The Effectiveness of Web-Based RIASEC-Assisted Career Information Services in Enhancing Students' Career Self-Efficacy and Career Decision-Making

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Abstrak. Pengambilan keputusan karir dan self efficacy karir merupakan aspek penting dalam kesiapan siswa untuk menentukan studi lanjut dan arah karir di masa depan. Namun, tidak semua siswa memiliki kesiapan dan arahan karir yang jelas sehingga mereka kesulitan dalam menentukan pilihan karir yang sesuai dengan potensi diri.Penelitian ini bertujuan untuk menguji keefektifan layanan informasi karir berbasis RIASEC dalam meningkatkan self efficacy karir dan pengambilan keputusan karir siswa dengan menggunakan design one group pretest–posttest design. Teknik (purposive sampling) digunakan untuk memilih 30 subyek penelitian sesuai kriteria yang kemudian dibagi kedalam dua kelompok yaitu kelompok self efficacy karir dan kelompok pengambilan keputusan karir.Analisis data yang digunakan menggunakan uji paired sample t-test dengan bantuan SPSS 23. Hasil analisis (0.00< 0.05) menunjukkan adanya peningkatan skor rata-rata self efficacy karir dan pengambilan keputusan karir siswa setelah diberikan layanan informasi karir berbantuan media RIASEC berbasis web. Temuan penelitian menunjukan bahwa layanan informasi karir berbantuan media RIASEC berbasis web efektif dalam meningkatkan kedua variabel penelitian, namun layanan ini lebih efektif dalam meningkatkan self efficacy karir siswa dibandingkan pengambilan keputusan karir.

Abstract. Career decision-making and career self-efficacy are essential components of students' readiness to determine their future educational pathways and career directions. However, not all students possess clear career goals or sufficient preparedness, which often leads to difficulties in selecting career options aligned with their personal potential. This study aimed to examine the effectiveness of web-based career information services grounded in the RIASEC model in improving students' career self-efficacy and career decision-making. A one-group pretest–posttest design was employed. Purposive sampling was used to select 30 participants who met the predetermined criteria. The participants were then categorized into two analytical groups: a career self-efficacy group and a career decision-making group. Data were analyzed using a paired-samples t-test with SPSS version 23. The results of the analysis (0.00 < 0.05) indicated a significant increase in the mean scores of both career self-efficacy and career decision-making after the implementation of the web-based RIASEC-assisted career information service. The findings suggest that the intervention was effective in improving both variables. However, the service demonstrated greater effectiveness in enhancing students' career self-efficacy compared to their career decision-making

Key word: Career Information Services; RIASEC; Career Self Efficacy; Career Decision-Making.

INTRODUCTION

Students at the secondary education level are expected to possess strong career self-efficacy and career decision-making skills as essential foundations for planning their future academic and professional pathways. Career self-efficacy refers to an individual's belief in their ability to recognize personal strengths, explore career information, set goals, and develop realistic career plans (Bandura, 1997; Lent & Hackett, 1987). Students with high career self-efficacy tend to be more optimistic, actively engage in career exploration, demonstrate resilience in facing obstacles, and show stronger commitment to their chosen career paths (Betz & Taylor, 2006). These attributes contribute to clearer future direction, greater independence in making choices, reduced confusion, and improved career readiness and satisfaction with decisions made (Winkel & Hastuti, 2004; Widyastuti & Pratiwi, 2013).

However, findings from a preliminary study involving the administration of career self-efficacy and career decision-making scales to 283 students indicated that students' conditions have not yet reached an optimal level. In the career self-efficacy dimension, 82 students (29.0%) were categorized as low, while in the career decision-making dimension, 107 students (37.8%) fell into the low category. These findings are consistent with research conducted by Anni et al. (2021), which revealed that most senior high school students demonstrated moderate to low levels of career self-efficacy, negatively affecting their career planning and readiness. Similar results were reported by Hidayat and Pratiwi (2020), who found that students' low career decision-making ability stemmed from limited self-understanding, insufficient knowledge of the world of work, and suboptimal career information services in schools. Furthermore, Ardi et al. (2023) found that many students experience confusion in determining career choices due to limited access to systematic and sustainable technology-based career services. Rahman et al. (2019) emphasized that a mismatch between students' interests, personality traits, and career choices contributes to low confidence in making career decisions, highlighting the need for web-based RIASEC media to assist students in identifying their personal characteristics. In addition, Suryani and Wibowo (2022) reported that low levels of career transition readiness among twelfth-grade students

were associated with low career self-efficacy and poor decision-making quality, underscoring the need for innovation in digital-based career guidance services. Taken together, these findings reinforce the results of the preliminary study, indicating that the majority of students remain in the low to moderate categories of career self-efficacy and career decision-making. Therefore, an effective intervention in the form of RIASEC-based, web-assisted career information services is needed to address these gaps.

This study is important because career self-efficacy and career decision-making ability are key determinants of students' readiness to plan and define their future educational and occupational pathways. At the senior high school level, particularly in Grade XII, students are in a critical transitional phase in which they are required to make consequential career decisions, such as whether to pursue higher education or enter the workforce. This study differs from previous research in terms of its focus, approach, and design. Earlier studies generally examined either career self-efficacy or career decision-making as separate constructs.

In contrast, the present study integrates both variables as primary indicators of the effectiveness of career information services. Moreover, prior research has tended to utilize digital media in a general sense, whereas this study specifically develops and implements a systematically designed and interactive web-based RIASEC platform. Methodologically, many previous studies have relied on survey designs or research and development approaches. The present study, however, employs an experimental design to empirically test the effectiveness of the intervention. Furthermore, this research was conducted with twelfth-grade senior high school students who are undergoing a crucial transition to higher education and the workforce. As such, it offers more contextually grounded practical contributions to the strengthening of career guidance and counseling services in schools. Accordingly, this study introduces a novel contribution in the form of an integrated and comprehensive RIASEC-based career information service oriented toward enhancing students' career self-efficacy and the quality of their career decision-making.

METHODS

This study employed a quantitative approach using a one-group pretest–posttest design. The population consisted of 283 twelfth-grade senior high school students in Blora Regency. The sample comprised 30 respondents selected through purposive sampling, followed by random assignment into groups. This technique was applied as a screening process to obtain participants with similar characteristics: twelfth-grade students, both male and female, who demonstrated low levels of career self-efficacy and career decision-making.

The career self-efficacy scale was constructed based on the dimensions proposed by Taylor and Betz (1983) (as cited in Bandura, 1997:243), including self-appraisal, gathering occupational information, goal selection, planning for the future, and problem solving. Meanwhile, the career decision-making scale was based on the framework of Tiedeman and O'Hara (as cited in Sharf, 2012:41–43), which consists of exploration, crystallization, choice, and clarification. The instrument utilized a four-point Likert scale ranging from "strongly appropriate" (4) to "strongly inappropriate" (1). Validity testing of the career self-efficacy scale yielded a coefficient of 0.349, with a Cronbach's alpha reliability coefficient of 0.968. The career decision-making scale also demonstrated a validity coefficient of 0.349 and a Cronbach's alpha reliability coefficient of 0.933. Data were analyzed using a paired-samples t-test with the assistance of SPSS version 23.

RESULT AND DISCUSSION

Based on the findings, the web-based RIASEC-assisted career information service was found to be effective in improving students' career self-efficacy. Similarly, the intervention was also effective in enhancing students' career decision-making ability.

Table 1. T-Test Result

Variable	Mean (pre-post)	t	df	Sig.	Note
Career Self Efficacy	-48,30	-36,66	29	0.00	Sig.
Career Decision-Making	-47,17	-35,61	29	0.00	Sig.

The results of the paired-samples t-test showed a t-value of –36.659 with df = 29 and a Sig. (2-tailed) value of 0.000 for the career self-efficacy variable. When compared

to the critical t-value of 1.669 at the 0.05 significance level, the result indicates that 36.659 (> 1.669).For the career decision-making variable, the t-value was –35.612 with df = 29 and a Sig. (2-tailed) value of 0.000. When compared with the same critical t-value (1.669), the result shows that 35.612 > 1.669. Since all p-values were below 0.05, the web-based RIASEC-assisted career information service was statistically proven to be effective in improving both students' career self-efficacy and career decision-making.

These findings reinforce the conclusion that RIASEC-based career information services effectively enhance both constructs. The results are consistent with Ardi, Eseadi, and Guspriadi (2023), who demonstrated that web-based career counseling services significantly improved students' career decision-making ability and confidence in selecting career paths. Similarly, Anni et al. (2021) found that digital web-based career information services were effective in increasing career self-efficacy and career planning maturity among senior high school students. Rahman et al. (2019) reported that a web-based RIASEC approach improved the alignment between students' interests, personality traits, and career choices, thereby positively influencing self-confidence and the quality of career decisions. Hidayat and Pratiwi (2020) also observed that interactive media-assisted career information services significantly enhanced students' self-understanding, career exploration, and decision-making ability. In addition, Suryani and Wibowo (2022) concluded that the integration of digital technology into career guidance services effectively strengthened career self-efficacy and career transition readiness among twelfth-grade students. Overall, these findings support the conclusion that web-based RIASEC-assisted career information services constitute an effective strategy for optimizing students' career readiness, self-confidence, and the quality of their career decision-making.

Although the findings of this study indicate that the web-based RIASEC-assisted career information service is effective in enhancing students' career self-efficacy and career decision-making, several previous studies have reported different results. Setiawan and Lestari (2019) found that digital-based career information services did not produce a significant effect on students' career decision-making, particularly when not accompanied by intensive guidance from school counselors. Prabowo and Handayani

(2020) reported that improvements in career self-efficacy were more strongly influenced by internal factors, such as achievement motivation and family support, rather than by career information service interventions alone. Similarly, Wijaya et al. (2021) observed that the use of web-based media in career services did not optimally enhance students' career maturity due to limited digital literacy and low levels of active student engagement during the service process. In addition, Sari and Nugroho (2018) concluded that conventional one-way career information services were less effective in improving the quality of career decision-making, resulting in no significant changes among students.These differences suggest that the effectiveness of career information services is highly dependent on the quality of program design, the intensity of implementation, student characteristics, and environmental support. Therefore, a more comprehensive and context-sensitive approach is required in implementing career services within schools.

CONCLUSION

The findings indicate that the integration of a web-based RIASEC platform into school career guidance services can serve as a relevant alternative strategy aligned with the characteristics of contemporary students. The platform enables students to access career information in a more flexible, interactive, and individualized manner.

Based on the results and discussion regarding the effectiveness of the web-based RIASEC-assisted career information service in enhancing career self-efficacy and career decision-making, the following conclusions can be drawn: 1). The web-based RIASEC-assisted career information service is effective in improving students' career self-efficacy, as evidenced by positive changes in students' confidence in their ability to recognize their potential, plan for the future, and address challenges related to educational and career choices. 2). The web-based RIASEC-assisted career information service is effective in improving students' career decision-making ability, demonstrated by increased capacity for self-understanding, exploration of alternative career options, and more mature, rational, and directed decision-making. This study was conducted in a single school with a limited number of participants.

Future research is therefore recommended to involve a larger and more diverse sample drawn from various school contexts to enhance the generalizability of the findings. In addition, incorporating other relevant variables, such as career maturity, career adaptability, career resilience, achievement motivation, and social support, would provide a more comprehensive understanding of the factors influencing students' career self-efficacy and decision-making. Further development of integrated web-based RIASEC career information models incorporating more innovative digital technologies, such as mobile applications or interactive online platforms, is also recommended to ensure continued relevance to digitally oriented generations. Moreover, the use of longitudinal research designs and mixed-method approaches is expected to yield deeper insights into the long-term effects of the intervention and the processes of change experienced by students.

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