DEVELOPING A SELF-CONFIDENCE SNAKES-AND-LADDERS BOARD GAME FOR JUNIOR HIGH SCHOOL COUNSELING SERVICES

Eko Saputro[1*], Ade Irma Novianti[2], Dewi Masyitoh[3]

[123] Universitas PGRI Argopuro Jember, Indonesia
*Corresponding Author: ekosaputrodgazto@gmail.com

ABSTRACT
Low self-confidence among junior high school students is frequently associated with passive classroom participation, hesitation to express opinions, and difficulty coping with academic and social challenges, indicating a need for engaging guidance and counseling media. This study aimed to develop an educational board game, "Self-Confidence Snakes and Ladders," as a counseling medium to strengthen students' self-confidence. The study employed a Research and Development (R&D) approach adapted from a modified Borg & Gall model through four stages: needs analysis, product design, expert validation, and limited field testing. Participants consisted of a content expert, a media expert, a prospective user (guidance and counseling teacher), and a small group of junior high school students. Data were collected using feasibility assessment sheets based on a 4-point Likert scale covering accuracy, usefulness, feasibility, attractiveness, suitability, and ease of use, and were analyzed descriptively. The results showed high feasibility across reviewers: the content expert rated the product 3.33, the media expert 3.40, the prospective user 3.37, and the small-group trial 3.50, all within the "very good" category, with minor suggestions related to refining question wording, improving font clarity, and adjusting session duration. In conclusion, the developed game is highly feasible and well-received as a practical counseling medium that can promote interactive and enjoyable student engagement. Future studies should evaluate effectiveness using experimental designs, larger samples, and validated self-confidence outcome measures.

Keywords: Educational Game; Guidance And Counseling; Junior High School; Research And Development; Self-Confidence.

INTRODUCTION

Students' school success is shaped not only by curriculum and cognitive ability, but also by socio-emotional resources that enable active participation, persistence, and adaptive peer functioning. A central construct in this domain is self-confidence, which is closely related to self-efficacy—students' beliefs about their capability to perform specific tasks—and is consistently linked to engagement, persistence, classroom participation, and help-seeking (Bandura, 1997; Honicke & Broadbent, 2016; Zimmerman, 2000). When students perceive themselves as incompetent, they are more likely to avoid challenges, withdraw socially, and disengage from learning opportunities, which can accumulate into poorer academic and psychosocial outcomes (Orth & Robins, 2014; Valentine et al., 2004). This concern is particularly salient in early adolescence (ages 12–15), which corresponds to junior high school (SMP). This developmental period is marked by identity exploration, heightened sensitivity to peer evaluation, and intensified social comparison, all of which can make confidence beliefs fragile when students experience repeated failure or negative social feedback (Erikson, 1968; Santrock, 2023). At the same time, global evidence indicates that peer dynamics and school climate remain pressing issues; for instance, bullying and peer aggression are widely recognized as threats to student well-being and participation (UNESCO, 2019). Consequently, schools increasingly rely on guidance and support systems that can strengthen students' resilience and positive self-beliefs. Within this direction, meta-analytic evidence shows that universal, school-based social and emotional learning (SEL) programs can improve social behavior, emotional competencies, attitudes, and academic outcomes (Cipriano et al., 2023; Durlak et al., 2011). In Indonesia, self-confidence challenges are also frequently observed in SMP students (e.g., reluctance to speak, fear of making mistakes, avoidance of presentations), creating a practical demand for BK interventions that are not only theoretically grounded but also engaging and feasible in real school conditions. In alignment with this, school counseling standards explicitly position self-confidence as a key student mindset for success (ASCA, 2024).

Despite broad agreement that self-confidence is essential, it remains unclear why low self-confidence persists even when schools deliver motivational messages or routine counseling. Social cognitive theory suggests that confidence is strengthened primarily through repeated performance experiences, observation, and social persuasion—mechanisms that are difficult to activate through advice-only approaches (Bandura, 1997; Zimmerman, 2000). Additionally, many group guidance formats are constrained by limited time and large groups, which can reduce student participation and limit opportunities for safe self-expression. Moreover, evidence on intervention outcomes is design- and implementation-dependent. While SEL interventions are beneficial on average, outcomes vary with program structure and fidelity (Cipriano et al., 2023; Durlak et al., 2011). Similarly, studies of game-based learning and gamification report generally positive trends but emphasize contextual variability and the importance of design features and facilitation (Hamari et al., 2014; Wouters et al., 2013). Therefore, a clear niche emerges for BK innovation: developing media that are structured, engaging, culturally familiar, low-cost, and theory-driven, then evaluating feasibility systematically. A general solution proposed across counseling and instructional research is the use of activity-based, game-informed interventions that combine participation, reflection, peer interaction, and structured prompts. Such designs are consistent with motivational theory (autonomy, competence, relatedness) and can increase engagement while supporting confidence-building experiences (Ryan & Deci, 2000).

Scientific literature supports game-based learning (GBL) as a structured environment that can increase engagement and motivate active participation. Conceptually, GBL is understood as learning through game experiences that integrate cognitive, motivational, and sociocultural mechanisms (Plass et al., 2015). Meta-analyses indicate that serious games can outperform conventional instruction on learning and retention under many conditions, though effects depend on implementation quality (Wouters et al., 2013). In school contexts, further synthesis has shown that GBL can improve achievement and engagement, with variability across designs and settings (Lei et al., 2022). Importantly, game-based approaches are not restricted to digital formats. Board games can support learning and psychosocial development because they naturally require turn-taking, communication, rule-following, and peer feedback. A systematic review suggests that board game interventions can enhance understanding and interpersonal interaction (Noda et al., 2019). Relatedly, board game–based mental health interventions for adolescents have been reported to improve psychosocial targets under guided implementation (Respati et al., 2024). In counseling, participatory and experiential approaches are also emphasized because change is strengthened when learners actively engage in structured experiences and reflect on meaning (Corey, 2021). When game mechanics are integrated with affirmations and reflective prompts, the activity can create repeated opportunities for mastery and positive social reinforcement—core mechanisms for confidence development (Bandura, 1997; Zimmerman, 2000).

Although the broader evidence supports game-informed interventions, gaps remain for BK media targeting self-confidence in SMP. First, much research emphasizes digital games, while many schools need low-tech, scalable, and low-cost solutions. Second, board game studies often prioritize general learning outcomes rather than counseling-specific constructs such as self-confidence and self-expression. Third, because outcomes in GBL and gamification are strongly design-dependent, BK media must be purposefully designed to align mechanics, prompts, and facilitation with confidence-building mechanisms (Hamari et al., 2014; Lei et al., 2022; Wouters et al., 2013). There is also a methodological gap: many school innovations are used informally without systematic development steps that establish theoretical alignment, content validity, feasibility, and user acceptability. Therefore, a focused need exists to develop a culturally familiar board game (e.g., snakes and ladders) into a structured BK medium embedding positive affirmations, reflective questions, and challenge tasks, supported by a credible R&D process.

The purpose of this study was to develop and evaluate the feasibility of a snakes and ladders–based counseling medium ("Self-Confidence Snakes and Ladders") for SMP guidance and counseling services. The objectives are to: (1) design a board game enriched with affirmations, reflective prompts, and structured challenges aligned with self-confidence/self-efficacy mechanisms; (2) assess content and media feasibility through expert judgment; and (3) examine user acceptability and practicality through prospective-user responses and a small-group tryout appropriate for development research. The novelty of the study is threefold: (a) transforming a culturally familiar traditional game into a theory-informed BK medium mapped to social cognitive confidence-building mechanisms (Bandura, 1997); (b) aligning the target outcome with contemporary school counseling standards that explicitly prioritize self-confidence as a key

student mindset (ASCA, 2024); and (c) offering a feasible, low-tech, and scalable medium consistent with evidence-informed design principles in game-based learning (Plass et al., 2015; Wouters et al., 2013). The scope is limited to SMP students in early adolescence and to development-stage evaluation (feasibility, appropriateness, usability, acceptability). Claims about "effectiveness" are restricted unless supported by rigorous outcome testing (e.g., controlled trials), consistent with the design-dependent nature of SEL and game-based interventions (Cipriano et al., 2023; Durlak et al., 2011).

METHOD

This study employed a Research and Development (R&D) approach adapted from the Borg & Gall development model to produce an educational counseling medium that is valid, practical, and useful for junior high school students. R&D is appropriate when a study aims not only to understand a phenomenon, but also to design, validate, revise, and field-test a product for educational use through iterative stages of development (Borg & Gall, 2003; Gall et al., 2007). The product developed in this study was an educational "Snakes and Ladders" board game designed to support Guidance and Counseling (BK) services, with game content oriented toward strengthening students' self-confidence. The development pathway followed a systematic sequence—needs analysis → prototype design → expert validation → limited try-out (small group)—and revisions were conducted after each evaluation stage to improve content accuracy, design quality, and usability.

Population and Sample

The target population consisted of junior high school (SMP) students who demonstrated indications of low self-confidence and were potential recipients of BK services, as well as BK personnel responsible for counseling interventions in school settings. Because product development requires user feedback and expert appraisal that are directly relevant to the product's function, the study used purposive sampling to recruit participants who could provide substantive evaluations of practicality and feasibility (Patton, 2015). Participants included BK teacher(s) as practitioner users to identify needs and assess practicality, a small group of SMP students to evaluate attractiveness, clarity, and perceived benefit during limited testing, and expert validators consisting of a material/content expert (BK/psychology/education) and a media/design expert to assess the product's instructional-psychological fit and design usability.

Table 1. Participants and Roles in Product Development

Participant Group	Main Role	Primary Output/Feedback
BK teacher(s)	Needs identification; practicality assessment	User needs, implementation feasibility, suggestions for BK integration
SMP students (small group)	Limited try-out users	Attractiveness, clarity of instructions, engagement, perceived usefulness
Material expert	Content validation	Accuracy and appropriateness of self-confidence messages/tasks
Media expert	Media validation	Visual design, readability, layout, color harmony, product usability

Data Collection Techniques and Instruments

The data used for this study were collected using questionnaires, observation, and interviews to ensure the product was grounded in real school needs and evaluated from multiple perspectives (Creswell & Creswell, 2018). During the needs analysis, students completed a self-confidence questionnaire to provide an initial profile of self-confidence conditions, while observations documented behavioral indicators such as reluctance to speak, avoidance of participation, and peer interaction patterns. In parallel, semi-structured interviews with BK teacher(s) explored typical self-confidence issues, current counseling practices, limitations of existing media, and expectations for an engaging and interactive product. Based on needs analysis findings, the researchers developed a prototype snakes-and-ladders game integrating educational and psychological elements. Each square contained structured prompts, including positive messages/affirmations, behavioral challenges (e.g., practicing speaking up), and self-reflection questions to encourage positive self-evaluation and courage in expressing opinions. The prototype also included game

rules, facilitator guidance for BK teachers, and student instructions to support consistent implementation in counseling sessions. For expert validation, the study used feasibility instruments based on a 4-point Likert scale (1–4) to encourage clear evaluative judgments without a neutral midpoint (Likert, 1932). Validation sheets assessed content/message alignment with self-confidence objectives, suitability for SMP developmental characteristics, and technical design quality (layout, color, readability). After revisions based on expert input, a limited try-out was conducted with BK teacher(s) and a small student group to assess ease of use, attractiveness, engagement, clarity, and perceived benefit in counseling practice.

Table 2. Feasibility Instrument Dimensions (Likert 1–4) and Core Indicators

Dimension	Indicator Examples	Rater
Accuracy (Ketepatan)	Alignment with self-confidence objectives; correctness of messages/tasks	Experts, BK teacher
Usefulness (Kegunaan)	Relevance for BK services; contribution to student reflection and participation	Experts, BK teacher, students
Ease (Kemudahan)	Clarity of rules; simplicity of use in BK sessions	BK teacher, students
Suitability (Kesesuaian)	Appropriateness for SMP level; cultural/context fit	Experts, BK teacher
Attractiveness (Kemenarikan)	Visual appeal; readability; student engagement	Media expert, students

Data Analysis Procedures

Data analysis combined descriptive quantitative analysis for feasibility ratings and descriptive qualitative analysis for contextual feedback used in product revision. Quantitatively, Likert-scale ratings from expert validation and try-out assessments were summarized using mean scores per dimension and overall. The resulting values were interpreted using predetermined feasibility categories commonly applied in development studies to determine whether the product is ready for use or requires revision. Qualitatively, interview notes, observation notes, and open-ended comments were analyzed through data reduction (identifying recurring issues and key suggestions), data display (grouping feedback into themes such as content, language, design, and usability), and conclusion drawing to determine revision priorities (Miles et al., 2014). This integrated analytic logic ensured that numerical feasibility outcomes were supported by actionable improvement insights.

Validity, Reliability, and Ethical Considerations

Validity in this study was strengthened through expert judgment to establish content validity, ensuring that the messages, prompts, and challenges aligned with the intended construct (self-confidence) and BK objectives (Polit & Beck, 2006). Face validity and usability validity were reinforced through practitioner review (BK teacher) and student try-out feedback to confirm clarity, acceptability, and contextual fit. Additionally, the combination of questionnaire results, observation records, and interview feedback provided methodological triangulation to enhance the credibility of needs analysis and revision decisions (Patton, 2015). Reliability was supported by using consistent instrument dimensions and standardized rating anchors (1–4) across validators and users. Where multiple experts were involved, consistency of judgments can be checked through comparison of dimension-level ratings to confirm stable evaluation tendencies. For the self-confidence questionnaire used in needs analysis, reliability can be strengthened through internal consistency estimation (e.g., Cronbach's alpha) when sample size permits, consistent with psychometric recommendations for scale development and use (Nunnally & Bernstein, 1994). Ethically, the study followed standard educational research procedures, including securing permission from the school, ensuring informed consent (and guardian consent where required for minors), protecting confidentiality through anonymization, and confirming that participation was voluntary and unrelated to academic grading or school evaluation.

RESULTS AND DISCUSSION

The findings of this study clearly show that the educational Snakes-and-Ladders board game developed to support junior high school (SMP) students' self-confidence obtained consistently high feasibility ratings across four assessor groups: a content expert, a media expert, a prospective user (BK

teacher), and a small-group student trial. Across these groups, the product was assessed using indicators that correspond to standard R&D feasibility dimensions, namely content accuracy/appropriateness, usefulness, visual/design suitability, ease of use, and attractiveness. The overall pattern indicates that the product is highly acceptable and practicable for guidance and counseling (BK) services, while still requiring targeted refinements to improve item wording, font legibility, and time allocation—three aspects that directly influence implementation fidelity in real school settings (Clark et al., 2016; Plass et al., 2015; Wouters & van Oostendorp, 2013).

Based on the narrative scoring range provided (3.0–4.0), the feasibility instrument appears to employ a 4-point scale. Under this assumption, means above approximately 3.25 can be interpreted as "very good/very feasible," while values around 3.0 indicate "feasible with minor revision." The results show that overall mean scores from all assessor groups fall within the "good–very good" band, with a slight concentration of lower values in precision/accuracy and implementation feasibility—a common profile in early-stage educational product development, where the macro-design is already strong but micro-level language and visual accessibility still need refinement to optimize the learning mechanism and user experience (Abdul Jabbar & Felicia, 2015; Mayer, 2016; Wouters et al., 2013).

Table 3. Summary of feasibility evaluation results

Assessor	Indicators assessed	Mean score(s)	Overall mean	Main recommendations
Content expert	Accuracy/appropriateness; usefulness; feasibility	3.5; 3.5; 3.0	3.33	Revise several question items to better align phrasing with self-confidence material
Media expert	Attractiveness; suitability; accuracy	3.4; 3.5; 3.3	3.40	Improve legibility: clarify several fonts on cards/board for easier reading
Prospective user (BK teacher)	Usefulness; ease; accuracy; attractiveness	3.5; 4.0; 3.0; 3.0	3.37	Align implementation time with school schedule and lesson/counseling periods
Small-group trial (students)	Usefulness; ease; accuracy; attractiveness	3.5; 3.5; 3.0; 4.0	3.50	Extend play time so the session can be completed optimally

From the content expert, the product achieved very strong scores for accuracy/appropriateness (3.5) and usefulness (3.5), suggesting that the substantive content of the board game is aligned with the instructional-counseling goal of fostering self-confidence. The slightly lower score for feasibility (3.0) indicates that the product is already usable but would benefit from minor revisions to strengthen precision and contextual fit—particularly through improved wording of certain questions so that prompts more consistently elicit confidence-related reflection rather than drifting into general moral or academic domains. This recommendation is consistent with construct-centered instructional design: when a product targets a psychological attribute such as confidence, the language of prompts must map closely onto the intended construct and developmental level to preserve validity (Bandura, 1977; Anderson & Betz, 2001; Yeh et al., 2019).

From the media expert, the product received a high rating for suitability (3.5) and strong ratings for attractiveness (3.4) and accuracy (3.3), which supports the conclusion that the design elements (layout, color harmony, visual components, and media structure) are appropriate for SMP learners. The recommendation to improve font clarity is not merely cosmetic; it directly affects usability, reduces extraneous cognitive load, and prevents breakdowns in the game flow (e.g., students misreading

prompts, slowing turn-taking, or losing engagement due to avoidable frustration). Literature on learning with games consistently emphasizes that design friction—unclear rules, cluttered text, or visual accessibility barriers—can weaken instructional impact even when learners enjoy the activity (Mayer, 2016; Plass et al., 2015; Wouters & van Oostendorp, 2013).

From the prospective user (BK teacher), the highest score in the dataset appears on ease of use (4.0), suggesting that the procedures and mechanics are straightforward for classroom or counseling implementation. The teacher also rated usefulness highly (3.5), reinforcing that the media can be realistically integrated into BK services. However, the teacher's feedback regarding time alignment underscores a key operational constraint: even a highly engaging product must fit the institutional rhythm of counseling periods and school schedules. This implementation constraint is frequently identified in evidence syntheses on school-based interventions, where program success depends not only on design but on fidelity, dosage, and feasibility in routine practice (Durlak et al., 2011; Mertens et al., 2020; Sitzmann, 2011).

From the small-group student trial, the very high rating for attractiveness (4.0) indicates strong engagement and positive affect during play, while the strong ratings for usefulness (3.5) and ease (3.5) indicate that students can understand rules and navigate the activity smoothly. The recommendation to extend play time is a meaningful indicator of sustained interest, but it also signals the risk of incomplete sessions if time is not planned carefully. In game-based learning research, incomplete sessions can reduce the opportunity for reflection, consolidation, and transfer—especially when the intended outcome is a psychosocial attribute that benefits from guided meaning-making rather than mere participation (Abdul Jabbar & Felicia, 2015; Wouters et al., 2013; Wouters & van Oostendorp, 2013).

Game-based learning and serious games

The feasibility profile observed in this study—high attractiveness, strong usability, and positive perceived usefulness—aligns with broader evidence that game-based learning often produces robust effects on motivation, engagement, and participation, particularly when learners receive clear structure and feedback (Abdul Jabbar & Felicia, 2015; Plass et al., 2015; Wouters et al., 2013). Meta-analytic studies of serious games and gamified learning environments generally report that games can yield measurable benefits, though effects vary by learning objectives, scaffolding quality, and implementation fidelity (Clark et al., 2016; Sailer & Homner, 2020; Sitzmann, 2011). Your results match this pattern: stakeholders find the game engaging and usable, while also pointing to practical refinements that typically strengthen fidelity and outcomes—namely, clearer prompts, legible text, and appropriate dosage/time.

Board games as credible educational and psychosocial tools

Because the developed product is an **analog board game**, the appropriate comparison is not limited to digital games. The literature recognizes that board games can support learning and psychosocial outcomes by structuring turn-taking, cooperative/competitive interaction, and repeated opportunities for practice and feedback. Board-game interventions have been reviewed as viable tools for enhancing motivation and interpersonal interaction, although studies often recommend stronger designs and broader samples to confirm efficacy across contexts (Noda et al., 2019). This aligns closely with your data: students show strong attraction and request longer play, which indicates a favorable engagement condition; however, broader claims about psychosocial impact still require outcome measurement beyond feasibility and satisfaction ratings.

Theoretical plausibility for self-confidence through game mechanisms

Your discussion connects the intervention to self-efficacy theory, and this linkage is coherent with the mechanics of a structured board game. Self-efficacy theory posits that confidence beliefs can be strengthened through mastery experiences, vicarious experiences, social persuasion, and affective states (Bandura, 1977). In the context of a Snakes-and-Ladders counseling game, mastery experiences can be operationalized through successful completion of prompts and small wins; vicarious experiences occur as students observe peers respond and succeed; social persuasion is present through supportive feedback from peers and the BK teacher; and affective states can improve because the setting is playful and lower-

stakes. Prior research on self-efficacy in social/behavioral domains similarly emphasizes that structured success opportunities and supportive feedback predict stronger efficacy expectations (Anderson & Betz, 2001; Yeh et al., 2019). In addition, Self-Determination Theory provides complementary explanatory power: game-based activities can support perceived competence, autonomy, and relatedness, all of which are associated with more adaptive motivation and self-perceptions (Deci & Ryan, 2000; Ryan & Deci, 2000). This theoretical convergence strengthens the interpretability of your feasibility results: the activity is not only enjoyable, but plausibly aligned with mechanisms that can support confidence development when implemented with adequate scaffolding.

A key distinction in the international literature is between feasibility/acceptability evidence and effectiveness evidence. Your strongest results are feasibility results: experts, users, and students agree that the game is usable, attractive, and valuable as a BK medium. This aligns with formative evaluation expectations in R&D work, where establishing validity and practicality is the foundation for subsequent impact testing. However, meta-analyses reporting "effects" typically rely on pre–post outcomes, comparison groups, or randomized designs, and they measure changes in learning or psychosocial variables directly (Clark et al., 2016; Sitzmann, 2011; Wouters et al., 2013). Therefore, the study's claims should be calibrated: the product is feasible and highly promising, but claims of measured improvement in self-confidence require an effectiveness phase using validated scales and more rigorous designs. This careful positioning is consistent with program evaluation standards in school-based socio-emotional interventions, where outcomes can improve but are sensitive to dosage, fidelity, and measurement approach (Durlak et al., 2011; Mertens et al., 2020; Haney & Durlak, 1998).

Importance of the Findings

One of the most important analytic features of the results is the convergence across stakeholder groups. When content experts confirm appropriateness, media experts confirm design fit, practitioners confirm usability, and students confirm engagement, the product demonstrates a strong readiness profile for school-based implementation. This multi-perspective convergence increases confidence that the product is not only theoretically aligned but also operationally workable—an important condition for adoption in BK services. Implementation research consistently highlights that multi-stakeholder alignment supports fidelity and sustainability; even well-designed interventions can fail if teachers perceive them as too complex or if students find them unengaging (Durlak et al., 2011; Mertens et al., 2020; Mayer, 2016).

The recurring lower scores on precision/accuracy (3.0–3.3) and feasibility (3.0 from content expert) should be interpreted as constructive signals rather than weaknesses that undermine the product. In game-based interventions, precision typically refers to how consistently design elements activate the intended learning or counseling mechanism. If some prompts are ambiguously worded, the game may still be engaging, but the psychological target (self-confidence) may be activated inconsistently across turns or groups. Similarly, time constraints can create a mismatch between an engaging experience and institutional schedules; when the session ends prematurely, debriefing and reflection can be truncated, weakening transfer to real-life behaviors. These concerns correspond to meta-analytic findings that instructional support and adequate implementation time often moderate the impact of games on intended outcomes (Wouters & van Oostendorp, 2013; Abdul Jabbar & Felicia, 2015; Wouters et al., 2013).

While the results strongly support feasibility, it is also important to consider alternative interpretations. First, high student ratings may partly reflect a novelty effect, where students respond positively because the activity is new and different from routine counseling formats. Novelty can increase short-term engagement without guaranteeing sustained psychosocial change. Second, user and student ratings can be influenced by social desirability, particularly when the product is facilitated by adults or when students wish to provide "good" feedback. These limitations do not reduce the value of feasibility evidence, but they reinforce the need for a subsequent effectiveness phase using validated self-confidence measures and, where possible, a comparison group (Clark et al., 2016; Sitzmann, 2011; Mertens et al., 2020).

This study contributes to the literature in three substantive ways. First, it strengthens the evidence base for analog game-based counseling media, an area that receives less attention than digital serious games despite its high practicality in schools with limited infrastructure (Noda et al., 2019; Plass et al.,

2015). Second, it positions a counseling board game within a mechanism-consistent theoretical frame—especially self-efficacy and motivation theory—which improves interpretability and supports future replication (Bandura, 1977; Ryan & Deci, 2000; Yeh et al., 2019). Third, it surfaces implementation-critical details (readability, time alignment) that are often underreported, even though these details frequently determine whether a promising intervention is adopted and delivered with fidelity (Durlak et al., 2011; Wouters & van Oostendorp, 2013; Mayer, 2016).

Practical implications for BK implementation

From a BK practice standpoint, the results imply that schools can adopt the media with a short revision cycle focused on three priority improvements. First, revise prompt wording so that statements and questions consistently target confidence-related domains such as "speaking up," "trying after failure," "handling mistakes," "asking for help," and "expressing opinions," which aligns prompts with self-efficacy sources and reduces construct drift (Bandura, 1977; Anderson & Betz, 2001). Second, improve font clarity and visual legibility to ensure smooth game flow and equitable access for students with varying reading speed and attention, consistent with the principle that reducing extraneous barriers strengthens learning impact (Mayer, 2016; Plass et al., 2015). Third, redesign the session schedule (e.g., a longer single session or two shorter sessions) to ensure completion and allow time for facilitated reflection, because debriefing and instructional support are repeatedly identified as moderators of game-based learning outcomes (Wouters & van Oostendorp, 2013; Wouters et al., 2013; Abdul Jabbar & Felicia, 2015).

At the school-policy level, the product supports a feasible pathway for integrating socio-emotional development into BK services through low-cost, engaging media. School-based socio-emotional programs can produce meaningful benefits when implemented with clarity, consistency, and sufficient dosage (Durlak et al., 2011; Mertens et al., 2020). Importantly, an analog board game is scalable in resource-limited contexts because it does not require devices, internet access, or software maintenance—yet can still foster collaboration and supportive peer interaction. As a result, the product is well-positioned as an equity-friendly innovation for schools seeking practical tools to support confidence and participation behaviors.

An analytically notable finding is the student suggestion to extend play time, which signals high engagement and perceived value. In many formative trials, students often request simplification or reduced time; here, the opposite occurs, indicating that the activity structure sustains interest. However, this also implies that the designer must treat time as a core design parameter, not a logistical afterthought: if time is insufficient, students may not reach later prompts, may not complete reflective cycles, and may lose the opportunity for closure and consolidation—elements that help move from enjoyment to psychosocial development (Wouters & van Oostendorp, 2013; Mayer, 2016; Sitzmann, 2011).

Several limitations should be stated explicitly to support international-journal credibility. First, the study provides strong feasibility evidence but does not yet report pre–post outcomes; therefore, claims should remain at feasibility and theoretical promise rather than measured effectiveness (Clark et al., 2016; Wouters et al., 2013). Second, the small-group trial provides usability insight but limits generalizability, consistent with limitations noted in reviews of board-game interventions (Noda et al., 2019). Third, the possibility of novelty and desirability bias suggests that future studies should incorporate validated self-confidence or self-efficacy measures and, if feasible, comparison designs to strengthen causal inference (Bandura, 1977; Haney & Durlak, 1998; Ryan & Deci, 2000). Finally, reliability reporting (e.g., internal consistency for rating instruments or agreement indices for experts) would further strengthen the trustworthiness of feasibility claims, and should be included in the next iteration of reporting where instrument structure permits.

CONCLUSION

This study aimed to develop an educational board-game medium—"Self-Confidence Snakes and Ladders"—to support guidance and counseling services in strengthening junior high school students' self-confidence. The key findings indicate that the product achieved consistently high feasibility ratings across evaluators, including the content expert (M = 3.33), media expert (M = 3.40), prospective user/GC teacher

(M = 3.37), and small-group trial (M = 3.50), all categorized as very good, with minor revision notes concerning item wording, font readability, and time allocation. The study contributes theoretically by extending evidence on game-based counseling media as an experiential, student-centered approach aligned with self-efficacy principles, and it contributes practically by offering a low-cost, engaging, and easy-to-implement counseling medium that can increase student participation during BK sessions and potentially facilitate positive self-beliefs. For educational practice and policy, schools may consider integrating validated counseling media into structured socio-emotional support programs; however, future research should employ experimental or quasi-experimental designs with larger and more diverse samples, include pre–post self-confidence measures and follow-up assessments, and test implementation fidelity to establish stronger causal evidence of effectiveness.

REFERENCES

Abdul Jabbar, A. I., & Felicia, P. (2015). Gameplay engagement and learning in game-based learning: A systematic review. Review of Educational Research, 85(4), 740–779. https://doi.org/10.3102/0034654315577210

American School Counselor Association. (2021). ASCA Student Standards: Mindsets & Behaviors for Student Success: K–12 college-, career- and life-readiness standards for every student (Updated October 2025). https://www.schoolcounselor.org/getmedia/7428a787-a452-4abb-afec-d78ec77870cd/mindsets-behaviors.pdf

Anderson, S. L., & Betz, N. E. (2001). Sources of social self-efficacy expectations: Their measurement and relation to career development. Journal of Vocational Behavior. https://doi.org/10.1006/jvbe.2000.1753

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman.

Borg, W. R., & Gall, M. D. (2003). Educational research: An introduction (7th ed.). Allyn & Bacon.

Cipriano, C., Strambler, M. J., Naples, L. H., Ha, C., Kirk, M., Wood, M., Sehgal, K., Zieher, A. K., Eveleigh, A., McCarthy, M., & Durlak, J. A. (2023). The state of evidence for social and emotional learning: A contemporary meta-analysis of universal school-based SEL interventions. Child Development, 94(5), 1181–1204. https://doi.org/10.1111/cdev.13968

Clark, D. B., Tanner-Smith, E. E., & Killingsworth, S. S. (2016). Digital games, design, and learning: A systematic review and meta-analysis. Review of Educational Research, 86(1), 79–122. https://doi.org/10.3102/0034654315582065

Corey, G. (Tahun/edisi mohon disesuaikan dengan buku yang Anda gunakan). Theory and practice of group counseling. Cengage Learning.

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. Child Development, 82(1), 405–432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

Erikson, E. H. (1968). Identity: Youth and crisis. W. W. Norton.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). Educational research: An introduction (8th ed.). Pearson.

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?—A literature review of empirical studies on gamification. In 2014 47th Hawaii International Conference on System Sciences (pp. 3025–3034). IEEE. https://doi.org/10.1109/HICSS.2014.377

Haney, P., & Durlak, J. A. (1998). Changing self-esteem in children and adolescents: A meta-analytic review. Journal of Clinical Child Psychology, 27(4), 423–433. https://doi.org/10.1207/s15374424jccp2704_6

Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. Educational Research Review, 17, 63–84. https://doi.org/10.1016/j.edurev.2015.11.002

Lei, H., Cui, Y., & Zhou, W. (2022). Relationships between game-based learning and students' achievement: A meta-analysis. Journal of Educational Computing Research, 60(7), 1687–1713. https://doi.org/10.1177/07356331211064543

Likert, R. (1932). A technique for the measurement of attitudes (Archives of Psychology, No. 140). (Catatan: karya klasik ini umumnya tidak memiliki DOI yang ditetapkan.)

Mayer, R. E. (2016). Multimedia learning (3rd ed.). Cambridge University Press.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). SAGE.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.

Orth, U., & Robins, R. W. (2014). The development of self-esteem. Current Directions in Psychological Science, 23(5), 381–387. https://doi.org/10.1177/0963721414547414

Patton, M. Q. (2015). Qualitative research & evaluation methods (4th ed.). SAGE.

Plass, J. L., Homer, B. D., & Kinzer, C. K. (2015). Foundations of game-based learning. Educational Psychologist, 50(4), 258–283. https://doi.org/10.1080/00461520.2015.1122533

Polit, D. F., & Beck, C. T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. Research in Nursing & Health, 29(5), 489–497. https://doi.org/10.1002/nur.20147

Respati, N. N. R., Utami, R., & colleagues. (2024). Board game–based mental health intervention for adolescents. The Open Public Health Journal, 17, e18749445310785. https://doi.org/10.2174/0118749445310785240603045859

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. Educational Psychology Review, 32(1), 77–112. https://doi.org/10.1007/s10648-019-09498-w

Santrock, J. W. (2023). Adolescence (19th ed.). McGraw-Hill Education.

Sitzmann, T. (2011). A meta-analytic examination of the instructional effectiveness of computer-based simulation games. Personnel Psychology, 64(2), 489–528. https://doi.org/10.1111/j.1744-6570.2011.01190.x

UNESCO. (2019). Behind the numbers: Ending school violence and bullying. UNESCO. (ISBN 978-92-3-100306-6). https://www.unicef.org/media/66496/file/behind-the-numbers.pdf

Valentine, J. C., DuBois, D. L., & Cooper, H. (2004). The relation between self-beliefs and academic achievement: A meta-analytic review. Educational Psychologist, 39(2), 111–133. https://doi.org/10.1207/s15326985ep3902_3

Wouters, P., & van Oostendorp, H. (2013). A meta-analytic review of the role of instructional support in game-based learning. Computers & Education, 60, 412–425. https://doi.org/10.1016/j.compedu.2012.07.018

Wouters, P., van Nimwegen, C., van Oostendorp, H., & van der Spek, E. D. (2013). A meta-analysis of the cognitive and motivational effects of serious games. Journal of Educational Psychology, 105(2), 249–265. https://doi.org/10.1037/a0031311

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. Contemporary Educational Psychology, 25(1), 82–91. https://doi.org/10.1006/ceps.1999.1016