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Perceptions of Students and School Counselors of a Web-Based RIASEC Career-Interest Assessment for Further-Education Planning

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ABSTRAK

Keputusan terkait karier dan pendidikan lanjutan merupakan tugas perkembangan yang penting bagi siswa sekolah menengah; namun, para siswa mungkin memerlukan dukungan terstruktur untuk memahami minat mereka serta mengeksplorasi jalur pendidikan yang tersedia. Penilaian minat karier berbasis web menawarkan cara potensial untuk memfasilitasi refleksi diri awal dan menyediakan informasi yang mudah diakses untuk eksplorasi lebih lanjut, meskipun kegunaannya perlu ditinjau dari sudut pandang para pengguna yang dituju. Penelitian ini mengkaji persepsi 47 siswa kelas IX dan dua Guru BK terhadap aplikasi asesmen minat karier RIASEC berbasis web di SMP Negeri 4 Kota Bengkulu. Penelitian menggunakan desain metode campuran paralel konvergen dengan kuesioner skala Likert lima tingkat dan jawaban terbuka setelah penggunaan aplikasi. Persepsi siswa secara keseluruhan positif (M = 3,91; SD = 0,56; persetujuan 72,8%). Kesadaran diri dan perencanaan pendidikan lanjut memperoleh nilai tertinggi, sedangkan kepercayaan diri mengambil keputusan paling rendah. Konsistensi internal 15 butir kuesioner persepsi siswa tinggi (α = 0,918), tetapi tidak membuktikan validitas instrumen. Tanggapan dua Guru BK disajikan sebagai ilustrasi kasus dan tidak digeneralisasi. Jawaban terbuka menunjukkan manfaat yang dirasakan untuk refleksi dan perencanaan awal, namun siswa masih memerlukan informasi dan pendampingan untuk membandingkan pilihan. Hasil hanya menggambarkan persepsi; penelitian tidak membuktikan validitas psikometrik asesmen RIASEC maupun dampak kausal aplikasi. Aplikasi sebaiknya menjadi pemantik eksplorasi dengan interpretasi Guru BK.

ABSTRACT

Career and further-education decisions are important developmental tasks for secondary school students, yet students may need structured support to understand their interests and explore educational pathways. Web-based career-interest assessment offers a potential way to facilitate initial self-reflection and provide accessible information for further exploration, although its usefulness should be examined from the perspectives of its intended users. This study examined perceptions of a web-based RIASEC career-interest assessment among 47 Grade 9 students and two school counselors at SMP Negeri 4 Kota Bengkulu, Indonesia. A convergent parallel mixed-methods design combined five-point questionnaire ratings and open-ended responses collected after application use. Student perceptions were positive overall (M = 3.91, SD = 0.56; 72.8% agreement). Self-awareness and further-education planning received the highest ratings, while decision confidence was lowest (M = 3.73; 62.4% agreement). The 15-item student perception questionnaire showed high internal consistency (Cronbach's α = .918), which does not establish validity. Counselor responses are case illustrations only. Students valued the application as a prompt for reflection and preliminary planning but reported ongoing uncertainty about abilities, costs, alternatives, and family expectations. The findings describe perceptions only and do not

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demonstrate psychometric validity or causal effects. The application is best used as an initial exploration prompt with counselor-supported interpretation.

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INTRODUCTION

For Grade 9 students in Indonesia, the transition from lower-secondary school to senior high school (Sekolah Menengah Atas, SMA) or vocational senior high school (Sekolah Menengah Kejuruan, SMK) is an immediate educational decision with consequences for subject choices, vocational preparation, and later opportunities. Students must weigh interests and perceived abilities alongside family expectations, admission requirements, costs, school resources, and future options. This transition is part of a broader developmental process of career exploration (Super, 1990) and calls for guidance that helps students compare alternatives rather than choose on the basis of an interest label alone (Shobrina, 2024; Wang et al., 2024; Wang & Wang, 2025). Career interventions can also support the development of decision readiness and self-efficacy, although these outcomes require direct evaluation (Siebert et al., 2023).

Holland's RIASEC model organizes vocational interests into six types—Realistic, Investigative, Artistic, Social, Enterprising, and Conventional—and can help students explore possible relationships between their interests and educational or occupational environments (Holland, 1997; Nauta, 2010). In RIASECPATH, the model underpins the interest profile: 42 dichotomous YA/TIDAK (YES/NO) items are scored across the six types, and the application presents the three highest profiles together with suggested subjects, education pathways or programs, occupations to explore, follow-up actions, and a downloadable report. These outputs are intended to prompt exploration, not to classify students definitively or prescribe a single choice. Current discussions of RIASEC self-assessment likewise emphasize interpreting such tools as career-intervention resources rather than stand-alone decision makers (Wong et al., 202)

Related Indonesian applications show that online interest and career-planning tools are already being developed for different users and purposes. Darwis et al. (2026) describe a web-based screening activity using the Rothwell Miller Interest Blank for junior-high students and immediate results; Rianto and Wulandari (2025) describe a mobile RIASEC-based career-planning application using forward chaining and job-trend information; and Lestari and Purwoko (2026) report the development of the Holland-based NALIKA website to support career guidance for Grade 11 vocational students. These studies document useful but different design, implementation, and validation contexts; they are not head-to-head performance comparisons with RIASECPATH. The specific gap addressed here is how Grade 9 students approaching the SMA/SMK transition and the school counselors who interpret results perceive one application's usefulness and limitations

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in a school setting. The study therefore does not claim that web-based RIASEC assessment is new; it contributes user-perception evidence across both recipient and counselor perspectives.

The roles of Holland's and Savickas's theories in this study are distinct. Holland's RIASEC framework informs the organization of the application's interest categories and feedback. Savickas's career-adaptability framework is used only as an interpretive lens for discussing participants' references to future preparation, considering alternatives, and confidence. Career adaptability was not measured with a dedicated instrument, and the study does not claim that RIASECPATH changed concern, control, curiosity, or confidence. Studies of the Career Adapt-Abilities Scale, including work examining its structure and reliability in specific student populations, illustrate that adaptability is a separate construct requiring direct measurement (Savickas & Porfeli, 2012; Yang et al., 2023).

A convergent parallel mixed-methods approach was selected because the research questions concern both the pattern of participants' ratings and the reasons, qualifications, or uncertainties expressed in their own words. A descriptive survey with optional comments could report ratings, but would not by itself specify equal, separate analyses of the two data strands or their planned integration. Here, questionnaire and open-ended data were collected in the same study phase, analyzed separately, and brought together to examine convergence, complementarity, and differences between student and counselor perspectives (Fetters et al., 2013). This design describes perceived usefulness and support needs; it does not test causal effectiveness.

Against this background, this study examined perceptions of RIASECPATH among Grade 9 students and two school counselors at one Indonesian junior secondary school. It addressed three research questions (RQs):

1. RQ1. How do Grade 9 students perceive RIASECPATH in relation to self-reflection and further-education planning?
2. RQ2. How do the two participating school counselors perceive the application's relevance and potential use in school guidance services?
3. RQ3. How do the quantitative and qualitative findings converge or differ in describing the application's perceived usefulness, limitations, and need for further guidance?

The study focuses on user perceptions in a specific school context. It does not aim to establish the psychometric validity of the RIASEC assessment, demonstrate causal effects on career decision-making, or measure changes in career adaptability.

METHOD

APPENDIX A. APPLICATION DESCRIPTION AND SAMPLE REPORT

The web-based RIASECPATH application was used before participants completed the perception questionnaire. The final version documented in the application source contains 42 statements, answered using YA/TIDAK (YES/NO). Each 'YA' response contributes one point to the RIASEC type assigned to that item; 'TIDAK' contributes zero. The application calculates a percentage for each type using the number of items

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assigned to that type as the denominator, ranks the six types, and presents the three highest-ranked types as the main combination. The application also provides percentage visualizations, a personal profile, suggested subjects, education-pathway/program options, occupations to explore, follow-up actions, and a downloadable one-page PDF report. The on-screen disclaimer states that the result is a picture of interest tendencies, should be used as a basis for exploration, and should be discussed with the school counselor (Guru BK) and parents. Example of the one-page PDF report: see Figure A1 below. The report shown is a sample output supplied for documentation; the participant's name and school details should be masked or replaced with a pseudonym before publication.



Figure 1. Example of the RIASECPATH one-page PDF assessment report (sample output).

Research Design

This study used a convergent parallel mixed-methods design to answer questions requiring both descriptive ratings and contextual explanations. The questionnaire quantified students' and counselors' perceptions, whereas open-ended responses provided detail about what participants found useful, what remained uncertain, and what support they considered necessary. Both strands were collected during the same study phase, analyzed separately, and integrated during interpretation. This planned integration distinguishes the design from a descriptive survey with incidental comments: the quantitative and qualitative results were compared for convergence, complementarity, and divergence. The purpose was to understand perceptions in context, not to estimate causal effects of the application.

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Participants and Recruitment

Participants were selected through criterion-based purposive sampling. The study involved 47 Grade 9 students and two school counselors at SMP Negeri 4 Kota Bengkulu, Indonesia. Grade 9 was selected because students were approaching the transition from lower-secondary education and considering SMA and SMK pathways. Students had attended an introductory session on RIASEC, were willing to complete the assessment, and had permission from the school and relevant teachers. The two counselors were included to provide professional perspectives on possible use in the school's guidance services. Their responses are treated as two context-specific illustrative cases, not as a representative sample of counselors or a basis for population-level inference.

Application Administration and Data-Collection Procedure

The RIASECPATH application was distributed to students through a web link that could be opened in a browser on their individual mobile phones. Students accessed the application using the school's internet connection and completed the assessment in their classroom, accompanied by the researcher and the school counselor. Students were allowed to ask the researcher for assistance if they encountered difficulties while completing the application. Figure 1 illustrates the application interface, assessment response format, score summary, and educational recommendations. These screenshots document the interface and output format; they do not, by themselves, establish psychometric validity or the effectiveness of the recommendations.

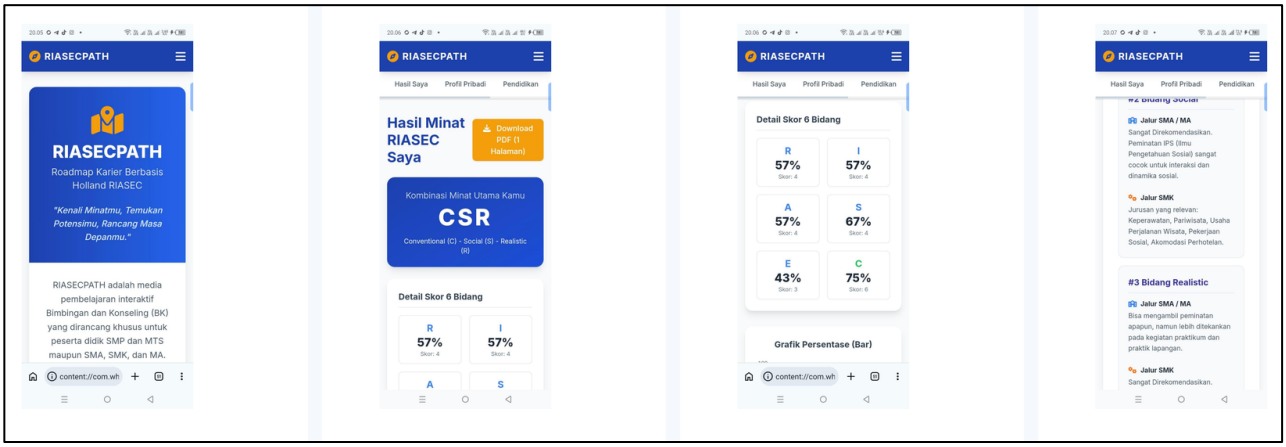


Figure 2. Screenshots of the RIASECPATH web-based career-interest assessment: (a) home page, (b) sample assessment item, (c) assessment results, and (d) further-education recommendations.

The study materials did not contain a verified estimate of assessment-completion time; therefore, no duration is reported. After completing the assessment, students were instructed to download the PDF report containing their results and send it to the researcher and school counselor. The report was intended to support subsequent guidance and counseling. Students then completed the perception questionnaire. Student responses were processed anonymously for research purposes. Assessment results were used as a starting point for exploration and counseling, not as definitive classifications or predetermined educational recommendations.

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Research Instruments

The student perception questionnaire comprised 15 closed-ended items across five dimensions: self-awareness, understanding further-education pathways, further-education planning, exploration engagement, and decision confidence. It also contained five open-ended questions designed to elicit students' explanations of their experiences, perceived benefits, concerns, and support needs.

The school-counselor questionnaire comprised 13 closed-ended items and five open-ended questions. The closed-ended items addressed five dimensions: alignment with guidance-service objectives, usefulness of assessment results, integration into guidance services, service efficiency, and the counselor's role in interpreting assessment results.

Closed-ended items in both questionnaires used a five-point Likert response scale, an approach whose development and interpretation require attention to item wording and response structure (Jebb et al., 2021). Prior to data collection, both instruments were reviewed by three experts for content relevance. The panel comprised two university lecturers and one school counselor. Experts rated item relevance on a four-point scale (1 = not relevant, 2 = somewhat relevant, 3 = relevant, and 4 = highly relevant), and content relevance was summarized using Aiken's V. The student questionnaire's mean coefficient was 0.70, while the school-counselor questionnaire's mean was 0.87. The student value was treated as the lower-bound screening result under the instrument-review procedure, not as evidence of strong or comprehensive validity. The questionnaire was retained for exploratory description of perceptions after expert comments and minor wording revisions; the result does not establish construct, criterion, or predictive validity. Because the value reported here is a mean across items, it should not be read as proof that every item met the same level of relevance. The open-ended questions were also reviewed for relevance, clarity, and suitability, and minor expert-recommended revisions were incorporated.

The internal consistency of the 15 closed-ended student perception items was examined using Cronbach's alpha. Based on 47 complete student responses, the coefficient was $\alpha = 0.918$, indicating high internal consistency within the analyzed sample. This coefficient is reported as an estimate of internal consistency and should not be interpreted as evidence of content validity, construct validity, or the psychometric validity of the RIASEC assessment itself.

Qualitative Expert Review of the RIASEC Items

The content of the RIASEC assessment items was reviewed by three professionals in guidance and counseling: one university lecturer and two school counselors. The review was conducted through semi-structured interviews focusing on the alignment of the items with the intended RIASEC dimensions, their relevance to career-interest assessment, wording clarity, and suitability for the target student population. The experts provided qualitative comments and recommendations concerning the assessment items and selected interface elements. These recommendations were considered and incorporated into subsequent revisions of the

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application before data collection. Following the revision process, the experts indicated that the item content was appropriate for the intended purpose and sufficiently representative of the constructs targeted by the application. This expert review provided evidence of content appropriateness prior to implementation.

Quantitative Data Analysis

The student perception questionnaire consisted of 15 closed-ended items rated on a five-point Likert scale. Descriptive statistics were used to summarize students' responses, including item and dimension means, standard deviations, and the percentage of responses classified as agreement. The five dimensions were self-awareness, understanding further-education pathways, further-education planning, exploration engagement, and decision confidence.

Dimension scores were calculated as the mean of the items assigned to each dimension, while the overall score represented the mean across the 15 items. The percentage of agreement was calculated by combining responses in the two positive categories—agree and strongly agree—and dividing their frequency by the total number of valid responses for the relevant set of items, then multiplying by 100. For the overall percentage, the denominator was the total number of valid student responses across all 15 items; for a dimension-level percentage, the denominator was the total number of valid responses to the items belonging to that dimension. This calculation describes the proportion of positive questionnaire responses and should not be interpreted as the proportion of students who agreed with every statement.

The questionnaire's internal consistency was examined using Cronbach's alpha. The 15-item student perception questionnaire yielded an alpha coefficient of .918 for the 47 student responses. This coefficient concerns the internal consistency of the perception questionnaire and does not establish the psychometric validity or reliability of the RIASEC assessment itself.

For descriptive interpretation, mean scores were classified as follows: 4.00–5.00, very positive; 3.00–3.99, positive; 2.00–2.99, moderately positive; and 1.00–1.99, less positive. The quantitative findings were interpreted descriptively, without making causal claims about the application's effects on students' educational decisions.

Qualitative Data Analysis

Students' and school counselors' open-ended responses were analyzed using a deductive–inductive thematic approach. The analysis began with repeated readings for familiarization, followed by identification and coding of meaningful response segments. Codes were grouped into themes using both the study's areas of interest—self-awareness, further-education planning, exploration, and decision confidence—and ideas arising from participants' responses. The process was guided by recommendations for transparent and coherent thematic analysis (Braun & Clarke, 2023). Themes were then considered alongside quantitative results to identify convergence, complementary explanations, and differences. A response could contribute to more than one theme when it contained multiple relevant ideas. The two counselors' comments were interpreted as illustrative accounts from this school, not as evidence representative of counselors generally. A single response could

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contribute to more than one theme when it contained multiple relevant ideas. Student responses and counselor perspectives were interpreted in their study context, with the two counselors' responses treated as illustrative cases rather than a basis for generalization to a wider population.

Mixed-Methods Integration

Integration took place after the separate analyses. The team compared rating patterns with the themes and examples in participants' written responses, asking where the data strands converged, added complementary detail, or differed. Student responses and counselor responses were also considered separately before drawing an integrated interpretation. This procedure was used to contextualize perceived usefulness and identify unresolved support needs; it does not establish that the application improved students' decision-making or caused any observed perception.

Ethical Considerations

Students and teachers' participation was based on their willingness to take part in the study. Before data collection, students and teachers received an explanation of the assessment and the purpose of the research. Students indicated their willingness to participate orally and in writing, with permission from the school and the relevant teachers. Students' and teachers' responses were processed anonymously for research purposes. The students' assessment reports were also used to support follow-up counseling by the school counselor.

Dimension	Theme and meaning	Illustrative respondent codes	n*
Self-awareness	Recognition of analytical and technological potential (e.g., logic, data, computers, engineering, mathematics).	S1, S6, S8, S19, S24, S26, S32, S44, S45, S47	11
	Recognition of social and communication interests (e.g., helping, teaching, communication, teamwork).	S7, S10, S12, S13, S22, S35	6
	Recognition of practical, artistic, economic, social-science, business, tourism, and cultural interests.	S4, S5, S11, S15, S17, S18, S27, S33, S36, S37, S41, S42	12
Education pathways	Recommendations helped students consider the fit between majors, occupations, and education.	S1, S2, S8, S11, S12, S16, S17, S19, S20, S22, S24, S26, S32, S34, S40, S45	16
	The application helped compare SMA/SMK options, majors, or study programs.	S4, S5, S6, S10, S21, S23, S27, S29, S31, S33, S37, S39	12
	Further clarification was needed because information was insufficient or recommendations did not fully fit.	S15, S18, S24, S25, S30, S31	6
Planning	Academic improvement and preparation for further schooling.	S6, S10, S15, S17, S19, S21, S23, S29, S37, S38, S39, S40, S47	13
	Seeking information or consultation about majors, requirements, occupations, or schools.	S1, S4, S9, S11, S12, S13, S16, S22, S24, S27, S31, S34, S35, S36, S41, S44, S45	17

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Dimension	Theme and meaning	Illustrative respondent codes	n*
	Developing skills, taking courses, improving language skills, discipline, and measurable goals.	S5, S7, S8, S18, S20, S26, S28, S30, S32, S33, S42, S44	12
Exploration	Seeking information about majors, curricula, subjects, skills, and occupational prospects.	S2, S3, S5, S6, S8, S11, S12, S15, S16, S17, S18, S19, S20, S22, S23, S26, S27, S29, S31, S32, S33, S34, S36, S38, S40	25
	Seeking information about universities, costs, scholarships, or alternative pathways.	S1, S4, S11, S16, S21, S23, S26, S38, S44	9
	No exploration yet, or recommendations perceived as unsuitable.	S10, S14, S24, S25, S30, S31, S39, S46	8
Decision confidence	Confidence increased because results seemed consistent with interests, abilities, or aspirations.	S1, S2, S3, S4, S6, S9, S10, S11, S12, S13, S14, S17, S19, S20, S21, S23, S28, S29, S32, S33, S34, S36, S37, S39, S42, S43, S44, S45, S46, S47	30
	Conditional confidence: the application helped, but further information or comparison was needed.	S8, S16, S22, S26, S38	5
	Doubts related to ability, failure, costs, parents, multiple options, or differences from prior plans.	S5, S15, S18, S24, S27, S30, S31, S35, S41	9

RESULTS AND DISCUSSION

The findings are presented in four parts: student perceptions of the application, themes from students' open-ended responses, school counselors' perceptions, and an integrated discussion. Quantitative results describe the overall pattern of perceptions, while qualitative findings provide context for interpreting the ratings. The two data strands are integrated to identify areas of convergence and continuing support needs, consistent with the principles of mixed-methods integration described by Fetters et al. (2013).

Student Perceptions of the RIASEC's Application

The 47 students reported positive overall perceptions of the web-based RIASEC career-interest assessment application (M = 3.91, SD = 0.56; agreement = 72.8%). As shown in Table 1, self-awareness received the highest mean score (M = 4.04; agreement = 82.3%), closely followed by further-education planning (M = 4.03; agreement = 79.4%). Understanding further-education pathways was also rated positively (M = 3.93; agreement = 70.2%), as were exploration engagement (M = 3.81; agreement = 69.5%) and decision confidence (M = 3.73; agreement = 62.4%). Thus, students generally viewed the application favorably, although their confidence in making educational decisions was comparatively lower than their ratings of self-reflection and planning.

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Table 1. Student Perceptions of the Web-Based RIASEC Application

Dimension	Mean	SD	Agreement	Category
Self-awareness	4.04	0.60	82.3%	Very positive
Understanding further-education pathways	3.93	0.68	70.2%	Positive
Further-education planning	4.03	0.58	79.4%	Very positive
Exploration engagement	3.81	0.70	69.5%	Positive
Decision confidence	3.73	0.73	62.4%	Positive
Overall	3.91	0.56	72.8%	Positive

The thematic analysis provides context for the quantitative pattern. As summarized in Table 2, students described recognizing different kinds of interests, considering educational alternatives, identifying possible preparation steps, seeking further information, and experiencing varying levels of confidence. The theme counts are descriptive: because a response could contribute to more than one theme, the counts are not mutually exclusive and should not be interpreted as independent categories of students.

Table 2. Themes from Students' Open-Ended Responses

Dimension	Theme and meaning	Illustrative respondent codes	n*
Self-awareness	Recognition of analytical and technological potential (e.g., logic, data, computers, engineering, mathematics).	S1, S6, S8, S19, S24, S26, S32, S44, S45, S47	11
	Recognition of social and communication interests (e.g., helping, teaching, communication, teamwork).	S7, S10, S12, S13, S22, S35	6
	Recognition of practical, artistic, economic, social-science, business, tourism, and cultural interests.	S4, S5, S11, S15, S17, S18, S27, S33, S36, S37, S41, S42	12
Education pathways	Recommendations helped students consider the fit between majors, occupations, and education.	S1, S2, S8, S11, S12, S16, S17, S19, S20, S22, S24, S26, S32, S34, S40, S45	16
	The application helped compare SMA/SMK options, majors, or study programs.	S4, S5, S6, S10, S21, S23, S27, S29, S31, S33, S37, S39	12
	Further clarification was needed because information was insufficient or recommendations did not fully fit.	S15, S18, S24, S25, S30, S31	6
Planning	Academic improvement and preparation for further schooling.	S6, S10, S15, S17, S19, S21, S23, S29, S37, S38, S39, S40, S47	13
	Seeking information or consultation about majors, requirements, occupations, or schools.	S1, S4, S9, S11, S12, S13, S16, S22, S24, S27, S31, S34, S35, S36, S41, S44, S45	17
	Developing skills, taking courses, improving language skills, discipline, and measurable goals.	S5, S7, S8, S18, S20, S26, S28, S30, S32, S33, S42, S44	12
Exploration	Seeking information about majors, curricula, subjects, skills, and occupational prospects.	S2, S3, S5, S6, S8, S11, S12, S15, S16, S17, S18, S19, S20, S22, S23, S26, S27, S29, S31, S32, S33, S34, S36, S38, S40	25

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Dimension	Theme and meaning	Illustrative respondent codes	n*
	Seeking information about universities, costs, scholarships, or alternative pathways.	S1, S4, S11, S16, S21, S23, S26, S38, S44	9
	No exploration yet, or recommendations perceived as unsuitable.	S10, S14, S24, S25, S30, S31, S39, S46	8
Decision confidence	Confidence increased because results seemed consistent with interests, abilities, or aspirations.	S1, S2, S3, S4, S6, S9, S10, S11, S12, S13, S14, S17, S19, S20, S21, S23, S28, S29, S32, S33, S34, S36, S37, S39, S42, S43, S44, S45, S46, S47	30
	Conditional confidence: the application helped, but further information or comparison was needed.	S8, S16, S22, S26, S38	5
	Doubts related to ability, failure, costs, parents, multiple options, or differences from prior plans.	S5, S15, S18, S24, S27, S30, S31, S35, S41	9

*n indicates the number of respondent codes associated with a theme. A response could contribute to more than one theme; the counts are not mutually exclusive.

Self-awareness and recognition of interests

Self-awareness was the highest-rated dimension. At item level, perceived understanding of personal potential received a mean of 4.06, recognition of strengths that could be developed received a mean of 4.04, and recognition of interests received a mean of 4.02. Students described interests related to analytical and technological activities, social interaction, communication, practical work, art, business, and cultural or social-science fields. Students' open-ended responses provide examples of how they interpreted the assessment as an opportunity to recognize interests and possible strengths. One student described discovering an interest in analytical thinking: "I discovered a hidden potential in data analysis and logic. The application often presented problem-solving challenges, and I realized that I could solve them quickly and enjoyed the thinking process." (Student S1; translated from Indonesian). Another student described becoming more aware of an interest in helping others: "After using the RIASEC application, I realized that I actually have strong interests and abilities in activities involving people and helping others." (Student S12; translated from Indonesian). These responses illustrate how students connected the assessment experience with personal interests and potential.

They also show that students' interpretations varied, ranging from analytical and technological interests to social and helping-oriented interests. This is consistent with the purpose of Holland's RIASEC framework, which organizes vocational interests into six broad types that can be used to explore possible person–environment relationships (Holland, 1997; Nauta, 2010). Accordingly, students' reported discoveries should be treated as initial hypotheses to discuss and examine, not as conclusive evidence about which educational pathway they should choose.

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Understanding educational pathways and planning

Students rated their understanding of further-education pathways positively (M = 3.93; agreement = 70.2%) and their further-education planning even more positively (M = 4.03; agreement = 79.4%). Open-ended responses referred to considering majors, occupations, SMA/SMK options, and study programs. Students mentioned possible next steps such as improving academic performance, developing skills, taking courses, checking admission requirements, seeking information, and consulting the school counselor. One student wrote: "Previously, I thought vocational high school would be the right choice for me. However, after seeing the potential and future occupations presented by the application, I started reconsidering whether general senior high school might be suitable for me." (Student S4; translated from Indonesian). The same student also described an intention to investigate options more carefully: "After the assessment, I started looking for information about medical education, including what I would need to prepare, the costs, and alternative ways to pursue it so that the expenses would not become too high." (Student S4; translated from Indonesian). These responses illustrate a potential link between assessment feedback and consideration of educational alternatives. They also show that students' decisions involve more than interest alignment: costs, preparation requirements, and alternative pathways are part of the decision process. The findings therefore support the use of RIASEC results as an initial resource for discussing educational possibilities, while emphasizing the need to verify information about curricula, admission requirements, scholarships, and future opportunities.

This interpretation is consistent with literature that positions career guidance as support for exploring alternatives and preparing for transitions (Parola et al., 2024; Shobrina, 2024; Wang et al., 2024; Wang & Wang, 2025). Indonesian studies on further-study guidance and digital assessment provide a local context for incorporating structured information into school services (Darwis et al., 2026; Nurhikmayani & Yuwono, 2022; Rianto & Wulandari, 2025; Syafitri et al., 2024). In this study, students' responses describe intentions and perceptions; they do not verify that information-seeking occurred or that plans were implemented.

Exploration engagement and decision confidence

Exploration engagement was rated positively (M = 3.81; agreement = 69.5%), while decision confidence was the lowest-rated dimension (M = 3.73; agreement = 62.4%). Within that dimension, confidence in the assessment results (M = 3.91) exceeded readiness to face a career decision (M = 3.51). This difference suggests that recognizing a potentially relevant interest profile is not the same as feeling ready to select a feasible pathway. One student valued the profile but remained unsure about job competition, education costs, and the realities of the field (Student S8); another remained uncertain because several fields still appealed to them (Student S5). Other open-ended responses raised concerns about abilities, family expectations, costs, and alternative pathways. These concerns are consistent with research on uncertainty in adolescent career expectations and the social influences on career choices (Guo, 2025; Marcionetti & Zammitti, 2025). These comments help contextualize the lower confidence rating, but they do not establish which factor caused it, and the study did not measure clinical anxiety.

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The pattern is therefore not necessarily contradictory: self-awareness concerns recognizing interests and perceived strengths, whereas decision confidence also depends on judging whether an option is affordable, accessible, compatible with one's abilities, and acceptable within family and school circumstances. Participants' references to costs, competition, family expectations, and multiple attractive alternatives suggest why reflection can coexist with hesitation. In Savickas's framework, these statements can be discussed in relation to confidence and exploration, but career adaptability was not measured; no increase or decrease in its dimensions can be inferred. Dedicated measurement is required to test that construct (Savickas & Porfeli, 2012; Yang et al., 2023).

Taken together, the findings indicate perceived value alongside unresolved decision constraints. They support using the application to begin a discussion, while leaving students and counselors to verify educational options and consider practical conditions. This interpretation is consistent with RIASEC as a framework for exploring interests rather than a deterministic decision rule (Holland, 1997; Nauta, 2010).

School Counselor Perceptions of the RIASEC's Application

The two participating school counselors reported positive perceptions of the application (combined M = 3.96, SD = 0.45; agreement = 96.2%). Alignment with guidance-service objectives received the highest dimension mean (M = 4.17), while the counselor-as-interpreter dimension received a lower mean (M = 3.50). These descriptive values summarize only the two participating counselors and are presented alongside their open-ended accounts as illustrative cases; they are not estimates of counselor opinion beyond this school. Their comments concern perceived fit, usefulness, integration into services, administrative efficiency, and the need for professional interpretation.

Table 3. School Counselors' Perceptions of the Web-Based RIASEC Application

Dimension	Mean	SD	Agreement	Category
Alignment with service objectives	4.17	0.41	100.0%	Very positive
Usefulness of assessment results	4.00	0.00	100.0%	Very positive
Integration into guidance services	4.00	0.00	100.0%	Very positive
Service efficiency	4.00	0.00	100.0%	Very positive
Counselor as interpreter	3.50	1.00	75.0%	Positive
Overall	3.96	0.45	96.2%	Positive

A divergence was observed between one counselor's closed-ended and open-ended responses concerning responsibility for interpreting assessment results. Although the counselor selected a score of 2 (disagree) for the statement that interpretation remained the school counselor's responsibility, the corresponding open-ended response emphasized the importance of interpreting results in relation to students' individual circumstances and needs. The available data do not establish the reason for this difference. This divergence is therefore retained as an item-level finding and illustrates the importance of considering questionnaire ratings alongside participants' written explanations.

The counselors' responses indicated that the results could serve as material for individual counseling, group guidance, and follow-up discussions. They also perceived potential administrative value in automated scoring

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and result presentation. These are reports of perceived usefulness and efficiency; the study did not independently measure time savings, usability, or service outcomes. The lower score for the counselor-as-interpreter dimension highlights the importance of clarifying the professional role of the school counselor. An automated profile can organize students' responses and suggest directions for exploration, but the results still require interpretation in light of students' circumstances, academic preparation, family expectations, and available educational opportunities. This is consistent with the use of RIASEC as a framework for exploring interests rather than as a deterministic decision rule (Holland, 1997; Nauta, 2010).

Table 4 summarizes the themes from the two school counselors' open-ended responses. The themes concern alignment with guidance-service objectives, usefulness of results, integration into services, perceived administrative efficiency, and the counselor's interpretive role.

Table 4. Themes from School Counselors' Open-Ended Responses

Dimension	Theme	Evidence and meaning
Alignment with service objectives	Alignment with interest awareness, self-understanding, and educational/career direction.	Both counselors considered RIASEC relevant to guidance needs and useful for helping students consider educational direction.
Usefulness of results	Results as a basis for classroom guidance, major-selection discussions, counseling, and follow-up.	Results were viewed as a starting point for a guidance conversation, not as a standalone conclusion.
Integration into services	Assessment incorporated into service planning and implementation.	The workflow was considered compatible with service delivery.
Service efficiency	Automated response processing, profile presentation, and compilation.	The counselors perceived that automated response processing and profile presentation could reduce manual administrative work.
Counselor interpretation	Counselors retain responsibility for interpretation; the application processes and presents responses.	One counselor described results as a reference; the other emphasized contextual interpretation and counseling discussion.

The two counselors' open-ended responses converged on the application's potential role in guidance services, but the small, single-school sample limits the scope of that observation. Both accounts support viewing an automated profile as a starting point for discussion rather than a substitute for professional judgment. Counselors remain responsible for interpreting results in light of students' circumstances, academic preparation, family expectations, financial constraints, and the educational opportunities actually available. The two accounts therefore illustrate possible uses and concerns in this context, not a general professional consensus.

Integrated discussion and implications

Across the two data strands, students described the application as a prompt for reflecting on interests and considering educational alternatives, while the two counselors described possible uses in guidance services. These converging accounts support perceived usefulness as an initial resource, while the lower decision-confidence ratings and written concerns show that assessment feedback alone does not resolve questions about

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feasibility. Savickas's career-adaptability concepts help interpret themes of preparation, exploration, and uncertainty, but they were not measured outcomes; no change in adaptability can be inferred.

The findings are consistent with studies positioning guidance services as support for further-study planning and interests as one input to educational choice (Nurhikmayani & Yuwono, 2022; Parola et al., 2024; Shobrina, 2024; Syafitri et al., 2024). They also sit alongside Indonesian digital tools with different purposes: RMIB screening for junior-high students, mobile RIASEC-based career planning, and the Holland-based NALIKA guidance website (Darwis et al., 2026; Lestari & Purwoko, 2026; Rianto & Wulandari, 2025). The present study does not rank these systems or compare their technical performance. Its contribution is to combine student and counselor perceptions of one application and to consider favorable ratings alongside unresolved concerns.

The study draws on two complementary but distinct theoretical perspectives. Holland's RIASEC framework provides the basis for classifying students' interest tendencies into six types, whereas Savickas' career adaptability framework is used as an interpretive lens for discussing students' perceptions of career-related awareness and planning. The four dimensions of concern, control, curiosity, and confidence were not measured using a dedicated career-adaptability instrument in this study. Consequently, the findings should not be interpreted as evidence of changes in students' career adaptability. Rather, the framework helps contextualize how students perceive the relevance of assessment feedback to their further-education planning.

For school counseling practice, the responses support a guided comparison rather than treating an assessment recommendation as a decision. A counselor can invite students to compare at least two SMA/SMK alternatives using curricula, admission requirements, costs, scholarships, and relevant future opportunities, then discuss the comparison with the counselor and, where appropriate, family members. This recommendation responds to concerns voiced in the study; it is not an intervention effect demonstrated by the data.

For schools, the application should be incorporated into a structured career-guidance process rather than used as a stand-alone decision-making tool. School counselors can use the RIASEC profile as an initial reference for individual or classroom discussions, followed by consideration of students' academic readiness, educational opportunities, family circumstances, and personal preferences. School policies should also establish clear procedures for data access, result interpretation, communication with parents, and follow-up guidance activities.

The findings also suggest several considerations for the development of web-based career-assessment applications. First, developers should make the scoring procedure, profile-generation rules, and interpretation limits transparent so that users and counselors can understand how assessment results are produced. Second, educational recommendations should be presented as options for further exploration rather than definitive prescriptions. Third, application development should prioritize the privacy and protection of students' personal data, particularly because the intended users include minors. Finally, the system should provide reports that can be readily discussed by students, school counselors, and parents within an appropriate guidance process. These recommendations are proposed design considerations and should not be interpreted as features that have all been evaluated in the present study.

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The findings are limited to perceptions from 47 students and two counselors at one school after application use; there was no comparison group or pre–post measurement. The results therefore cannot establish causal effects on self-understanding, decision quality, educational choices, or career adaptability. Future studies should report item-level validity evidence, examine the usability and accuracy of recommendations, and test whether counselor-supported use is associated with changes in exploration or decision confidence over time.

CONCLUSION

This study examined students' and school counselors' perceptions of a web-based RIASEC career-interest assessment designed to support further-education planning. The findings indicate that students generally perceived the application as relevant to recognizing their interest tendencies and considering educational options. However, decision confidence received the lowest rating among the examined dimensions, suggesting that perceived awareness of interests does not necessarily translate into confidence in making further-education decisions.

The responses of the two participating school counselors provided contextual insights into the application's perceived relevance, usefulness for career-guidance activities, administrative convenience, and the continuing importance of counselor-led interpretation. These responses are illustrative and should not be generalized to the wider population of school counselors.

The findings suggest that web-based RIASEC assessment applications may serve as supporting resources within structured school career-guidance services. Developers should prioritize transparent scoring and interpretation, responsible handling of student data, and educational recommendations that encourage further exploration rather than prescribe decisions. Schools should ensure that assessment results are discussed with qualified counselors and considered alongside students' academic, personal, and contextual circumstances.

This study is limited by its reliance on self-reported perceptions, the small number of school counselors, and the absence of direct measurement of career adaptability or subsequent educational decision-making outcomes. Future research should examine the application's usability, the quality of its recommendations, and its contribution to students' actual exploration and further-education planning through more extensive and longitudinal evaluation.

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