

Exploring gameplay to support the development of leadership skills in post-registration district nursing: a mixed-method study

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The use of gamification in higher education is a relatively new concept. Tavares (2022) systematically reviewed literature related to game-based learning and found that nursing students who engaged in gamified learning developed relationships and team-working capabilities. The concept of gamification to enhance learning was further acknowledged by Freeman et al (2024) with the introduction of game-centric resources to support the development of undergraduate learners on nursing programmes, where practice placements were limited and a simulated approach was required. Most studies focus on the introduction and development of electronic resources to support the delivery of gamification, to simplify the concept of game use and broaden the student experience associated with leadership development. This study evaluated whether board games could enhance leadership skills in post-registration nursing students.

Literature review

Gamification describes the concept of using games and playful interaction to enhance learning in people, make a task more engaging, increase productivity and motivate changes in behaviour (Kapp, 2012; Marczewski, 2013). Kapp (2012) explained that the various concepts used in games contribute to differing terminology, suggesting that 'gamification' refers to the use of game mechanics to engage learners in tasks they might not typically undertake.

The skills required during gameplay mean that board games can be used in the classroom to encourage decision making through effective team working and establish outcomes to underpin complex decision-making situations through innovative thought (Van Esch and Wiggen, 2020). Van Esch and Wiggen (2020) also discussed the concept of serious gaming, which is specifically designed to simulate real-life situations, such as those encountered in leadership or care settings. Serious games are typically developed within a defined framework, featuring structured formats and specific outcomes. These may include board games or digital games created for online platforms (Kapp, 2012).

Historically, board games have been used in a variety of ways to prevent cognitive decline in older people. Gameplay encourages engagement with others and proactive participation in decision-making, while both non-verbal and verbal communication are enhanced. This can lead to a reduction in some traits associated with ageing (Nakao, 2019). Using games and play can motivate intrinsic emotions in players, resulting in engagement and increased productivity (Buckley and Doyle, 2014). A variety of emotions are developed during gameplay, which can be positive and negative (Mullins and Sabherwal, 2020). This can support the intended outcomes of the game, as in-person gameplay encourages non-verbal communication and visible actions, such as facial expressions, gestures and emotions like anger and sadness, which enhance both communication and team engagement (Mullins and Sabherwal, 2020). Lebron et al (2023) suggested that encouraging learners to get involved in game development and play actively engages

Abstract

Background: Board games are increasingly used in education to support skills such as communication, decision-making and teamwork. This study explored their role in developing leadership skills among post-registration nursing students at a UK university. **Methods:** Strategy-based board games were introduced to promote team collaboration, strategic thinking and social interaction. Participants, enrolled in a district nursing programme, identified leadership skills during gameplay. Data were collected through questionnaires, written debriefs and group discussions. **Results:** Key themes included role awareness, decision making, conflict resolution and communication. Participants reported increased self-awareness, stronger leadership insight and improved teamwork and communication.

Conclusions: Board games offer a practical, engaging approach to developing leadership skills in nursing education through active learning and team interaction. **Implications for practice:** Board gameplay encourages increased awareness of leadership styles and personality types, which impacts the quality of patient care, improves communication within teams and enhances staff morale, wellbeing and overall team performance.

Keywords: communication • game play • interaction • leadership • reflection

the learner to identify some of the key skills associated with leadership including team working, decision making, resilience and increased self-confidence, which support personal development.

Serious gameplay has a positive impact on leadership ability and gaming can be incorporated into the learning environment to support simulated skill acquisition (Buzady, 2017). Buzady (2017) added that game playing can influence flow, a concept derived from positivist psychology and is an intervention designed to engage the learner in a safe way, build on capability and increase courage of skill acquisition through engagement with alternative activities such as gamification. To demonstrate this concept, Joy et al (2023) developed a game in collaboration with nursing colleagues to enhance clinical judgement in student nurses and encourage interactive learning, during which barriers to the development of games to support student learning were identified. The cost of developing games to be delivered electronically can be expensive, especially if additional resources are required, with most of the expense involved in programming and script development. Using multimedia software, such as Articulate, can decrease the cost of electronic game development. However, this may also limit the resources available (Joy et al, 2023).

Santos (2019) suggested that board games are a cheaper alternative to online gaming, as they only require an initial outlay whereas online games usually warrant ongoing fees or subscriptions. Therefore, using board games is more cost effective, providing that they are well-maintained. Ward et al (2019) confirmed that board games could be an effective method to educate people on topics related to professional care delivery. The study aimed to encourage the identification of safety issues and reporting procedures to improve patient outcomes (Ward et al, 2019). The results of playing the games showed an increased recognition of incidents requiring reporting related to patient safety concerns, as well as greater self-awareness and accountability among junior doctors.

Briggs (2021) supported the identification of key skills associated with mastery developed through gaming and highlights the acquisition of technical skills, essential for lower management to implement processes and procedures, as well as human skills that address the emotional and social needs of the workforce, and conceptual skills that enable decision making, critical thinking and higher-level problem solving.

From the literature reviewed, it is evident that playing board games can have a positive impact on leadership development, support team cohesion, and enhance self-awareness and problem solving. The current study was undertaken by the author to determine whether these positive effects were evident in post-registration nursing programmes.

Methods

Design

A mixed-method approach was used to gather feedback from the learners including an online survey, a written debrief and informal discussion. Silverman (2024) identified several

advantages to incorporating mixed-methods in a study, the most substantial being the credibility of the research because of the triangulation of data. Research using a mixed-method approach requires rigorous analysis by the researcher to consolidate findings and on occasion, the findings may be contradictory because of the different methods of enquiry adopted (Silverman, 2024).

A qualitative, experiential learning approach was used, integrating board game-based activities into a leadership module. The intervention aimed to enhance self-awareness, leadership skill and soft skills (communication, teamwork, conflict resolution) through reflective practice during gameplay. Board games were chosen as they have been adopted in a variety of educational settings to support learner development from basic language skills to supporting logical thinking and creativity (Juhász, 2021). Playing board games supports the development of cognitive functioning, as decisions are made in real-time and through interaction with other team members, develops strategic thinking and enhances executive decision-making abilities (Martinez et al, 2023).

Setting and participants

The study was conducted at a northwest university within a post-registration district nursing programme. Participants were 20 students enrolled in a leadership module, which included theoretical study on leadership models, the role of the specialist nurse and service innovation.

To support their development, several interventions were introduced, one of which involved learning through gameplay. A selection of new, unopened board games was strategically chosen to help develop leadership skills such as risk assessment, strategic planning, decision making, evaluation and problem solving. Students divided themselves into groups of four and rotated through three selected games. One group member was assigned to observe and provide feedback via a structured debrief report. Roles and responsibilities could change with each game and teams were responsible for assigning these internally.

Before gameplay, students had to read instructions and set up each game themselves, reinforcing communication and interpretation skills. Throughout the sessions, they were encouraged to reflect on their limitations and strengths to enhance self-awareness. This practical activity built on prior theoretical learning and provided opportunities to apply soft skills essential for leadership—teamwork, engagement, communication, conflict resolution and coaching techniques.

In addition, participants were asked to evaluate their own leadership attributes and consider their roles in the delivery and monitoring of innovative nursing practices.

Database search

Literature was searched using a variety of search engines and databases including PubMed, ProQuest Central UK, EBSCOhost electronic journals service, EBSCOhost, Scopus, Science Direct, MEDLINE and CINAHL. A basic search was undertaken for the term 'board games', which generated 46 053 results. The term was further refined to

include 'and leadership', which reduced the number to 1415. The search was further defined to include publications in the last 10 years and full text access available, which provided 420 results. This number was then reduced through the use of double quotation marks "board games" to search the exact word combinations, resulting in a final number of 48 documents. The results of the search were manually reviewed by reading the titles and abstracts to identify resources that were suitable for the literature review. In addition, a Google search was undertaken to generate further resources, grey literature and reference lists reviewed to identify additional relevant literature.

Ethical concerns

Consent is an important factor to consider when undertaking research, specifically ensuring the approach taken is informed to ensure that detrimental effects are not experienced by participants (Bos, 2020; Hammond and Wellington, 2020). The use of ethical guidance when undertaking research projects encourages integrity and viability of the data collated (Resnik, 2020). Confidentiality is important to maintain the respect, trust and autonomy of the participants (Bos, 2020).

Participants were informed that the results of the study would be published, but information specific to individual feedback would not be disclosed. All participants were asked to complete a questionnaire, which included an overview of the study and a statement of intent. All participants were informed that participation was on a purely voluntary basis. All participants were informed that they could leave the study at any point without obligation. Written consent was not obtained from the participants. The questionnaire was completed via a web link, so no identifiable data were made available to the researcher. Participants were asked not to include identifiable data in the feedback. Ethical approval was granted by the university's research ethics committee in accordance with the research and teaching ethics framework.

Survey

Surveys can be useful for collating data on a variety of topics from a wide audience and depending on the methodology used (such as questionnaires), specific audiences can be targeted (Fogli and Herkenhoff, 2018). There has been an

increase in the use of web-based surveys in recent years and although this method is fundamentally effective, the response rates are not always significant (Sammur et al, 2021).

Using surveys as a data collection method has several disadvantages, including limitations in the quality and scope of data, especially when a representative sample is not obtained (Fogli and Herkenhoff, 2018). Question design may also introduce bias, and lengthy or complex surveys often result in incomplete responses. In this study, nine out of 20 participants completed the questionnaire, yielding a 45% completion rate. This aligns with average response rates reported in the literature (Wu et al, 2022). While there has been a steady increase in the use of online surveys since 2015, leading to higher response rates, sometimes reaching up to 69% (Holtom et al, 2022), response rates can still vary significantly because of multiple factors. Therefore, the response rate in this study can be considered average and the findings reasonably supported.

The survey was created using a digital platform (Jisc) and comprised seven short-answer questions. It used a mixed-methods approach by collecting quantifiable data alongside basic qualitative feedback (Silverman, 2024). The questionnaire was distributed via a university platform accessible only to the selected participants, thereby ensuring a purposeful sample and minimising the risk of inappropriate responses, as recommended by Sammur et al (2021). The survey questions are presented in *Box 1*.

Structured debrief and discussion

Debriefing is an effective way to determine team performance and improve outcomes. There are two methods for delivering a debrief, either unguided or guided (Eddy et al, 2013). Unguided debrief involves the use of guide sheets incorporating general questions and discussion points, whereas a guided debrief uses technology to support reflective practice and team efficiency (Eddy et al, 2013). Dufrene and Young (2014) explored the concept of debriefing and its role in supporting reflection both on and in action, to identify learning outcomes and determine further interventions. Their research highlighted that debriefing was commonly used to enhance the

Box 1. Participant questionnaire

1. While playing the games, what role did you take, team leader or team player?
2. When taking part in the gameplay, which of the following leadership styles do you use?
 - Autocratic: make decisions without consulting others
 - Democratic: make the final decision, but consult with the team
 - Laissez-faire: give others the freedom to do what they want
 - Contingency leadership: response dependent on the situation.
3. Would you usually react in the same way when leading in the workplace?
4. What leadership skills, if any, did you obtain from playing the games?
5. During the session, did you instruct other members on your team and use teaching or coaching skills?
6. While taking part in the gameplay, did you provide feedback on the performance of the other team players? Was this constructive?
7. While playing the games, did you encourage or motivate others by using intrinsic or extrinsic rewards?
8. While playing the games, did you notice any conflict within the team. How was this managed?

effectiveness of high-fidelity simulations in facilitating knowledge acquisition. Reyes et al (2018) indicated that debrief was a successful intervention used by teams to improve performance at all levels. Therefore, participants in the present study were instructed to engage in discussion and document their experiences during play in order to make sense of their experiences through interaction with other team members. Reflection on performance during a debrief can enable team members to prepare for future tasks and accelerate learning through enhanced self awareness (Eddy et al, 2013).

To support the incorporation of a debrief into the sessions, one person in the group was provided with a guide sheet, which included broad questions and prompts to encourage engagement and response from other team members, relative to the leadership theme. In addition, this individual was asked to observe the actions of the learners playing the games and record any reactions and emotions expressed during the session on the sheet provided. Following the completion of the debrief sheet, the participants were brought back into the larger group and collective feedback was obtained.

Themes identified

Roles adopted and responsibilities

Among the nine people who responded to the questionnaire, there was a varied approach to responsibilities and roles adopted during the gameplay.

One of the respondents identified that the students in the team took turns in leading the game, asking volunteers within the group to lead and observe the sessions. However, one of the respondents identified that they were happy to take responsibility for leading the gameplay only if they felt confident in the interpretation of the rules. Two of the respondents indicated that they only became involved in the game as players.

Leadership styles while playing games

Of the nine respondents involved in the gameplay, four indicated that they used a democratic style. One respondent using this style elaborated on the answer, indicating that they are likely to use this style when leading a team in the practice setting but that their style could change depending on the situation. This style of leadership was also adopted by four of the participants, who indicated that they incorporated a contingency style of leadership during the gameplay. One of these respondents suggested that this style was likely to be adopted in the workplace.

One of the participants identified that they applied a laissez-faire approach to gameplay. However, this participant also adopted the role of the observer. The teams indicated that several leadership styles were used during the gameplay, depending on the point in the game the players were at and the responsiveness of the members.

Game leaders identified that an authoritative approach was needed when players became obstructive and refused to engage, or when there was misunderstanding regarding the instructions. One of the groups suggested

that transactional leadership styles were needed at times to encourage members to participate, although it is unclear what this involved.

Skills adopted during gameplay

Various skills were incorporated into the gameplay, many of which are transferable to leadership roles in practice settings. *Table 1* gives examples of the skills adopted by the respondents while playing the board games.

Participant 9 stated that 'distributive leadership' was used, 'ensuring that everyone in the team takes part and is supported', while participant 1 indicated that they were 'keeping the group focused on the task instead of chatting'. The students who identified using a laissez-faire and contingency approach during the task reflected this in the skills they developed through gameplay, noting that their role involved 'evaluating, responding and intervening when required'.

Communication

Communication interventions were only identified as a skill adopted by five of the respondents, while four of the participants indicated that teamwork was adopted during gameplay. This was also emphasised in the group feedback, as participants found that working together enabled the group to identify solutions to problems presented during the games, which also encouraged, empowered and motivated the members.

In addition to completing the questionnaire, participants were also asked to give feedback in their allocated group on the skills obtained and used during the gameplay. Several of the learners focussed on communication as a prevalent skill. This related to written communication and the following of clear instructions, in addition to oral communication and the sharing of information between group members. A key intervention regarding this was the interpretation of the guidelines to ensure understanding of all team members as complex instructions were a barrier to effective outcomes associated with gameplay. Additional barriers to effective communication were also identified as noise in the room

Table 1. Skills adopted during gameplay

Criteria	Responses
Keeping the group focussed	1
Evaluation	1
Responding when needed	2
Communication skills	5
Team work	4
Fairness, patience and respect	3
Staying calm	1
Delegation and organisation	2
Providing feedback	1

causing issues with listening and complex terminology used in the instructions that was difficult to understand, which resulted in resistance to participation from some team members.

Personality traits were also evident when engaging in gameplay, and the groups identified that there were emergent leaders. Some of the traits identified included speaking 'clearly and loudly', giving directions using positive encouragement and non-verbal communication skills such as smiling and active listening. Players felt that the skills learned during the gameplay could be used in a variety of situations in the workplace, as indicated in *Box 2*.

Teaching others

All participants in the survey, except one, indicated that they had demonstrated teaching or instruction skills during the gameplay session. The exception was participant 2, who did not engage in this activity and had the role of the observer. In the remaining eight responses, there was a varied approach adopted to teaching others. Participant 4 indicated that they 'followed instructions and relayed these to the team', participant five 'instructed others how to play' and participant 6 said that they used coaching skills to instruct other team members.

Participant 8 indicated that they occasionally provided instruction if they were 'aware of the rules'. This is the same participant who adopted the lead role in gameplay only if they 'felt confident of the rules'. To support the development of the team, players indicated that actions such as remaining calm, rationalising the activity of others, being diplomatic and observing the reactions of the team members increased team expectancy and therefore the outcomes.

Feedback

Only eight participants responded to the question regarding the provision of feedback. Of those who completed the survey, five indicated that they provided feedback to other team members, with two specifying that the feedback was constructive. Three participants stated they did not provide any feedback, with participant 1 explaining that they 'allowed people to work it out as a team'.

Other groups noted that greater assertiveness was sometimes necessary and that alternative approaches were needed to achieve desired outcomes and a sense of accomplishment. Teams reported that adapting communication styles, such as paraphrasing instructions, negotiating with team members and rotating the leadership role, encouraged participation,

fostered understanding among members and supported the development of others.

Motivation

All eight respondents to the motivation question indicated that an element of motivation was incorporated during the gameplay. The tactics used encouraged others to engage, 'smiling/laughing along' (participant 1), ensuring that everyone was included and it 'made the game fun' (participant 2).

Creativity and happiness encourage engagement and flow, thereby increasing productivity (Buzady, 2017). However, for this to occur, there must be clear goals, feedback and a sense of control. The introduction of gameplay when students are learning encourages engagement, motivates learning and is an enjoyable experience (Freeman et al, 2024). The participants who fed back from the team discussions indicated that fellow team members encouraged the seeking of support and motivated each other using humour, to make the sessions fun, and praise, to encourage team building.

Conflict resolution

While playing the games, there was evidence of conflict within the teams. This was indicated by four out of nine responses to the survey. Participant 1 highlighted that some of the team members were 'going off topic and people were shouting when they wanted to be heard'. This response was also substantiated by participant 6 who identified that 'there was disengagement within the group'. Participant 5 suggested that some of the conflict resulted from the interpretation of the rules of the game, which required examination and explanation in an alternative way.

Participant 7 suggested using effective communication and confirmation of understanding as a method to resolve misinterpretation of the rules and to reduce conflict. The remaining five respondents noted no conflict during the gameplay.

Discussion

This study aimed to identify whether leadership skills could be developed through the introduction of board games in the curriculum of a post-registration nursing programme. The objective was to encourage a team approach to decision making, social engagement and strategic thinking. Players were asked to consider key skills and traits associated with leadership ability and innovative interventions. Clear themes emerged in the feedback provided by the participants relating to leadership roles, responsibility and effective communication strategies.

Board games have been used in the classroom to develop a variety of learning needs, from basic communication to cognitive and complex decision making (Kapp, 2012; Marczewski, 2013; Nakao, 2019; Lebron et al, 2023). To support the development of leadership skills for students on a post-registration nursing programme at one higher education institute, a range of board games were introduced in the classroom. The board games were selected based on the strategic influence and outcomes associated with them,

Box 2. Situations where the skills learned during gameplay can be used in practice

- Multidisciplinary team meetings
- Scheduling and allocation of patient care
- Delegating workload to team members
- Identifying the developmental needs of team members
- Identification of the key strengths of the team members to support service delivery
- Managing complex patients and liaising with family members

including higher level decision making, strategic planning, team working, effective communication and innovative thought process. The influence of playing board game on emotional development and awareness has been explored through research (Kapp, 2012; Marczewski, 2013; Buckley and Doyle, 2014; Mullins and Sabherwal, 2020; Lebron et al, 2023).

To ensure that the participants experienced a range of outcomes, the learners were asked to join a team to work with, and select three different games to be played by each team. A lead observer and recorder were also nominated by the team members to support the development of a debriefing sheet and record observations from the team interaction and discussions. From the evidence provided, it was clear that the teams engaged in relationship development and an element of team formation was evident.

According to Tuckman's theory on team development, members engage in a variety of emotions and stages before a team can be fully functional (Ellis, 2021). The teams were formed by students known to each other through sharing a classroom. Some of the team members also had experience of working together, so some knowledge of individual traits was common among some of the participants.

As the game progressed and the students became more familiar with one another, some conflicts began to emerge, reflecting the 'storming' stage of Tuckman's group development theory. As the teams continued to engage with the gameplay, natural leaders started to emerge and individual members gradually accepted their roles within the group, signalling a transition into the 'norming' stage.

As the day progressed and the team members became more comfortable with each other and became more productive, the 'performing' stage became evident. The teams appeared to involve all participants during the gameplay, demonstrating cohesion and effective team working. Participants emphasised this in their feedback, and as a result, the teams indicated that game completion was achievable, thereby meeting the desired outcomes associated with the game.

Several participants felt the need to assume a dominant, teacher-like role during gameplay, instructing other team members on the rules and expected outcomes, particularly when conflicts arose. This reflects the team's awareness of emergent leaders developing during play. Those who took on this responsibility suggested that an authoritative leadership style was sometimes necessary to restore order within the group. According to Northouse (2019), leaders often adopt various leadership styles and behaviours based on the situation; these characteristics reflect the need for command and task completion.

In addition to the feedback provided, participants were asked to complete a questionnaire about their observations and the impact of gameplay on their personal development, providing evidence of self-regulation. Lyubovnikova et al (2017) and Northouse (2019) found that self-awareness and regulation is an important feature of authentic leadership, as the recognition of personal strengths and weaknesses encourages transparency and trust from followers. However, there could be personal values inherent in a leader that may

conflict with the needs of the followers, therefore impacting on the authentic leader's position (Northouse, 2019). In his writing about compassionate leadership, West (2021) suggests that individuals need to be non-judgemental towards themselves if they wish to connect authentically with others.

The findings from this study indicate that using board games in the classroom supports the development of authentic leadership skills by fostering self-awareness and an understanding of the impact individuals have on their team members. Additionally, board games enhance cognitive decision-making abilities, which in turn encourage team teaching, individual growth and improved communication skills.

During gameplay, some conflict arose, primarily related to the interpretation and understanding of the rules. However, these issues were minor and were effectively resolved through positive feedback and group discussion at the local level. Furthermore, several participants contributed to the development of their teammates by taking on directing roles, acting as educators and using coaching skills. All of these are factors identified as successful catalysts for team member growth. When feedback was incorporated, participants also demonstrated increased engagement.

Although this study was conducted with learners in a higher education institution setting, the simplicity and accessibility of board games mean that the skills developed through gameplay can be applied beyond the classroom. These skills are transferable to various contexts where clinical leadership is essential.

Limitations

This study was conducted at a single university and involved a relatively small cohort of district nursing students from only two healthcare organisations. As such, the sample may not be representative of the wider population of district nursing students across different regions, educational institutions, or healthcare settings.

This limitation restricts the generalisability of the findings and may not fully capture the diversity of experiences, practices and outcomes present in other contexts. Additionally, organisational culture, curriculum design and local healthcare policies may have influenced the results in ways that are not applicable elsewhere. Therefore, further research involving a more diverse and larger sample across multiple sites is recommended to validate these findings.

Conclusions

From the evidence collated, it can be assumed that playing board games with a strategic focus can support the development of leadership skills and innovation. Board games can improve self-awareness, develop creativity, enhance communication and support team cohesion. Therefore, they are an effective intervention in team development and should be included in team building sessions.

Playing board games is also an effective method to improve team cohesion, support the development of leadership skills and motivate the team to engage. Interacting with other team members increases communication across team members

Key points

- Introducing the concept of gameplay into post registration nursing programmes can increase self awareness of authentic leadership styles.
- Using board games in the classroom can enhance leadership skills including communication, team working and conflict resolution.
- Board games are an accessible resource that can be used to support the development of leadership skills in a variety of settings.

CPD reflective questions

- What are your thoughts regarding the use of board games to support learning and how does this compare to traditional learning methods?
- Have you used board games within the practice setting to support staff development and engagement? How did this contribute to the development of your leadership skills and team working?
- Consider a time when you have engaged in board gameplay, what skills did you learn and what impact did this have on your engagement with others?

and supports the reduction of conflict within the team. A variety of traits were demonstrated during the playing of board games, with some participants taking on the role of leader while other members were passive and engaged as a team member, although these roles rotated as the teams became more productive and the goals determined. It can be assumed therefore that playing games can simulate actions associated with leadership delivery and support the development of leadership skills and traits.

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