


Developing a Career Monopoly Game to Enhance Career Planning among Senior High School Students

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ABSTRACT

Career planning is an essential developmental task for adolescents, particularly senior high school students who are approaching important educational and occupational transitions. However, many students continue to experience difficulties in identifying their interests, abilities, and future career goals, resulting in uncertainty regarding career decision-making. To address this issue, innovative and engaging career guidance media are needed to facilitate students' career exploration and planning processes. This study aimed to develop and evaluate the feasibility of a Career Monopoly game as a guidance and counseling medium for enhancing career planning among senior high school students. This study employed a Research and Development (R&D) approach using the Four-D (4-D) model developed by Thiagarajan, Semmel, and Semmel, consisting of the stages of define, design, develop, and disseminate. The product was developed based on a needs analysis conducted among Grade XI students at SMAN 2 Medan. The feasibility of the developed media was evaluated through expert validation and practicality testing. The validation process involved two content experts and two media experts, while practicality testing was conducted with a school counselor and eight Grade XI students. Data were collected using validation and student response questionnaires and analyzed descriptively. The findings indicated that the Career Monopoly game achieved a content validity score of 92.5%, which falls within the very feasible category. The media was also positively evaluated in terms of visual design, interactivity, usability, and instructional quality. Furthermore, the practicality assessment revealed an overall student response score of 94%, indicating a very high level of practicality. Students perceived the game as attractive, easy to use, and helpful in understanding career-related information and developing career plans. The integration of career information and Holland's RIASEC personality framework further supported students' self-exploration and career decision-making processes. In conclusion, the Career Monopoly game is a valid and practical guidance and counseling medium for supporting career planning among senior high school students. The findings suggest that game-based career guidance media can enhance student engagement and provide meaningful learning experiences that facilitate career exploration and planning. Therefore, the Career Monopoly game may serve as an innovative alternative for delivering career guidance services in schools.

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Introduction

Career planning has become an increasingly important developmental task for adolescents in the era of globalization and rapid labor market changes. The growing complexity of educational pathways and career opportunities requires students to make informed decisions regarding their future academic and occupational choices. Effective career planning enables individuals to identify their interests, abilities, values, and aspirations, thereby facilitating the selection of educational and career pathways that align with their personal characteristics and long-term goals (Agustina et al., 2021). Consequently, career planning is widely recognized as a crucial factor influencing future career success and personal fulfillment.

Schools play a strategic role in supporting students' career development. Adolescents spend a substantial portion of their time within educational settings, making teachers and school counselors important sources of guidance and support. According to Metheny (as cited in Parola et al., 2024), schools provide a critical environment in which students can explore career opportunities, develop career-related competencies, and receive assistance in making educational and occupational decisions. Within this context, guidance and counseling services serve as an essential component of educational practice by facilitating students' personal, academic, social, and career development.

Career planning is particularly important for senior high school students because they are approaching major educational and occupational transitions. During adolescence, students are expected to develop an understanding of themselves, explore career alternatives, and make realistic decisions regarding their future pathways. According to Hurlock (1991), one of the primary developmental tasks of adolescence is preparing for future occupational roles. Similarly, Yean and Yahya (as cited in Kasan, 2022) emphasize that career planning involves a conscious process through which individuals assume responsibility for their future career development. Failure to engage in effective career planning may result in uncertainty, inappropriate educational choices, and difficulties in achieving long-term career goals.

Despite the importance of career planning, many students continue to experience difficulties in making career decisions. Preliminary observations conducted at SMAN 2 Medan revealed that numerous students lacked clear career goals and demonstrated limited knowledge regarding educational and occupational opportunities. Several students reported uncertainty about their future career choices, while others indicated that they tended to follow their peers' decisions rather than making independent career choices. Some students also expressed confusion regarding whether they should pursue higher education or enter the workforce after graduation. These findings suggest that students require additional support in developing effective career planning skills.

Interviews conducted with the school counselor further indicated that many students had not yet developed independent career planning abilities. As a result, students often struggled to identify educational pathways and occupational options that matched their interests, talents, and competencies. Such difficulties may lead to inappropriate career decisions, dissatisfaction with future career outcomes, and reduced opportunities for personal and professional success. Therefore, interventions that enhance students' career planning abilities are essential to support their educational and career development.

Although SMAN 2 Medan has implemented career guidance services, these programs primarily focus on Grade X and Grade XII students. Career guidance activities are commonly delivered through assessments designed to identify students' personality types and career interests. For Grade XI students, however, career guidance services are generally provided only when students actively seek assistance from the counselor. Consequently, many students may not receive adequate support in developing systematic and informed career plans.

To address these challenges, innovative guidance and counseling media are needed to increase students' engagement and participation in career guidance activities. Educational media play a crucial role in facilitating learning by making information more accessible, interactive, and meaningful for students. According to Briggs (as cited in Larasati, 2019), instructional media function as tools that convey information and stimulate students' learning processes. Within guidance and counseling contexts, the use of engaging media may enhance students' motivation to participate in career-related activities and improve their understanding of career information.

One promising approach is the use of game-based learning media. Simulation games provide opportunities for students to actively participate in learning experiences that resemble real-life situations, thereby enhancing understanding and retention of information (Utami & Hambali, 2025). Educational games have been shown to increase student engagement, motivation, and participation while simultaneously facilitating meaningful learning experiences. However, research examining the development of game-based media specifically designed to improve career planning among senior high school students remains limited.

Therefore, this study introduces and develops a career monopoly game as an innovative career guidance medium. The game adapts the familiar structure of the traditional Monopoly board game while incorporating educational content related to career exploration, educational pathways, occupational information, and career decision-making. By integrating career information into an interactive gaming environment, the career monopoly game is expected to facilitate students' understanding of career concepts, enhance their career planning abilities, and increase their engagement in career guidance services.

The novelty of this study lies in the development of a game-based career guidance medium that combines interactive learning, career information delivery, and student-centered participation within a single educational tool. Unlike conventional career guidance approaches that primarily rely on

lectures and assessments, the career monopoly game provides students with experiential learning opportunities that encourage active exploration of career options. Therefore, this study aims to develop and evaluate the feasibility of a career monopoly game as a guidance and counseling medium to support career planning among senior high school students..

Method

Research Design

This study employed a Research and Development (R&D) approach to develop and evaluate a career monopoly game as a guidance and counseling medium for enhancing students' career planning. The study adopted the Four-D (4-D) development model proposed by Thiagarajan, Semmel, and Semmel (1974), which consists of four sequential stages: Define, Design, Develop, and Disseminate.

The 4-D model was selected because it provides a systematic framework for designing, developing, and validating educational products. The primary objective of this study was to produce a career guidance medium in the form of a career monopoly game and to evaluate its feasibility for use in guidance and counseling services. The developed product was subsequently subjected to validation and practicality testing to determine its suitability as a career guidance medium for senior high school students.

Participants

The participants involved in this study consisted of expert validators and prospective users of the developed product. The expert validators included specialists in guidance and counseling and educational media who evaluated the content and design quality of the career monopoly game. Prospective users consisted of Grade XI students at SMAN 2 Medan who participated in the practicality assessment of the developed media.

Instruments

Several instruments were utilized in the study. Product validity was assessed using expert validation questionnaires, which evaluated the content accuracy, relevance, instructional quality, presentation, and media design of the career monopoly game. Practicality data were collected through student response questionnaires designed to assess the ease of use, attractiveness, clarity, and usefulness of the developed media in supporting career planning activities.

The assessment criteria were adapted from the product quality framework proposed by Nieveen (as cited in Plomp, 2010), which emphasizes three major dimensions of educational product quality: validity, practicality, and effectiveness. However, this study focused only on validity and practicality because effectiveness testing requires experimental procedures involving pretest and posttest measurements, which were beyond the scope of the present development study.

Data Analysis

Data analysis was conducted descriptively using quantitative and qualitative approaches. Quantitative data obtained from validation and practicality questionnaires were converted into percentage scores and interpreted according to predetermined feasibility criteria. Product validity was evaluated based on two dimensions: content validity and media validity. Content validity examined the appropriateness and accuracy of the career planning materials, while media validity assessed the visual design, layout, usability, and overall quality of the game.

Product practicality was determined through students' responses to the developed media. The practicality assessment focused on students' perceptions regarding the ease of use, attractiveness, and usefulness of the career monopoly game in facilitating career planning activities. The results of the validity and practicality analyses were used to determine the overall feasibility of the developed media as a guidance and counseling tool for career planning.

Define Stage

The define stage aimed to identify the needs and problems related to students' career planning. At this stage, a preliminary analysis was conducted through observations, interviews with school counselors, and a review of relevant literature. The findings revealed that many students experienced difficulties in making career decisions, lacked adequate knowledge about educational and occupational opportunities, and demonstrated uncertainty regarding their future career choices.

These findings served as the basis for developing an innovative guidance and counseling medium to support students' career planning.

Design Stage

The design stage involved the preparation of the career monopoly game prototype and the development of supporting instruments. The game was designed by integrating career planning materials into a Monopoly-based board game format that encouraged active participation and experiential learning. At this stage, the researcher developed game components, including the game board, playing cards, career information cards, game rules, and supporting materials. In addition, validation and practicality questionnaires were constructed to assess the quality and feasibility of the developed product.

Develop Stage

The develop stage focused on product validation, revision, and practicality testing. The initial prototype of the career monopoly game was evaluated by expert validators consisting of guidance and counseling specialists and educational media experts. The validation process examined both content validity and media validity, including the appropriateness of career planning materials, instructional quality, visual design, and usability of the game. Based on the validators' feedback, revisions were made to improve the product. Subsequently, the revised version was subjected to practicality testing involving prospective users to evaluate its ease of use, attractiveness, and usefulness in supporting career planning activities.

Disseminate Stage

The disseminate stage involved the introduction and limited distribution of the finalized product to prospective users. At this stage, the validated and revised career monopoly game was implemented within guidance and counseling activities to familiarize students and counselors with its use. The dissemination process aimed to provide access to the developed media and gather additional feedback regarding its potential application in career guidance services. The results of this stage were used to support recommendations for broader implementation of the career monopoly game in educational settings.

Result and Discussion

Results

Needs Analysis and Data Collection (Define Stage)

The initial analysis stage was conducted to identify students' career planning needs and the problems they experienced in making career decisions. Data were obtained from a preliminary survey involving 25 Grade XI students. The findings revealed that most students had not yet developed independent career planning skills and lacked a clear understanding of their future educational and occupational pathways.

Many students reported difficulties in identifying their interests, talents, and personal strengths. Furthermore, the career guidance services they had previously received were generally delivered through conventional methods and involved limited use of engaging instructional media. The needs assessment also indicated that students required interactive and enjoyable career guidance media that would actively involve them in the learning process, facilitate their understanding of career-related information, and increase their motivation to participate in guidance activities.

Considering that Grade XI students are at the career exploration stage, the results of the needs analysis provided a strong foundation for developing a career guidance medium that was relevant to students' developmental characteristics and career planning needs.

Product Design (Design Stage)

The design stage focused on the systematic development of the Career Monopoly game as an innovative career guidance medium. The Monopoly board game format was selected because it combines educational and recreational elements, thereby increasing students' motivation, engagement, and active participation in career guidance activities.

The Career Monopoly game consisted of several components, including a game board, career cards, education cards, opportunity cards, challenge cards, a RIASEC interest inventory, and

a career history worksheet. These components were designed in printed visual formats to facilitate their use by school counselors during career guidance sessions.

In addition, an initial prototype was developed by determining the learning objectives, game procedures, content structure, reflection activities, and game mechanics. This prototype served as the basis for the subsequent development and validation processes.

Product Development and Validation (Develop Stage)

The product development stage involved the creation of the Career Monopoly prototype and its evaluation by experts. The developed product consisted of a Monopoly game board, profession tokens, dice, educational cards, opportunity cards, challenge cards, RIASEC interest cards, and a user guidebook.

The content and design of the game were developed based on the results of the needs assessment and career planning materials relevant to senior high school students. To ensure product quality, the prototype was evaluated by two content experts and two media experts.

The content validation results yielded a feasibility score of 92.5%, indicating a very high level of validity. The evaluation covered content accuracy, relevance of career planning materials, presentation quality, and language appropriateness. Similarly, the media experts concluded that the Career Monopoly game was highly feasible in terms of visual design, interactivity, usability, and instructional quality. Several minor revisions were recommended, particularly concerning visual appearance and the clarity of game instructions.

These findings indicate that the Career Monopoly game possesses strong content and media validity and is suitable for implementation as a career guidance medium.

Initial Field Testing (Disseminate Stage)

The initial field testing stage was conducted to evaluate the practicality and user acceptance of the developed product. The validation process involved guidance and counseling experts, media experts, guidance and counseling practitioners, and prospective users.

The content validators consisted of Rizki Ananda Syafitri, S.Pd., M.Pd., and Nur Asiah, M.Pd., both lecturers in the Department of Guidance and Counseling at Universitas Negeri Medan. The media validators included Artha Mahindra, S.Pd., M.Pd., a lecturer in Early Childhood Education, and Amirul Hazmi, S.Pd., M.Pd., a lecturer in the Department of Guidance and Counseling at Universitas Negeri Medan.

The practicality test involved a school counselor from SMAN 2 Medan and eight Grade XI students from the Newton 1 class. Data were collected through validation and student response questionnaires to assess the feasibility, attractiveness, usability, and usefulness of the Career Monopoly game.

Product Revision

Product revisions were carried out based on feedback obtained from validators and prospective users. Improvements focused on refining career planning content, clarifying game procedures, and enhancing the visual design of the media. After revision, the Career Monopoly game was considered suitable for use as a supporting medium in career guidance services.

The practicality of the developed media was evaluated through student response questionnaires administered after students participated in the game. According to the predetermined criteria, a practicality score of at least 61% indicated that the product could be considered practical.

The overall student response score reached 94%, indicating a very high level of practicality.

Attractiveness of the Career Monopoly Game

The results showed that 90% of students considered the Career Monopoly game attractive and engaging. This percentage falls within the "very good" category (Riduwan, 2012), indicating that the game successfully captured students' interest and has strong potential as a guidance and counseling medium.

Clarity of the Career Monopoly Game

A total of 86.67% of students reported that the game procedures, language, instructions, and objectives presented in the user guide were clear and easy to understand. This finding suggests that students were able to follow the game activities effectively and that the instructional design of the media was appropriate.

Ease of Use

The results revealed that 100% of students perceived the Career Monopoly game as easy to use. This finding indicates that the game mechanics, instructions, and components were sufficiently simple and user-friendly for implementation in guidance and counseling settings.

Encouraging Career Planning

The student response questionnaire further indicated that 93.33% of students believed that the Career Monopoly game encouraged them to develop career plans. Students reported that the game helped them better understand their interests, career options, and future educational pathways. The integration of Holland's RIASEC personality framework within the game appeared to facilitate students' self-exploration and career decision-making processes.

Overall, these findings demonstrate that the Career Monopoly game is both valid and practical as a guidance and counseling medium for supporting career planning among senior high school students.

DISCUSSION

The findings indicate that the Career Monopoly game successfully addressed students' needs for an engaging and interactive career guidance medium. The needs assessment revealed that many students lacked clear career plans and experienced difficulties in understanding their interests, abilities, and future career opportunities. These findings are consistent with career development theories emphasizing the importance of self-exploration and career information during adolescence.

The high validity scores obtained from content and media experts demonstrate that the developed product meets the standards of educational quality and instructional design. According to Nieveen's quality criteria, a product can be considered feasible when it demonstrates adequate validity and practicality. The content validity results suggest that the career information presented in the game was relevant, accurate, and appropriate for senior high school students. Likewise, the media validity findings indicate that the visual design and interactive elements effectively support learning and student engagement.

The practicality results further highlight the potential of game-based learning media in career guidance services. Students perceived the Career Monopoly game as attractive, easy to use, and beneficial for career planning. These findings support previous studies indicating that educational games can increase students' motivation, participation, and understanding by creating meaningful and enjoyable learning experiences.

The incorporation of Holland's RIASEC theory into the game also contributed to students' career exploration processes. Through the game activities, students were encouraged to identify their interests and personality characteristics and to connect these characteristics with relevant educational and occupational opportunities. Consequently, the Career Monopoly game functioned not only as an instructional medium but also as a tool for facilitating career self-awareness and informed career decision-making.

Overall, the findings suggest that the Career Monopoly game represents an innovative and feasible guidance and counseling medium that can support career planning among senior high school students. The integration of career information, self-assessment activities, and interactive gameplay provides students with opportunities to actively engage in career exploration while simultaneously increasing their motivation to participate in career guidance services.

Conclusion

This study successfully developed a Career Monopoly game as an innovative guidance and counseling medium to support career planning among senior high school students. The development process followed the Four-D (4-D) model, encompassing the stages of define, design, develop, and disseminate. The needs analysis revealed that many students experienced difficulties in planning their future careers, identifying their interests and abilities, and understanding educational and occupational opportunities. These findings highlighted the need for a more engaging and interactive career guidance medium.

The results of expert validation demonstrated that the Career Monopoly game possesses a high level of feasibility. Content validation yielded a score of 92.5%, indicating that the materials, presentation, and language used in the game were highly appropriate for career guidance purposes. In addition, the practicality assessment showed very positive responses from students, with an overall practicality score of 94%. Students perceived the game as attractive, easy to use, and helpful in understanding career-related information and developing career plans.

The integration of career information, Holland's RIASEC personality framework, and interactive game-based activities enabled students to engage actively in the career exploration process. Consequently, the Career Monopoly game serves not only as an educational medium but also as a tool for promoting self-awareness, career exploration, and informed career decision-making. These findings suggest that the Career Monopoly game is both valid and practical for use in school guidance and counseling services.

This study contributes to the development of innovative career guidance media by demonstrating the potential of game-based learning approaches in enhancing students' engagement and participation in career planning activities. Therefore, the Career Monopoly game may be considered a valuable alternative medium for school counselors seeking to deliver career guidance services in a more interactive, meaningful, and student-centered manner.

Future studies are recommended to examine the effectiveness of the Career Monopoly game through experimental or quasi-experimental designs involving larger samples and diverse educational settings. Such investigations would provide stronger evidence regarding the impact of the game on students' career planning skills, career decision-making self-efficacy, and career readiness.

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