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Game-Based Interactive Flipbooks as Guidance and Counseling Media to Train Students in Career Decision-Making

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Abstract

This study aims to develop a Game-Based Interactive Flipbook as a guidance and counseling medium to improve students' career decision-making skills. The study was motivated by the fact that many students experience difficulties in making career decisions due to limited self-understanding, insufficient career information, and the use of less interactive guidance and counseling media. This research employed the Research and Development (R&D) method using the 4-D development model, which consists of the Define, Design, Develop, and Disseminate stages. The participants were eleventh-grade senior high school students. Data were collected through observations and questionnaires, including needs analysis, media expert validation, material expert validation, student practicality testing, and school counselor practicality testing. The results showed that the developed media achieved a score of 73.33% in the media expert validation, categorized as feasible; 94.66% in the material expert validation, categorized as highly feasible; 91.08% in the student practicality test, categorized as highly practical; and 90.66% in the school counselor practicality test, categorized as highly feasible. Therefore, the Game-Based Interactive Flipbook is considered feasible and practical as a guidance and counseling medium to improve students' career decision-making skills.

Keywords: interactive flipbook, guidance and counseling media, career decision-making, students.

INTRODUCTION

Education is an important aspect in increase quality source Power human beings and

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prepare participant educate face current development. Education does not only achievement - oriented academic, but also helpful participant educate develop ability thinking skills live , and readiness facing the future. Education has role strategic in form capable individuals develop potential himself optimally so that capable face challenge life and the world of work in the future (Maki & Nurjaman, 2022) .

Within the educational process, guidance and counseling services particularly career guidance play a vital role in helping learners understand themselves and prepare for their futures. Career guidance assists students in understanding their own potential, identifying their interests and talents, accessing information on further education, and making career choices that align with their capabilities (Khoirunnisa & Lestari, 2024). According to the book Career Development and Counseling, career development is an essential component of individual growth, as it involves the ability to understand oneself, make choices, and prepare for the future in a purposeful manner (Steven, 2020).

One of ability important in development career is ability taking decision career . Taking decision career is a process of determining choice education and work based on understanding to self yourself and information about the world of careers (Khotimah et al., 2023) . In theory *Cognitive Information Processing* (CIP), James P. Sampson explains that taking decision career is a process of solving problems that occur through CASVE stages (*Communication, Analysis, Synthesis, Valuing, Execution*) so that individuals capable determine decision career in a way precise and systematic (Sampson, 2023) .

However, Still Lots students who have trouble in take decision career. Students Still experience confusion in determine choice major, study continue, and work Because not yet understand connection between talents, interests, education, and work. In addition , low self - efficacy causes student feel not enough Certain to ability himself Alone in determine the future (Bella Karina, 2022) . Other studies also show that low skills taking decision career can cause student experience error in determine choice education and work so that impact on development future career (Ululajmi, Aulia & Agustina, 2024) .

Problems taking decision careers in students are also influenced by lack of optimal service media guidance and counseling used in schools. The use of media is monotonous and lacking interactive cause student easy feel bored and lacking motivated in follow service and the learning process (Rahayu Diana, 2021) . In addition, the use of media that is less interesting cause low involvement student in understand material so that services provided Not yet accepted optimally. Conditions the show the need more innovative BK service media interesting , interactive , and

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appropriate with characteristics students in the digital era (Putu et al., 2022) .

One of the media that can used For help increase involvement student in service guidance career is *flipbook* interactive. *Flipbook* interactive is a digital media in the form of book electronics that can blend text , images , animation , video, audio, and features interactive other so that capable create a more effective learning process interesting and fun (Hendrianti, 2021) . Research about digital media development

guidance career show that interactive media can help student understand information career and study carry on in a way more effective (Suharto et al., 2025) . In addition , *flipbook* media own characteristic flexible Because can used When anywhere and anytime through digital devices so that in accordance with need learning 21st century (Faizhal Dendi, 2023) .

Apart from the use of digital media, educational games to help increase involvement student in the learning process and service guidance counseling . Games educative capable create atmosphere fun learning , improving motivation learn , and help student active in understand material (Putri Amalia, 2024) . Use game in service guidance counseling can also be help student practice ability think , consider alternative choices, and solving problems through interactive and challenging activities . With Thus , the merger *flipbook* interactive with element game can be a suitable medium For help student practice ability taking decision career in a way active and fun (Handayani et al., 2024) .

Various studies have developed digital media to support the learning process and guidance and counseling services. Research by Afifudin (2024) shows that interactive multimedia can increase student participation in learning (Afifudin, 2024) . Saripah et al. (2023) also reported that interactive *flipbook media* was effective in increasing motivation and learning outcomes through presenting interesting and interactive material (Saripah et al., 2023) . Meanwhile, Insani et et al. (2022) developed digital-based career guidance media that helps deliver career information to students. However, these studies still focus on delivering information or improving learning outcomes and have not integrated game activities as a means of training career decision-making based on the CASVE stages in *Cognitive Development Theory. Information Processing* (CIP) (Insani et al., 2022) .

Based on previous research, there is still a research gap *related to* the development of guidance and counseling media that not only presents career information but is also able to train students' career decision-making skills systematically. Therefore, this study offers novelty through the development of interactive game-based *flipbook media* that integrates the stages of *Communication , Analysis , Synthesis , Valuing ,* and *Execution* (CASVE) in every learning activity.

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Through this media, students not only obtain information about careers , but are also facilitated to recognize their potential, explore various career alternatives , consider the consequences of each choice, and formulate career decisions that are in accordance with their potential and career goals . Thus, the media developed is expected to not only increase student involvement in career guidance and counseling services , but also facilitate students in practicing career decision-making skills actively, systematically, and meaningfully.

Based on condition mentioned , it is necessary development of more guidance and counseling media innovative , attractive , and appropriate with need students . Analysis need show that student need service media guidance interactive , easy career understandable , flexible , and capable involving student in a way active in the process of taking decision career . Guidance and counseling teachers also need media that is capable of increase participation student in service guidance career so that the service process become more interesting and not boring . Therefore that , research This develop *flipbook* interactive based game as a medium for guidance and counseling For practice taking decision career students . The media developed load material taking decision career , visual illustrations , videos, games educational and training taking decision based on CASVE stages so that student can Study in a way active and fun . This media own superiority compared to conventional BK media Because more interactive , flexible , interesting , and capable train the thinking process student in determine decision career in a way systematic (Aprial David, 2022) .

Based on description said , research This aim For produce interactive *flipbook* based game as a valid, practical and effective guidance and counseling medium For practice taking decision career students . The development of this media expected can help student understand potential self , recognizing various choice career , as well as increase ability take decision career in a way precise and independent . In addition , this media expected can become innovation for BK teachers in give service guidance a better career interesting , interactive , and appropriate with development technology education moment this (Hasdayanti et al., 2024)

RESEARCH METHODS

Study This use method *Research and Development* (R&D) which aims produce product and testing eligibility developed products . Developed products in the form of interactive *flipbook* based game as a medium for guidance and counseling For practice taking decision career student (Marinu, 2024) . The development model used is a 4D model (*Four-D Model*) developed by Sivasailam Thiagarajan which consists of on stage *define* , *design* , *develop* , and disseminate . The

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4D model *was* selected Because in accordance used in development of guidance and counseling media digitally based systematic (Zamsiswaya, Sawaluddin, 2024) .

Study held at one of the Bandung Education Foundations (SMA) with subject study student class XI. At the stage *define* aims to identify students' needs for guidance and counseling media, analyze career decision-making problems, student characteristics, and materials that will be developed based on Cognitive Theory Information Processing (CIP)

Stage *design* done with compiling media storyboards, determining design interactive flipbook display based games , composing material taking decision career , as well as designing feature games and activities interactive based on CASVE stages (*communication, analysis, synthesis, valuing,* and *execution*). CASVE stages are used as base in media development for practice ability taking decision career students . Stage *develop* done through media creation , validation by media experts and experts material , revision product based on validator suggestions, After receiving input from the validator , the media was revised before being tested for practicality on students. and trials limited to student class XI high school for now feasibility of the media being developed . Stage *disseminate* carried out on a limited basis through the implementation of media in guidance and counseling services in research classes as a form of product dissemination in a limited scope.

Data collection techniques use observation and dissemination questionnaires. Instrument study in the form of sheet questionnaire needs , sheets validation media expert , sheet validation expert materials and practicality tests student .

Instrument research used covering sheet validation media expert , sheet validation expert materials , as well as questionnaire response students . Instruments arranged use Likert scale with indicator evaluation covering aspect appearance , content material , language , and media usage . Analysis results Then categorized to in criteria eligibility , namely :

Table 1. Category scores *Likert Scale*

Category	Score
Strongly agree	5
Agree	4
Disagree Less	3
Don't agree	2
Strongly Disagree	1

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Table 2. Criteria Eligibility

Percentage %	Category
100% - 81%	Very Worthy
80% - 61%	Worthy
60% - 41%	Enough Worthy
40% - 21%	Less than worthy
20% - 0%	Not feasible

Results and Discussion

Results

Student Needs Test Analysis

A student needs analysis was conducted on grade XI students to determine the level of student needs for Game-Based Interactive *Flipbook media as a Guidance and Counseling Media to Train Students'* Career Decision Making . The results of the student needs questionnaire distribution were used as a basis for developing the media developed and are presented in the following table.

Table 3. Results of Student Needs Test Analysis

No	Dimensions Analysis	Aspect	Indicator	Choice Answer	%
1	Ability student in making career decisions	Exploration Information Career	Students' ability to search for and understand information about career choices and the steps needed to achieve their desired career .	Strongly agree	26.98
				Agree	73.02
				Don't agree	0
				Strongly Disagree	0
2	Ability student in consider career decision making	Analysis Choice Career	Students' ability to analyze, consider, and adjust career choices to their own conditions and abilities.	Strongly agree	15.87
				Agree	79.36
				Don't agree	04.17
				Strongly Disagree	0
3		Doubt In Career	The level of doubt and confusion among students in	Strongly agree	47.61

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	Problems Career Decision Making	Decision Making	planning their future and determining career choices .	Agree	30.16
				Don't agree	09.53
				Strongly Disagree	12.70
4	Ability student in get career decision making	Confidence in Career Choices	The level of students' confidence and optimism towards career choices after obtaining career information .	Strongly agree	28.59
				Agree	65.07
				Don't agree	06.34
				Strongly Disagree	0
5	Ability student in plan career decision making	Career Planning and Decision Making	Students' ability to plan, consider, and make career decisions .	Strongly agree	31.74
				Agree	46.03
				Don't agree	15.88
				Strongly Disagree	06.35

The results of the student needs analysis show that most students have sought and understood career information , indicated by the percentage of agreeing and strongly agreeing on the career awareness dimension of 100%. In the self-understanding and career dimension , students also demonstrated the ability to analyze career choices with a percentage of agreeing and strongly agreeing of 95.23%. However, in the dimension of career decision-making problems , 77.77% of students still experienced doubt and confusion in determining career choices. In addition, students showed confidence in career choices of 93.66% and career planning of 77.77%. These results indicate that students still need guidance and counseling media that can help them in practicing career decision-making, so that *Flipbook was developed. Game-Based Interactive as a Guidance and Counseling Media to Train* Students' Career Decision Making.

Analysis Need Product Learners

A product needs analysis was conducted on eleventh-grade students to determine their needs for the guidance and counseling media to be developed. This analysis included the needs for guidance and counseling media, game-based media, media displays, career decision-making

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materials , and media features. The results of the product needs analysis were used as a basis for designing and developing a game-based interactive *flipbook* to suit the needs and characteristics of students. The results of the student product needs analysis are presented in the following table.

Table 4. Analysis Results Need Product Learners

No	Dimensions Analysis	Aspect	Indicator	Choice Answer	%
1.	BK Media Needs	The Need for Guidance and Counseling Media	Students' need for interesting, varied, interactive, and digital-based guidance and counseling media to help them understand career decision-making .	Strongly agree	49.20
				Agree	50.80
				Disagree Less	0
				Don't agree	0
				Strongly Disagree	0
	The Need for Game-Based Media	The Need for Game-Based Media	Students' need for game-based media that can increase interest, activeness, and involvement in exploring career options .	Strongly agree	57.14
				Agree	42.86
				Disagree Less	0
				Don't agree	0
				Strongly Disagree	0
	Media Display Needs	The Need for Media Display	Students need media with an attractive visual appearance, clear instructions for use, and an interactive and easy-to-understand design.	Strongly agree	39.68
				Agree	60.32
				Disagree Less	0
				Don't agree	0
				Strongly Disagree	0

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	Career Material Needs	The Need for Career Decision - Making Materials	Students need materials that help them identify their interests, abilities and potential, obtain educational and career information, compare alternatives and develop career plans.	Strongly agree	90.47
				Agree	9.53
				Disagree Less	0
				Don't agree	0
				Strongly Disagree	0
	Media Feature Needs	The Need for Media Features	Students need interactive features and game activities that help the exploration process, consideration of options, decision-making exercises, and the preparation of career plans.	Strongly agree	69.84
				Agree	30.16
				Disagree Less	0
				Don't agree	0
				Strongly Disagree	0

Based on results analysis need product participant educate, all aspect get response positive by 100% of combination options strongly agree and aagree.In the aspect need regarding guidance and counseling media, as many as 49.20% of participants educate stated that they strongly agree and 50.80% stated that they agree . On the aspect need towards media- based game , as many as 57.14% of participants educate stated that they strongly agree and 42.86% stated that agree . Next , on the aspect need to media display , as many as 39.68% of participants educate stated that they strongly agree and 60.32% stated that agree . Percentage of strongly agree highest contained in the aspect need material taking decision career amounting to 90.47%, while the other 9.53% state agree . Meanwhile that , in terms of need to media features , as many as 69.84% of participants educate stated that they strongly agree and 30.16% stated that agree . There is no participant students who choose category not enough agree , no agree , or strongly disagree agree on all measured aspects . The results show that participant educate own high

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demand towards interesting , interactive , and information -based guidance and counseling media games , have easy view understood , loaded material taking decision career , as well as equipped features that support the exploration and planning process career .

Development Product

Development product started with adapt draft *Flipbook* Come on known Pancasila as base media design. Concept the Then modified become game *flipbook* interactive career decision making with adapt theory, theme, appearance and content game to fit with objective practice career decision making.



flipbook is an interactive learning tool designed to help students learn and understand Pancasila through engaging presentations. It features text, visual illustrations, playable and pauseable audio, and *pop- up images* , creating a more interactive and enjoyable learning experience for students.

This game is digital-based and can be accessed via the link : https://career-picker-sma.web.app/

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Products that have been developed



Figure 2. Initial View of the Career Decision Making Interactive Flipbook

The Career Game Interactive *Flipbook's* initial display is designed as an opening page that displays the media title, illustrations of various professions, and navigation buttons in the form of "Start" and "Instructions." The "Start" button is used to enter the game, while the "Instructions" button serves to provide guidance on how to use the media to students. This display is also equipped with a sound feature and an exit button to provide ease of use. The attractive visual design and illustrations of various professions are used to illustrate the career theme and increase students' interest in using the media.

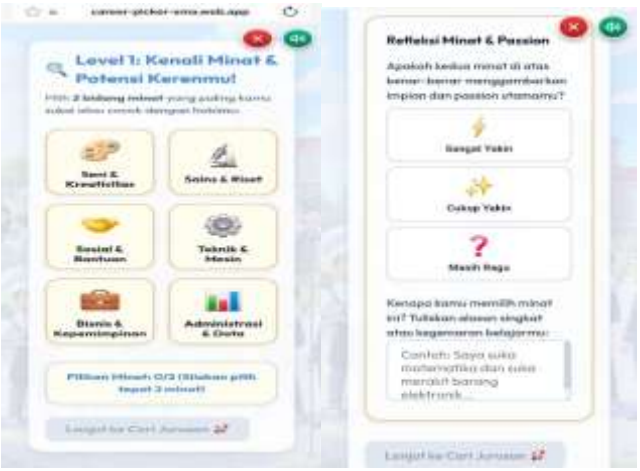


Figure 3. Level 1 View

At Level 1, students are guided to identify their interests and potential by selecting two of

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their most preferred areas of interest from six available options: Arts and Creativity, Science and Research, Social and Assistance, Engineering and Mechanical, Business and Leadership, and Administration and Data. After determining their two areas of interest, students proceed to the interest and *passion reflection stage* to assess the extent to which these choices truly reflect their interests, dreams, and passions. Students can choose one of the confidence levels: "Very Confident," "Quite Confident," or "Still Undecided." Next, students are asked to write a brief rationale for choosing these areas of interest based on their hobbies, experiences, or preferred activities. This stage aims to help students identify and reflect on their interests and potential as a basis for continuing the process of exploring majors and career choices in the next stage.

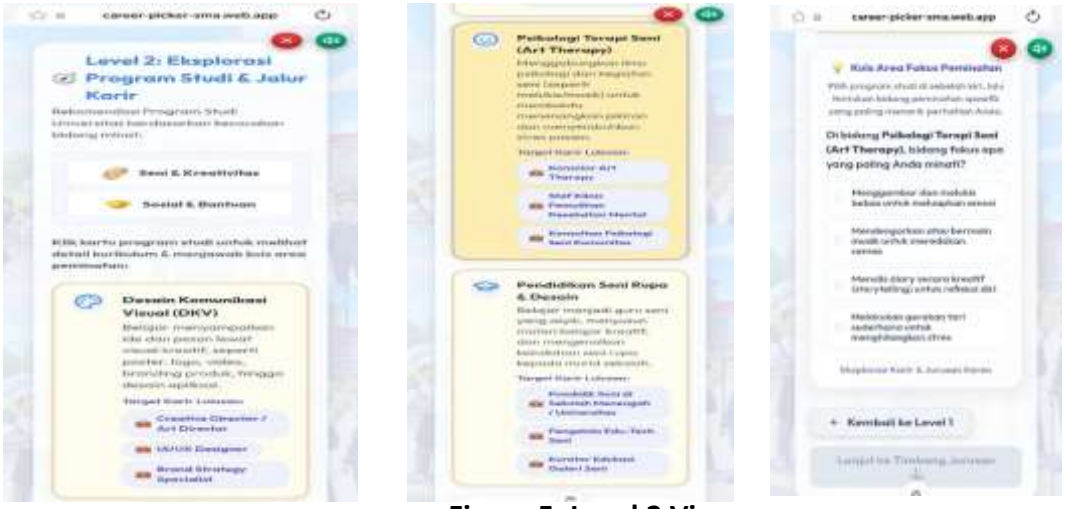


Figure 5. Level 2 View

At Level 2, students enter the exploration phase of study programs and career paths based on the areas of interest they selected at Level 1. Students will receive three study program recommendation cards tailored to their chosen areas of interest, so the study program cards that appear may differ for each area of interest. Each card contains brief information about the study program, an overview of the field of study, and career goals. graduates. Next, students are asked to choose one of the three study program cards. After selecting, students are presented with several different focus area quiz options according to the chosen study program. Students then choose one focus area that best aligns with their interests and passions, then press the "Save Interest" button to save the selection and proceed to the next stage of the game. This stage aims to help students explore the relationship between areas of interest, study program choices, areas of interest, and possible career paths to consider in the future.

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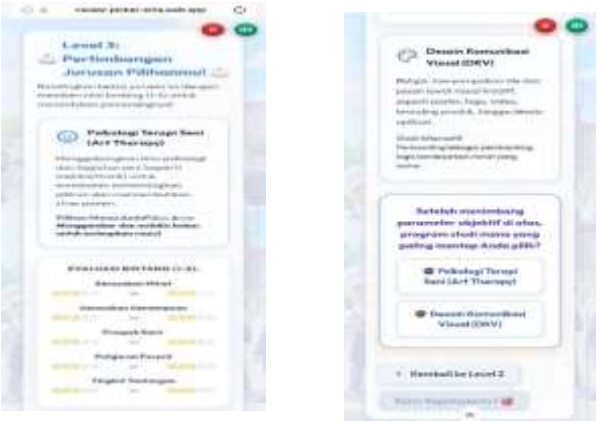


Figure 6. Level 3 View

At Level 3, students enter the major consideration stage by comparing the two study programs selected in the previous stage. Students are asked to provide a star rating on a scale of 1 to 5 for both study programs based on five aspects: interest suitability, ability suitability, career prospects, favorite subjects, and level of challenge. The rating for the study program displayed at the top is given in the left-star column, while the comparison study program at the bottom is assessed through the right-star column. After all aspects have been assessed, students are asked to consider the results of the comparison and choose the most solid study program to make their final decision. Next, students press the "Lock Your Decision!" button to confirm their choice and proceed to the next stage. This stage helps students consider various factors before making a more focused and systematic decision about their study program.



Figure 6. Level 4 view

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At Level 4, students enter the final study selection stage after going through the consideration process at the previous level. At this stage, the chosen study program is displayed. as the final decision of the student. Next, students are asked to select one or more main factors that support their commitment to the choice, such as suitability with personal interests and hobbies, academic grades, career prospects, and parental or family support. After that, students are asked to write down concrete steps (action *plan*) that will be taken to achieve the study choice. After all sections are completed, students click the "View Your First Career Map!" button to see a summary of the results of their journey and career planning. This stage helps students strengthen their commitment to their study choice and develop concrete steps to achieve their predetermined career goals.

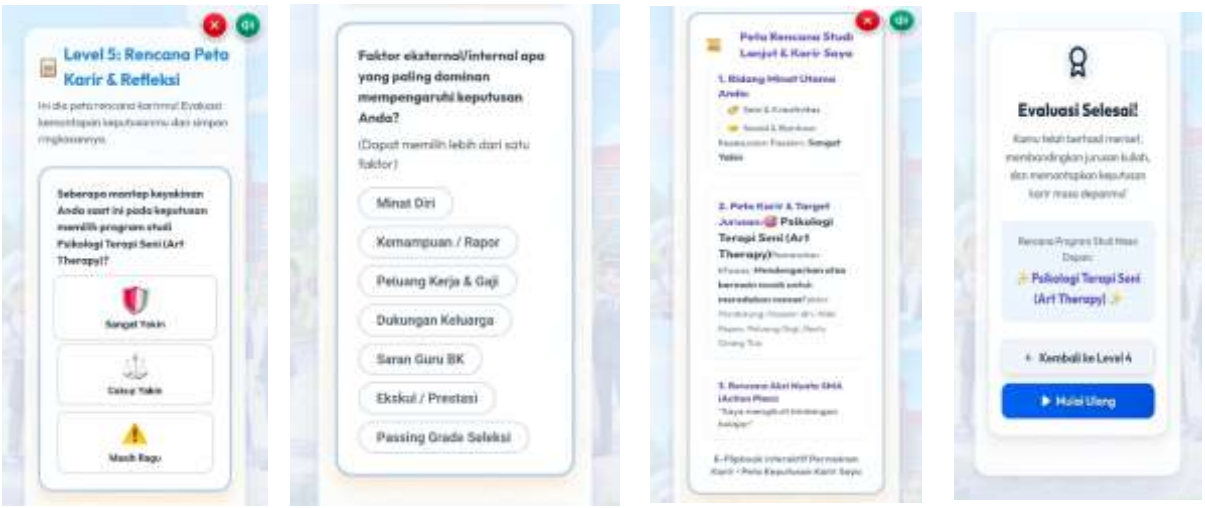


Figure 7. Level 5 View

At Level 5, students enter the career planning and reflection phase to evaluate their confidence in their chosen study program. Students are first asked to determine their level of confidence in their chosen study program through three options: "Very Confident," "Quite Confident," or "Still Undecided." Next, students select one or more internal and external factors that most significantly influence their decision, including personal interests, abilities or grades, job opportunities and salary, family support, guidance counselor advice, extracurricular activities or achievements, and *passing grades. selection grade.*

After all stages are completed, the media automatically displays "My Advanced Study and Career Plan Map " which contains a summary of the main areas of interest, the level of *passion suitability,* the chosen study program, special areas of interest, decision-supporting factors, and a concrete action plan *that has* been prepared by the student. This stage is the final part of the game

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that helps students review the overall results of their career exploration, considerations, and decisions in a structured manner.

Media Expert Validation

Media expert validation on Game-Based Interactive *Flipbook as Guidance and Counseling Media to Train Students'* Career Decision-Making involved one media expert validator, namely Fitria Umami, who is a lecturer and staff of the Islamic Education Guidance and Counseling Study Program. The results of the media expert validation calculations are presented in the following table.

Table 5. Media Expert Validation Results

Aspect	Score	Presentation	Category Eligibility
Display Design	12	80%	Worthy
Visual Quality	10	66.6%	Worthy
Color and Readability	9	60%	Enough Worthy
Practicality Use	12	80%	Worthy
Media Attraction	12	80%	Worthy
Average Percentage	**55/75 x 100**	**73.33%**	**Worthy**

Based on the validation results of media experts, Interactive Game-Based *Flipbook as a Guidance and Counseling Media to Train Students'* Career Decision Making obtained a feasible category with an average percentage of 73.33%. The aspects of display design, practicality of use, and media attractiveness each obtained a percentage of 80% with a feasible category. The visual quality aspect obtained a percentage of 66.6% with a feasible category, while the color and readability aspects obtained a percentage of 60% with a fairly feasible category. These results indicate that the developed media is feasible to use and can be

continued to the trial stage for students by making improvements to the color and readability aspects.

Subject Matter Expert Validation

The expert validation of the Game-Based Interactive *Flipbook as a Guidance and Counseling Medium to Train Students'* Career Decision-Making involved one expert validator, Putra Dinata, a lecturer in the Islamic Education Guidance and Counseling Study Program. The results of the expert assessment are presented in the following table.

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Table 6. Results of Material Expert Validation

Aspect	Score	Presentation	Category Eligibility
Material Suitability	15	100%	Very Worthy
Accuracy of Material	14	93.33%	Very Worthy
Compliance with Learners	14	93.33%	Very Worthy
Clarity of Game Content	14	93.33%	Very Worthy
Benefits of Material	14	93.33%	Very Worthy
Average Percentage	**71/75 x 100**	**94.66%**	**Very Worthy**

Based on the validation results of material experts, Game-Based Interactive *Flipbook as a Guidance and Counseling Media to Train Students'* Career Decision Making obtained an average percentage of 94.66% with a very feasible category. The aspect of material suitability obtained a percentage of 100%, while the aspects of material accuracy, suitability to students, clarity of game content, and material benefits each obtained a percentage of 93.33% with a very feasible category. These results indicate that the material presented is in accordance with the objectives of guidance and counseling services, student characteristics, and is able to support students' career decision making so that the media developed is declared very feasible to be used in the trial stage.

Student Practicality Test

The practicality test of the media was conducted on class XI students as users of *Flipbook media.* Interactive Game-Based Guidance and Counseling Media to Train Students' Career Decision-Making. The practicality test aims to determine the level of ease, attractiveness, and usefulness of the developed media. The results of the student practicality test are presented in the following table.

Table 7. Practicality Test Results Student

Aspect	Score	Presentation	Category Eligibility
Interest To Game	13.66	91.11%	Very Practical
Convenience Use	13.71	91.42%	Very Practical
Understanding Career Decision Making	13.57	90.47%	Very Practical
Activeness and Involvement	13.61	90.79%	Very Practical
Benefits	13.76	91.74%	Very Practical

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Average Percentage	**68.31%/75 x 100**	**91.08%**	**Very Practical**

Based on the results of the student practicality test, Game-Based Interactive *Flipbook* as a Guidance and Counseling Media to Train Students' Career Decision Making obtained an average percentage of 91.08% with a very practical category. The aspect of interest in the game obtained a percentage of 91.11%, ease of use of 91.42%, understanding of career decision making of 90.47%, activeness and involvement of 90.79%, and the aspect of benefits obtained a percentage of 91.74%. These results indicate that the media developed is very practical, easy to use, interesting, and able to help students understand and train career decision making.

Guidance and Counseling Teacher Validation of Media

Validation of the media by guidance and counseling teachers was carried out to determine practitioners' assessment of its suitability and usefulness. Interactive game-based *flipbooks* serve as guidance and counseling tools for students' career decision-making. Assessments included ease of use, display quality, appropriateness of materials and games, usefulness in guidance and counseling services, and support for student career decision-making. The results of the guidance and counseling teacher validation of the media are presented in the following table.

Table 8. Results Guidance and Counseling Teacher Validation of Media

Aspect	Score	Presentation	Category Eligibility
Convenience Media Usage	13	86.66%	Very Worthy
Quality Media View	14	93.33%	Very Worthy
Suitability of Game Materials with Career Decision Making	13	86.66%	Very Worthy
Usefulness in BK Services	13	86.66%	Very Worthy
Impact Support To Career Decision Making	15	100%	Very Worthy
Average Percentage	**68/75 x 100**	**90.66%**	**Very Worthy**

Based on the results of the guidance and counseling teacher validation, the Interactive Game-Based *Flipbook* achieved an average percentage of 90.66%, categorized as very suitable. The highest percentage was found in the aspect of career decision-making support at 100%, followed by media display quality at 93.33%, while the aspects of ease of use and material suitability were also very suitable.

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Games and usefulness in guidance and counseling services each scored 86.66%. These results indicate that the media was deemed highly appropriate by guidance and counseling teachers and could be used as supporting media in career guidance services to help students practice career decision-making.

DISCUSSION

This study aims to develop a Game-Based Interactive *Flipbook as a Guidance and Counseling Media to Train* Students' Career Decision Making using the *Research Method. and Development* (R&D). The development process includes needs analysis, product development, expert validation, and practicality testing. Each stage is carried out systematically to ensure the developed media meets student needs and is suitable for use in guidance and counseling services.

The initial stage of the research began with an analysis of student needs to determine the initial conditions of students in making career decisions. Based on the results of the analysis, in the career awareness dimension, 26.98 % of students stated that they strongly agreed and 73.02% stated that they had tried to seek information about career choices. In the self-understanding and career dimension, 15.87% of students stated that they strongly agreed, 79.36% agreed, and 4.17% disagreed that they had recognized their abilities and potential before determining career choices. Meanwhile, in the dimension of career decision-making problems, 47.61% of students stated that they strongly agreed and 30.16% agreed that they still experienced doubts in determining their career choices. In the dimension career maturity, 28.59% students stated that they strongly agree and 65.07% agree, while in the career planning dimension, 31.74% of students stated that they strongly agree and 46.03% agree that they have been able to prepare a career plan. However, there are still students who choose the disagree category on several indicators, thus indicating that students' career decision-making abilities have not developed optimally.

These results indicate that students are aware of the importance of career planning but still have difficulty in determining choices that align with their interests, talents, and abilities. Therefore, students need guidance and counseling media that can help them recognize their potential, explore various alternative choices, and train their career decision-making skills gradually. This finding is in line with research (Aminah & Ilhamuddin, 2025) which states that students need career guidance media that can help them understand their potential and obtain career information in a more interesting way. In addition, research (Az Zahra, 2025) also explains that the use of interactive digital media can increase student engagement in guidance and counseling services. The difference is, this study developed a Game-Based Interactive Flipbook

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compiled based on *Cognitive Theory. Information Processing* (CIP) not only conveys career information, but also trains decision-making skills through the stages of *Communication, Analysis, Synthesis, Valuing, and Execution* (CASVE).

In addition to analyzing student needs, this study also conducted product needs analysis as a basis for designing media. The results of the analysis showed that in the aspect of guidance and counseling media needs, 49.20% of students stated that they strongly agreed and 50.80% agreed. In the aspect of game-based media, 57.14% of students stated that they strongly agreed and 42.86% agreed. In the aspect of media appearance, 39.68% of students strongly agreed and 60.32% agreed that media should have an attractive appearance. The highest percentage was in the aspect of material needs for career decision-making, with 90.47% of students strongly agreeing and 9.53% agreeing. Meanwhile, in the aspect of media features, 69.84% of students strongly agreed and 30.16% agreed that media needs to be equipped with interactive features. These results indicate that students desire media that not only delivers material but also provides an engaging, interactive, and easy-to-use learning experience. This finding aligns with research (Hendrianti, Dwi et al., 2021) which explains that *flipbooks* Interactive media can integrate text, images, audio, video, and animation, thereby increasing student learning interest. Research (Nisa & Wiyono, 2026) also states that interactive digital media is more effective because it can increase student participation compared to conventional media. The difference is that this study developed *a flipbook* combined with educational game elements and structured based on the CASVE stages in *Cognitive Learning theory. Information Processing* (CIP) so that the media not only functions as a conveyor of information, but also as a means of exercising career decision making.

Based on the results of the analysis of the needs, a Game-Based Interactive *Flipbook was developed.* by adapting the concept of an interactive *flipbook which has been modified into a game-based media according to Cognitive theory Information Processing* (CIP). The product is developed into five levels of play that describe the stages of *Communication, Analysis, Synthesis, Valuing, and Execution.* (CASVE). Through these stages, students are encouraged to get to know themselves, explore study and career options, compare various alternatives, make decisions, and develop career plans. Furthermore, the media is equipped with illustrations, audio, navigation, and interactive activities to make it more engaging and user-friendly for students. This development is supported by the opinion (Hendrianti, Dwi et al., 2021) who stated that interactive *flipbooks* are able to integrate various multimedia elements to make the learning process more engaging. The novelty of this research lies in the combination of *flipbook media,* educational games, and CIP theory in one guidance and counseling medium specifically designed to train

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career decision-making skills.

The developed product was then validated by media experts and material experts. The media expert validation results yielded an average percentage of 73.33%. with the category of feasible, while the validation of material experts obtained a percentage of 94.66% with the category of very feasible. These results indicate that the media has fulfilled the aspects of design, appearance, ease of use, and suitability of the material with the objectives of guidance and counseling services. Several suggestions from media experts, such as improving color, readability, and visual quality, were used as the basis for refining the product before being tested on students. These validation results are in line with the opinion of (Aminah & Ilhamuddin, 2025) which states that good media must fulfill the aspects of appearance, ease of use, and material quality in order to be able to increase the effectiveness of learning and guidance and counseling services.

After being declared suitable, the media was tested on 21 students and Guidance and Counseling teachers. to determine the level of practicality of the product. The results of the practicality test on students obtained an average percentage of 91.08% with a very practical category, while the results of the BK teacher assessment obtained an average percentage of 90.66% with a very practical category. These results indicate that the media is easy to use, interesting, useful, and able to increase student involvement in guidance and counseling services. Through each level of the game, students can follow the career decision-making process systematically according to the CASVE stages, starting from recognizing themselves to developing a career plan. BK teachers also assess that this media can be an effective alternative in implementing career guidance services in schools. This finding is supported by research (Nisa & Wiyono, 2026) which states that interactive digital media can increase motivation, participation, and the effectiveness of guidance and counseling services.

Overall, the results of needs analysis, product development, expert validation, and practicality testing show that *Flipbook* Game-Based Interactive has met the criteria for feasibility and is highly practical for use as a guidance and counseling medium to train students' career decision-making skills. The development of media that integrates *Cognitive* Theory *Information Processing* (CIP) with educational game activities providing a more interactive and meaningful learning experience so that it can help students recognize their potential, explore various alternative choices, and make career decisions more systematically and responsibly.

CONCLUSION

Based on the results of the research and development that has been carried out, it can be

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concluded that this research has succeeded in producing *Flipbook* Interactive Game-Based Guidance and Counseling as a medium for career decision-making training for high school students. Product development was carried out using a 4-D model limited to the *Define, Design, and Development stages.* to produce media that suits the needs of students and Guidance and Counseling teachers.

The results of the needs analysis indicate that students require guidance and counseling media that is more engaging and interactive, and able to help them understand their potential, explore various career alternatives, and develop their career decision-making skills. Based on these needs, *flipbook* media was developed. *interactive that combines materials, illustrations, videos, games, quizzes, case studies, and* career decision-making exercises based on the stages of *Communication, Analysis, Synthesis, Valuing, and Execution* (CASVE) in *Cognitive theory Information Processing* (CIP)

The feasibility test results show that the Game-Based Interactive Flipbook received a very good rating from material experts and media experts. Furthermore, the results of the practicality test given by Guidance and Counseling teachers and students also showed a very practical category, so this media is considered easy to use, interesting, and useful as an alternative media in implementing career guidance and counseling services in schools. Thus, *Flipbook* Game-based interactive is suitable for use as a supporting medium for guidance and counseling services to train students in career decision-making.

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