keeping in mind the notion of accessibility. This entails convenience interfaces, simple directives and proper assistance of learners who cannot cope with technology well. According to Rieckhoff (2022), inviting a smooth user experience is paramount to a sustained engagement since sophisticated systems are on the verge of inducing frustration that will push people to become disengaged. Additionally, because of the attributes of other novel technologies and tools, the gamification element can be combined with them to add new dimensions of interactivity and engagement to the process, as Riedmann, Schaper, and Lugrin (2024) also propose, which is what social robots are. This however also creates more problems especially regarding accessibility, cost and technical expertise needed to install such systems.

Gamification Implementation: Best Practices and Strategies

Gamification has become an effective method of learning among adults, but still its integration into the learning environment is crucial. Both aspects of educational goals as well as learner needs need to be given some considerations in order to be implemented successfully.

Balancing Intrinsic and Extrinsic Motivation

Achieving an optimal level of intrinsic and extrinsic motivation is one of the key issues in gamification. Although things such as points, badges, and levels can be applied as a form of extrinsic motivation, the danger is that the learners will tend to pay excess attention to the reward over the content. Barth (2024) also states that stealth gamification is required not to allow learners to grow too dependent on extrinsic motivation. With rewards delicately incorporated in the learning process, the educators can rest assured that the content and the learning experience per se do not go out of the scene and that it is not all about the reward.

Promoting Collaborative Learning and Social Interaction

Collaborative learning is also another important aspect of gamification. Providing group-based tasks and multiplayer options, gamification may promote socializing and foster the sense of community among learners. As it has been mentioned by Samodumska et al. (2022), cooperation in gamified settings promotes adult learners to exchange knowledge and solve problems in teams and establish relationships. This social component can be very enriching to adult education because adults might feel lonely or out of touch with the conventional academic environment. In this research on using gamification as pedagogy in geriatric medicine, Schlioegl et al. (2022) show the significance of collaboration as an essential element in the process of teaching. They discovered that not only group work improved the interpersonal abilities of the learners, but it also gave them a better feeling of being inter-culturally competent. This observation highlights the significance of adding social and collaborative aspects to gamified learning environments so that it would stimulate both educational and personal development.

Gamification's Impact on Motivation, Engagement, and Performance

Gamification has been effective in boosting motivation, engagement and performance in adult learning. Koivisto and Malik (2021) discovered another beneficial feature of gamification, which is concrete and significant rewards that can motivate elderly people to learn more. Game mechanics like points, levels, and badges provides learners with simple and easy indicators on the progress and this increases their feeling of competence and hence, makes them want to advance more through the learning content. In the same manner, Riedmann et al. (2024) showed that gamification with the integration of social robots resulted in the better motivation, engagement and performance rate in adult learners. Gamified systems assist the learners to remain motivated and to do better in the educational activities by giving instant feedback and feeling of achievement. The combination of all these would not only facilitate academic achievement, it would also encourage the application of valuable life skills including communication and teamwork.

Challenges and Limitations of Gamification in Adult Education

Although the bright side is there, gamification in adult education exists with a number of challenges. One of them is the excessiveness of extrinsic rewards. According to Barth (2024), overemphasizing the use of badges, points, or leaderboards may obscure the intrinsic benefits of learning. To prevent it, gamified systems must focus on intrinsic motivation and ensure that rewards should follow the learning process as the second option. Technological complexity of gamified systems is another challenge. Mohring (2025) emphasizes that adult students do not necessarily find digital tools familiar, and it is necessary to keep the design of gamified platforms accessible. These challenges can be mitigated through the provision of instructional guidance, help documents and user-friendly interfaces.

METHODOLOGY

In this research, a qualitative research method will be used, with the help of a systemic literature review of available literature in the area of adult learning to explore the impact of gamification in adult learning. The major aim is to investigate the gamification systems in their relation to Self-Determination Theory (STD) to increase engagement, motivation, and performance of adult learners. The systematic review approach will designate the possibility of accumulating empirical research, theoretical discourses, and case illustrations about the use of gamification across the adult learning situations. The chosen literature was retrieved in the diverse academic sources such as peer-reviewed journals and books. In particular, this research paid special attention to articles published in 2020-2025 so that the latest trends and findings in the sphere of gamification were taken into account. This period was selected to identify the most recent developments in gamification practices and the ones that exemplify incorporation of technologies in adult learning environments. In order to guarantee rigor of literature review, studies were based on the following inclusion criteria: they had to target the adult learners, namely that they are the participants of the non-formal educational settings; they had to target the relation between gamification and motivation, engagement, or performance; and they had to target exploring the use of gamification elements, i.e., points, badges, or levels, in achieving the learning results. They were followed by the analysis which involved the thematic analysis and the possibility to trace the common patterns, gaps and themes in the literature. This approach gives a profound insight on how gamification designed in the right way can satisfy the psychological needs of adult learners as spelt out by SDT. It is by the use of the systematic review method that it is possible to get an all-rounded perspective of the current state of gamification in adult education as far as its potential and its limitation are concerned.

RESULTS

The outcomes of the literature review provide important information about the implementation of the gamification in adult education. The synthesis of the reviewed studies outlined the understanding that gamification noticeably affects states of motivation, engagement, and learning outcomes. Incorporation of the game-like points, badges, and levels has been demonstrated to strengthen the intrinsic incentive of adult learners by satisfying the psychological drive of autonomy, competence, and relatedness.

Impact of gamification on Autonomy

The research found out that there was consistency in reporting that gamified systems in adult education offer more autonomy to the leaners. Students enjoyed the choice they had in the manner in which they proceeded with learning activities. In particular, Becker and Metz (2022) observe that those adult learners who controlled the pace by which they learned became more engaged and satisfied. Likewise, Koivisto and Malik (2021) found out that providing learners with choices to choose tasks that related to their interests stimulated their motivation in a considerable way to proceed with learning. This is illustrated in the fig 1 below.

Fig 1: Gamification in education


Source: (Christopoulos, A., & Mystakidis, 2023)

Enhancement of Competence

The other important conclusion was the immediate feedback as a factor contributing to enhancing learners' competence. As mentioned by Samodumska et al. (2022), the gamified systems have the benefit of giving the learners with real-time feedback in the form of badges, points, and progress bars. This feedback assists the learners to monitor any improvement they have achieved and feel good about it which, on its part, promotes their self-efficacy and encourages further utilization of the learning content. According to Riedmann et al. (2024), using both social robots and gamified solutions in adult learning also boosted motivation since learners received a clear indication of success.

Fostering Relatedness

Social dimensions of gamification were moreover indicated as essential to the adult learning contexts. The collaborative nature of gamification provided by the integration of collaborative tasks and social interaction went a long way in making gamification relatedness to learners. Leaderboards, multiplayer, and other gamified features were valuable as they triggered social interaction leading to contribution of knowledge to build constructive learning environment. Mironova and Ruonala (2023) also noted that adult learners contributed to the social aspects of gamification, gaining access to peers and becoming more engaged and connected to each other. To conclude, the findings indicate that gamification successfully appeals to the psychological requirements described by SDT, therefore, improving the motivation, engagement, and performance of adult learners as illustrated in figure 2 below. Nonetheless, the research pointed out that close attention should be taken to avoid crowding the learning material with extrinsic rewards in the form of gamification.

Figure 2: Self-Determination Model, Scale, and Continuum
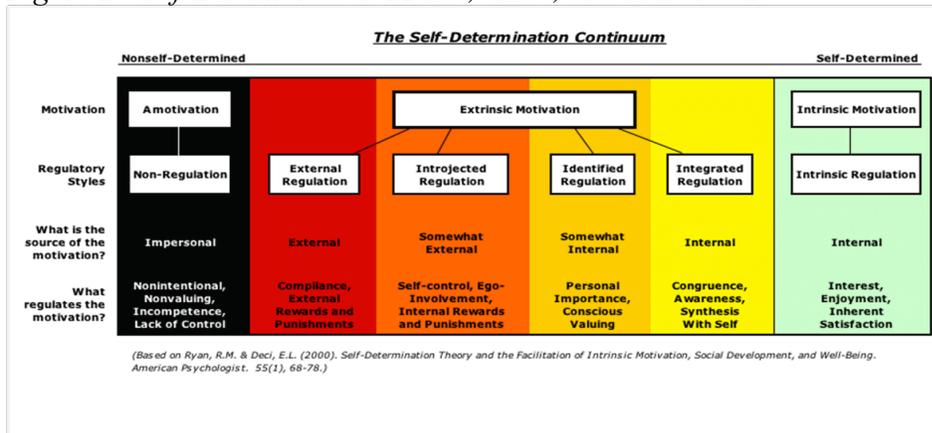
Source: (Ackerman, 2018)

DISCUSSION

The literature review results highlight the promise of gamification as a potent instrument to improve adult education. Gamified systems fit in the Self-Determination Theory since it supports the three psychological needs of autonomy, competence, and relatedness. The findings have aligned with the earlier studies, which have stressed the usefulness impacts of gamification on intrinsic motivation and engagement (Becker & Metz, 2022). But on the one hand, gamification prospects are still promising, and on the other hand, it is not unproblematic.

Autonomy and Learner Engagement

The implication is that the gamification approach can motivate the adult learners, as was explained by Becker and Metz (2022), because the autonomy it grants them helps them stay engaged. It is however important that this autonomy should be vigorously weighted to the arrangement of the learning material. Autonomy may cause confusion or disengagement without clear goals and instructions, and the learners that might require more instructions because of the complexity of the content material (Becker & Metz, 2022). Thus, it is essential when gamified systems are developed to provide autonomy and well-defined learning process. The use of Gamification in adult education has been shown to improve the learning performance and motivation. As it is stated by Schlögl et al. (2022), game-based learning has some positive effects on the educational outcome and motivation of participants in geriatric medicine education.

The Role of Competence in Motivation

Among the principal benefits of gamification, the rising competence achieved by immediate feedback can be noted, which is proved by Koivisto and Malik (2021). Constant feedback given to the learners will affirm the feeling of accomplishment, and this will help keep them motivated. Yet, it can create a danger when gamified systems are overdependent on extrinsic reinforcement like points or badges. According to Barth (2024), in the long term, overuse of such external reward may kill intrinsic motivation. Thus, the gamification process requires systems that stress the achievement of an intrinsic satisfaction instead of just giving learners prizes when they complete activities.

Relatedness and Social Learning

The results also highlight the aspect of relatedness in gamified systems. According to Samodumska et al. (2022), the social brand of gamification, e.g., multiplayer and leaderboard games, provide learners with a sense of belonging in the community that is especially important in adult education. Nevertheless, these social features can only succeed provided the system is designed properly. When not applied well, they can result in unhealthy competition or alienation among learners. Thus, gamified systems designers must make sure that social aspects promote cooperation, instead of competitions. Gamification can greatly improve adult learning, but to succeed, one should strike the right balance between autonomy, competence, and relatedness. In addition, limitations, including the excessive dependence on extrinsic rewards, should be raised to the fore to see that gamification contributes to the learning process, but not worsens it.

CONCLUSIONS

This research identifies the great impacts of gamification in adult education, especially in its motivation, engagement, and learning outcome enhancements. Gamification matches the pillars of self-determination theory; namely, the psychological needs of autonomy, competence and relatedness, which are the key source of intrinsic motivation. The use of game-like functionality of points, badges, and levels provides the adult learner with both autonomy on what they want to learn and when to learn, instant feedback to increase their feeling of competence, and the ability to share their experience and knowledge with their peers creating a sense of community. Nevertheless, the usage of gamification in adult learning should be well thought through despite the mentioned benefits. The most important thing is that the gamified systems would allow achieving a balance between the external forms of encouragement and intrinsic motivation. Too much use of the extrinsic rewards may result in disengagement when the rewards are removed. Additionally, gamified systems should be designed in such a way that they can be used by all learners, especially those who do not have a wide technological background. According to Rieckhoff (2022), the simplicity of interface and easy-to-follow instructions are important to determine whether gamification works during adult learning. To sum it up, gamification shows a lot of promise in making adult education better, yet it should be carefully planned to make the best of it. Future studies should pursue the possibilities of further adjusting gamification to accommodate the special needs of adult learners and consider the lasting impact of gamification on the learning process.

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