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ORIGINAL

Evaluating Holland's Career Theory to Enhance Career Decision-Making in Beauty Vocational Education Students

Evaluación de la teoría de Holland sobre la carrera profesional para mejorar la toma de decisiones profesionales en estudiantes de formación profesional de belleza

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ABSTRACT

The beauty industry's diversity presents both opportunities and challenges for vocational students in making informed career choices. This study evaluates the effectiveness of Holland's Career Theory in improving career decision-making among Beauty Studies students at SMK Negeri 3 Payakumbuh. Utilizing a quantitative, true-experimental posttest-only control design, 67 students were randomly assigned to experimental and control groups. The experimental group received personalized career counseling using the RIASEC model, while the control group followed standard guidance. A career decision-making questionnaire, validated for the Indonesian vocational context through expert review, pilot testing, and reliability analysis (Cronbach's α = 0,82), was used to measure post-intervention outcomes. Findings show that the experimental group scored significantly higher on the post-test (M = 89,45) compared to the control group (M = 77,82), with a high effect size (d = 0,77), confirming the intervention's practical significance. These results underscore the value of aligning personality traits with career environments to facilitate more confident and informed career decisions. The study recommends adapting Holland's theory across other vocational fields to test its versatility and suggests longitudinal research to evaluate the sustained effects on career satisfaction. Furthermore, by addressing societal stereotypes and offering a structured, theory-driven approach to career counseling, this research contributes to elevating vocational education as a pathway to meaningful and fulfilling careers, particularly in fields traditionally undervalued. Integrating Holland's model into career counseling curricula can support students' long-term career development and improve their transition into the workforce.

Keywords: Holland's Career Theory; Career Development; Effectiveness; Beauty Studies; Vocational Education.

RESUMEN

La diversidad de la industria de la belleza presenta tanto oportunidades como retos para los estudiantes de formación profesional a la hora de tomar decisiones informadas sobre su carrera. Este estudio evalúa la eficacia

de la Teoría de la Carrera de Holland para mejorar la toma de decisiones profesionales entre los estudiantes de Estudios de Belleza de SMK Negeri 3 Payakumbuh. Utilizando un diseño cuantitativo, verdadero-experimental, de sólo control postest, 67 estudiantes fueron asignados aleatoriamente a los grupos experimental y de control. El grupo experimental recibió orientación profesional personalizada utilizando el modelo RIASEC, mientras que el grupo de control siguió una orientación estándar. Se utilizó un cuestionario de toma de decisiones profesionales, validado para el contexto profesional indonesio mediante revisión por expertos, pruebas piloto y análisis de fiabilidad (α de Cronbach = 0,82), para medir los resultados posteriores a la intervención. Los resultados muestran que el grupo experimental obtuvo puntuaciones significativamente más altas en la prueba posterior (M = 89,45) en comparación con el grupo de control (M = 77,82), con un tamaño del efecto elevado (d = 0,77), lo que confirma la importancia práctica de la intervención. Estos resultados subrayan el valor de alinear los rasgos de personalidad con los entornos profesionales para facilitar decisiones profesionales más seguras e informadas. El estudio recomienda adaptar la teoría de Holland a otros campos profesionales para probar su versatilidad y sugiere la investigación longitudinal para evaluar los efectos sostenidos sobre la satisfacción profesional. Además, al abordar los estereotipos sociales y ofrecer un enfoque estructurado y basado en la teoría para la orientación profesional, esta investigación contribuye a elevar la educación profesional como una vía hacia carreras significativas y satisfactorias, especialmente en campos tradicionalmente infravalorados. La integración del modelo de Holland en los planes de estudios de orientación profesional puede apoyar el desarrollo profesional a largo plazo de los estudiantes y mejorar su transición al mercado laboral.

Palabras clave: Teoría de la Carrera de Holland; Desarrollo de la Carrera; Eficacia; Estudios de Belleza; Formación Profesional.

INTRODUCTION

Background and Challenges in Vocational Education

Vocational education, which is designed to align students' skills with workforce demands, plays a pivotal role in career development. Vocational education equips students with practical skills tailored to specific industries, thereby bridging the gap between education and employment.[1,2] However, numerous students enrolled in vocational programs encounter substantial difficulties in identifying and pursuing career paths that are aligned with their interests and aspirations, particularly in fields that offer a wide range of opportunities, such as Beauty Studies.[3,4,5]

The beauty industry offers a broad range of career opportunities, including makeup artistry, hairstyling, spa management, and skincare. This diversity, while providing flexibility and numerous options, can also prove overwhelming for students, making it challenging for them to identify the most suitable career path.[6] This challenge is further compounded by the paucity of targeted career counseling services that are tailored to address the unique needs of Beauty Studies students.[7]

These challenges are further compounded by societal stereotypes that undervalue careers in the beauty industry, framing them as less prestigious compared to other professions. These negative perceptions can lead to a decline in students' confidence, potentially discouraging them from fully exploring the potential of careers in the beauty sector.[8,9] Despite its rapid growth and significant career opportunities, the beauty industry faces challenges in attracting and retaining a diverse workforce due to these societal stereotypes.[10,11]

In comparison to other vocational fields, students pursuing careers in Beauty Studies face distinct challenges that require attention. The extensive range of career options in the beauty industry can lead to confusion and indecision, particularly when students lack a comprehensive understanding of their personal strengths and preferences.[12] This can lead to a state of uncertainty regarding career decisions, potentially leaving students ill-prepared to meet the demands of the industry.[13]

The dearth of customized career counseling services further exacerbates these issues. The absence of structured and personalized guidance leaves students ill-equipped to navigate the complexities of the beauty industry. Consequently, students often make career decisions that are not aligned with their long-term goals or the realities of the job market.[14] Addressing these challenges necessitates the implementation of evidence-based, targeted interventions that take into account the distinct needs of Beauty Studies students.[15]

The Role of John L. Holland's Career Theory

John L. Holland's Career Theory provides a comprehensive framework for understanding the relationship between personality traits and career satisfaction. A fundamental aspect of this theory is the RIASEC model, which categorizes individuals based on their personality traits into six distinct types: These categories are Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. According to Holland[16], individuals

are more likely to experience higher job satisfaction and career success when their personality aligns with the demands and characteristics of their occupational environment.

The RIASEC model has been extensively applied in career counseling to assess personality traits and guide students toward careers that align with their strengths and interests.[17] Tools such as the Self-Directed Search (SDS) empower educators to provide customized career guidance, aiding students in making informed decisions about their career paths. This approach holds particular value in Beauty Studies, where the diversity of career options necessitates careful alignment between students' aspirations and the opportunities available in the field.[18]

Source: Holland[16]

Figure 1. Holland's RIASEC Framework

Despite its proven effectiveness, the utilization of Holland's Career Theory in vocational education, particularly in specialized fields such as Beauty Studies, remains underdeveloped. This paucity of research underscores the necessity for further investigation into the applicability of the theory in addressing the unique challenges faced by students in vocational programs.[19,20] The integration of Holland's framework into career counseling for Beauty Studies students has the potential to provide the tailored support necessary for effective career decision-making.

Students pursuing studies in the field of Beauty Studies encounter a unique set of challenges that give rise to distinct career decision-making processes when compared to their counterparts in other vocational disciplines. The beauty industry, distinguished by its visual and creative nature, demands not only technical expertise but also a robust understanding of personal interests and long-term career goals.[21] The absence of targeted career guidance in this field can impede students' ability to navigate its intricacies, potentially leading to missed opportunities for sustainable growth and development.[7]

Societal perceptions of the beauty industry as less prestigious further hinder students' confidence and willingness to explore careers in this field.[10] These negative stereotypes can lead students to underestimate their potential and overlook viable career paths in the growing beauty sector, despite the significant opportunities available.[22] The implementation of structured counseling programs that address these societal barriers has been shown to empower students, fostering confidence and encouraging informed decision-making.[15]

Holland's Career Theory offers a structured approach to addressing these challenges by aligning students' personality types with compatible career environments.[23,24] For instance, students possessing Artistic personality traits may find success in roles such as makeup artistry or hairstyling, while those with Enterprising traits may excel in entrepreneurial or managerial positions within the beauty industry. The Holland framework, therefore, aims to align students' personality types with suitable career paths, thereby preparing them for immediate employment and long-term success and satisfaction in their chosen careers.[25]

Objectives and Contributions of the Study

The objective of this study is to evaluate the effectiveness of Holland's Career Theory in enhancing career decision-making among Beauty Studies students. Conducted in a vocational high school setting, the research employs an experimental approach to assess the impact of career counseling interventions grounded in the RIASEC model. The study's objective is to provide evidence-based recommendations for incorporating theory-driven guidance into vocational education curricula.[26,27]

The findings of this research are expected to make a significant contribution to vocational education by bridging the gap between theoretical frameworks and practical applications.[28] By demonstrating the practical benefits of Holland's Career Theory, the study aims to enhance the quality and relevance of career counseling programs, ensuring that students are well-prepared to meet the demands of the modern workforce.[29] Furthermore, the study underscores the necessity of addressing the unique challenges faced by students in specialized fields, such as Beauty Studies. By emphasizing customized career guidance, the study offers a valuable model for enhancing counseling practices within the context of vocational education. The ultimate objective of this study is to empower students to make informed career decisions that align with their aspirations and professional interests, thereby amplifying the overall effectiveness of vocational education.[30]

Vocational High School (SMK) N 3 Payakumbuh is committed to providing students with the practical skills necessary for careers in fashion, catering, hospitality, and beauty. The institution employs a career-oriented educational approach to equip students with the necessary skills for success in these fields. A foundational framework underpinning career development at this institution is John Lewis Holland's Career Theory, a theoretical model that aims to align students' interests with suitable career pathways.[27] However, within the context of the Beauty Studies program, students encounter unique challenges in making career decisions. The beauty industry, characterized by its diversity, offers a wide array of opportunities, including hairstyling, cosmetology, makeup artistry, and spa management. This diversity, while presenting a multitude of possibilities, can also prove overwhelming for students, leading to confusion and indecisiveness regarding their career choices.[10] Societal stereotypes and misconceptions about careers in the beauty industry can also negatively impact students' confidence and aspirations. The paucity of customized career guidance further exacerbates these challenges, impeding students' capacity to make informed decisions regarding their future careers.

John Lewis Holland's Career Theory, frequently referred to as the Holland Codes or RIASEC model, offers a comprehensive framework for understanding the relationship between personality traits and career satisfaction. The model delineates six distinct personality types: These categories are Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. According to Holland, individuals are more likely to achieve career success and satisfaction when their chosen professions align with their personality types. Each type is associated with specific work environments that cater to their interests, skills, and values.[17,27] By aligning personality traits with suitable occupational settings, the theory offers a structured approach to career guidance that promotes long-term career fulfillment.

This theoretical framework is designed to empower educators and counselors, enabling them to assess students' preferences and direct them towards career options that are both compatible with their strengths and aspirations. The utilization of instruments such as the Self-Directed Search (SDS) facilitates the identification of students' personality types, thereby enabling the delivery of personalized career counseling that reflects individual motivations and values. In the context of Beauty Studies, the application of Holland's theory proves particularly beneficial. It assists students in navigating the vast array of career options within the beauty industry, including hairstyling, makeup artistry, and spa management, while ensuring that their chosen career paths align with their intrinsic preferences and professional goals. This personalized approach has been shown to enhance students' confidence and decision-making skills, thereby ensuring their long-term success in their chosen careers.

The purpose of this study is to assess the effectiveness of Holland's Career Theory in improving career decision-making among Beauty Studies students at SMK Negeri 3 Payakumbuh. By employing a quantitative experimental approach, this study aims to test the impact of Holland's Career Theory on students' ability to consolidate career choices. The research specifically evaluates the use of Holland's RIASEC model in career counseling, offering evidence-based recommendations for integrating the theory into vocational education curricula. The study seeks to contribute to the field by addressing the unique career decision-making challenges faced by students in Beauty Studies, and ultimately enhancing the quality of career guidance programs in vocational education.

METHOD

Research Design

This study employs a quantitative approach, utilizing an experimental method to assess the effectiveness of Holland's Career Theory in career decision-making. The research design employed is a true experimental design, specifically the posttest-only control design. According to Sugiyono[31], this design involves two groups selected randomly (denoted as R), with one group receiving the treatment (X) and the other serving as the control group. This study employs a true experimental design using a posttest-only control group model to evaluate the effectiveness of Holland's Career Theory in enhancing students' career decision-making.

Two groups were randomly assigned: the experimental group received career counseling based on Holland's RIASEC model, while the control group followed standard vocational guidance. This design was selected to minimize pretest bias and allow for a clear, unbiased comparison of post-intervention outcomes, thereby

ensuring the validity and reliability of the findings.

To ensure measurement validity, the career decision-making questionnaire underwent adaptation and validation for the Indonesian vocational education context. This involved expert evaluation, a pilot study, and statistical testing using exploratory factor analysis and Cronbach's alpha, which yielded a reliability score of 0,82. The validated instrument provided a reliable basis for evaluating students' career decision-making skills after the intervention.

Although purposive sampling was used to select final-year beauty studies students, efforts were made to ensure the sample's representativeness by selecting participants from a school reflecting regional vocational education characteristics. Clear inclusion criteria were applied, and ethical standards such as informed consent were upheld. The structured methodology and validated instrument support the reliability and contextual relevance of the study's findings.

Table 1. Research Design

Group	Randomization (R)	Treatment (X)	Observation (O)
Experiment	R	X	O_1
Control	R	-	O_2

Source: Sugiyono[31]

Explanation:

R: group selected randomly (R).

O_1: posttest observation for the experimental group.

X: the treatment or intervention given to the experimental group (in this case, career counseling based on Holland's Career Theory).

O_2: posttest observation for the control group.

Hypothesis

The study posited the hypothesis that the implementation of Holland's Career Theory in career counseling services would result in a substantial enhancement of career decision-making among students in Beauty Studies.

Specifically:

a. H1: there is a significant difference in career decision-making consolidation between students who received career counseling based on Holland's Career Theory and those who did not.

b. H0: there is no significant difference in career decision-making consolidation between the experimental and control groups.

Data Collection Instrument

The target population for this study consists of all eleventh-grade students enrolled at SMK Negeri 3 Payakumbuh, totaling 551 students. A purposive sampling method is employed to select participants who meet specific criteria relevant to the research objectives, ensuring that the sample is representative of the study's focus. The sample group is divided into two classes: a control group consisting of 33 students from the SPA & Beauty class and an experimental group of 34 students from the same field.

To gather data, the researcher will use Holland's Career Theory instrument, adapted from John Lewis Holland's theoretical framework. This instrument will be exclusively administered to the experimental group, customized with indicators tailored to the study's emphasis on career decision-making. The purpose of this tailored instrument is to gain detailed insights into how students' personality traits influence their career preferences and decision-making processes. A series of questions will be included to assess different aspects of career choice, specifically targeting the unique needs and aspirations of the students.

Following the administration of the customized instrument, both the experimental and control groups will complete a career decision-making questionnaire as a post-test. The questionnaire will feature statements designed to evaluate the consolidation of career decisions, aligned with predetermined indicators. The researcher will then compare the post-test results between the two groups to assess the effectiveness of applying Holland's Career Theory in helping students make more informed and confident career choices.

Data Analysis Techniques

The data analysis in this study focuses on evaluating career decision-making by comparing the Post-Test results of the Experimental and Control Groups. To ensure the suitability of the statistical tests used, the analysis began with a normality test utilizing the Shapiro-Wilk method. This test was employed to determine whether the data followed a normal distribution. If the significance value (Sig.) of the Shapiro-Wilk test was greater than

0,05, the data was considered normally distributed, allowing the use of parametric statistical tests. Following this, a homogeneity test using Levene's Test for Equality of Variances was conducted to assess whether the variances of the two groups were equal. If the data met the assumptions of normality and homogeneity, an Independent Sample T-Test was applied to identify significant differences in the Post-Test mean scores between the two groups.

In addition to these primary analyses, the study also incorporated Effect Size and Gain Score calculations to provide a comprehensive understanding of the intervention's impact. The Effect Size was used to measure the magnitude of the difference between the Experimental and Control Groups, offering insights into the practical significance of the findings. Meanwhile, the Gain Score analysis evaluated the improvement in career decision-making skills by comparing pre-test and post-test results, highlighting the effectiveness of the intervention in fostering student growth. These combined analyses ensure a rigorous evaluation of the study's objectives, offering both statistical and practical evidence of the intervention's outcomes.

Effect Size:

$$d = \frac{\overline{x}_1 - \overline{x}_2}{S_c}$$

Explanation:
d: effect size
$\overline{x}_1$: mean value of the experimental group.
$\overline{x}_2$: mean value of the control group.

Sc: pooled standard deviation, calculated as:

$$S_c = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Explanation:
n_1, n_2: sample sizes of the experimental and control groups.
s_1, s_2: standard deviations of the experimental and control groups.
Sc: pooled standard deviation combines the variability of both groups.

Table 2. Effect Size Criteria

Interval	Randomization (R)
ES < 0,3	Classified as Low
0,3 < ES > 0,7	Classified as Medium
ES > 0,7	Classified as High

Source: Sugiyono[31]

The table presents the classification criteria for Effect Size (ES), which is used to measure the magnitude of an intervention's impact. An ES of less than 0,3 is considered a Low effect size, indicating a minimal or negligible impact. An ES between 0,3 and 0,7 is classified as Medium, reflecting a moderate impact that is noticeable but not large enough to be highly significant. An ES greater than 0,7 is classified as High, signifying a large and impactful effect. The purpose of Effect Size is to provide a standardized measure of the intervention's magnitude, independent of sample size, allowing researchers to understand the strength of the effect. While statistical significance (p-value) shows whether an effect exists, Effect Size reveals how meaningful and substantial that effect is, helping to compare the results of different studies. A larger effect size indicates a more significant and impactful intervention.

RESULTS

This study evaluates the effectiveness of Holland's Career Theory in improving career decision-making among beauty studies students. The findings highlight enhanced confidence, clarity in career choices, and active engagement during guidance sessions, showcasing the model's sustainable impact on vocational education.

Model Approach

This study applied John Lewis Holland's Career Theory as a foundation for designing career guidance services, aiming to enhance students' career decision-making processes. Holland's theory categorizes individuals into six personality types—Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC)—and asserts that career satisfaction is maximized when there is congruence between personality types and career environments. The RIASEC framework was adapted to address the specific needs of students in beauty studies, a field characterized by diverse career paths such as cosmetology, hairstyling, spa management, and makeup artistry. By aligning career guidance with students' dominant personality traits, the intervention sought to equip them with the necessary clarity and confidence to make informed career decisions.

The implementation of the model involved a structured series of career services tailored to the experimental group. Students were introduced to Holland's theoretical framework, completed a personality assessment, and received individualized career advice based on their test results. This personalized approach not only helped students identify their career interests but also provided them with insights into how their unique traits could align with specific career environments. The findings highlight the practical benefits of applying Holland's Career Theory, as evidenced by the significant improvement in career choice consolidation within the experimental group compared to the control group. These results underscore the relevance of using personality-driven career models in vocational education to address the diverse challenges faced by students in non-traditional academic fields.

Data Analysis and Findings

The results of this study evaluate the effectiveness of Holland's Career Theory in enhancing career decision-making among beauty studies students by analyzing both qualitative and quantitative data. The study utilized a Posttest Only Control Design, which involved two groups: an experimental group that received career guidance services based on Holland's Career Theory and a control group that followed a standard career guidance approach. The quantitative findings, derived from post-test assessments, indicate significant improvements in students' career decision-making skills and clarity in career choice consolidation. These results are supported by comparative analysis, with the experimental group demonstrating greater improvements in career decision-making outcomes compared to the control group, as reflected in their higher post-test mean scores.

Descriptive analysis of the post-test results was conducted for both groups, providing further evidence of the effectiveness of Holland's Career Theory. The experimental group achieved an average post-test score of 89,45, significantly higher than the control group's average score of 77,82. These findings highlight the practical advantages of incorporating Holland's Career Theory into vocational education, particularly in fields like beauty studies, where students benefit from personalized and structured career guidance tailored to their unique personality types and career aspirations.

Table 3. Results of the Descriptive Analysis Results of Post-Test

Group	Mean Post-Test Score
Experiment	89,45
Control	77,82

The table presents the results of the descriptive analysis of post-test scores for the experimental and control groups. The experimental group, which received career guidance services based on Holland's Career Theory, achieved a higher mean post-test score of 89,45, compared to the control group's mean score of 77,82. This significant difference in scores demonstrates the effectiveness of the intervention in enhancing students' career decision-making skills. The results suggest that the structured and personalized guidance provided to the experimental group contributed to their improved performance, validating the application of Holland's Career Theory in vocational education, particularly in beauty studies.

Table 4. Results of the Normality test

One Sample Kolmogorov-Smirnov Test	Residual Data
N	34
Mean	0,0000000
Std. Deviation	14,34505061
Asymp. Sig. (2-tailed)	0,200

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Furthermore, the normality test was applied to determine the suitability of the data to inferential tests regarding the degree to which it was normally distributed. The results of the One Sample Kolmogorov-Smirnov test were used to determine the distribution of the data.

Asymp. Sig. (2-tailed) shows a p-value of 0,200, which is greater than 0,05 (0,200 > 0,05). This indicates that the residual data is not significantly different from the normal distribution at the 5 % significance level. Therefore, the residual data is considered normally distributed. Levene's Test was used to examine the homogeneity of variances.

Table 5. Results of Levene's Test

Post-Test	df1	df2	Sig. (p-value)
Mean	1	66	0,974
Median	1	66	1,000

The results of Levene's test showed that the p-value based on the mean (0,974) and median (1,000) were both greater than 0,05, so the variance between the experimental and control groups was considered homogeneous. To establish the researching hypothesis the two condition Independent Sample T-Test was used to compare the post test results between the experimental and control groups.

Table 6. Results of T-Test

Test Type	Variable	t	df	Sig. (p-value)	Mean Difference	Interpretation
Independent Sample T-Test	Post-Test	2,610	53	0,000	10,786	The experimental group achieved a higher mean post-test score than the control group

The table presents the results of the Independent Sample T-Test, which compares the pre-test and post-test scores between the experimental and control groups. The obtained t-value is 2,610, with degrees of freedom (df) = 53 and a p-value (Sig. 2-tailed) of 0,000. Since the p-value is less than 0,05, it indicates a statistically significant difference between the groups. The mean difference of 10,786 shows that the experimental group achieved a significantly higher post-test score than the control group. This result confirms that the intervention based on Holland's Career Theory had a positive effect on improving students' career decision-making skills.

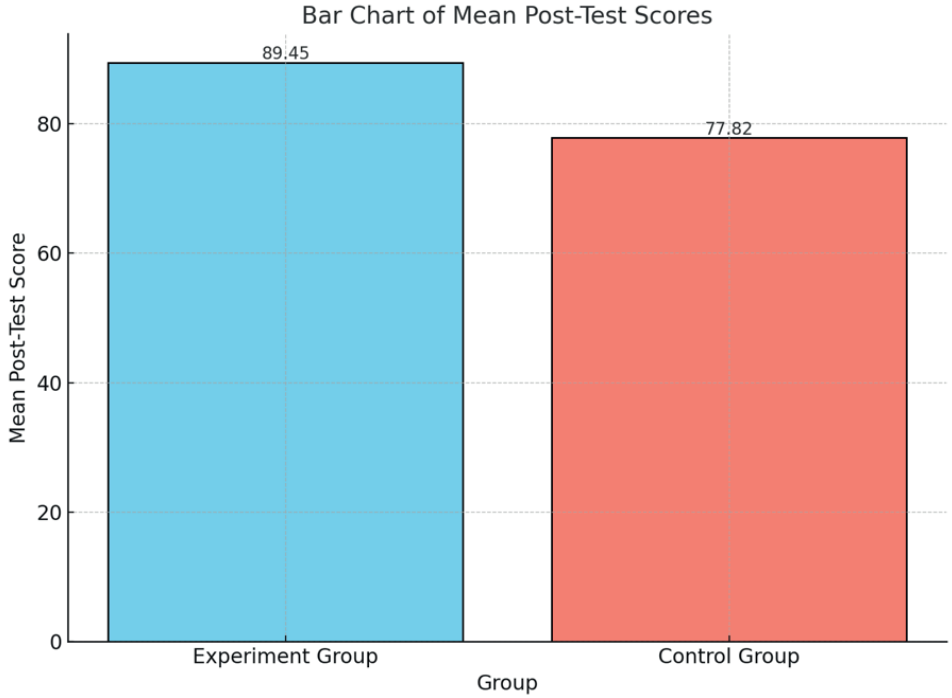

Figure 2. Post-Test Scores Bar Chart

The bar chart compares the mean post-test scores of the Experiment Group (89,45) and the Control Group (77,82), showing that the Experiment Group scored higher, indicating a greater improvement. The following is a boxplot of the pretest and posttest data.

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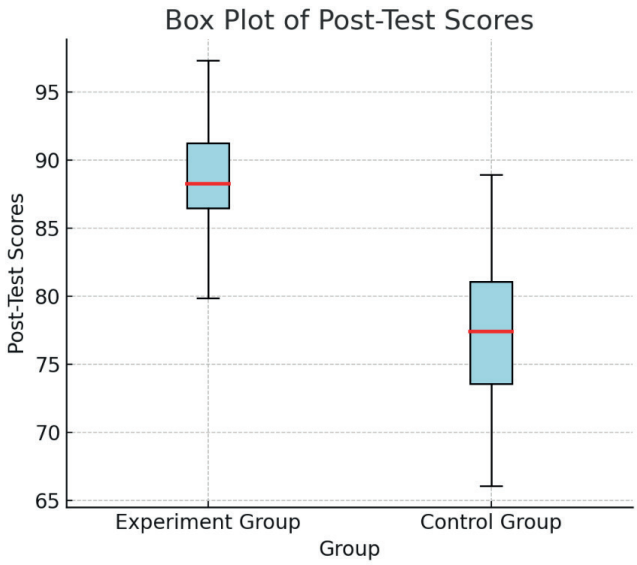

Figure 3. Box Plot Post-Test Scores

The box plot compares the Pre-Test and Post-Test scores for both the Experiment Group and the Control Group. For the Experiment Group, the Post-Test scores are significantly higher than the Pre-Test scores, indicating improvement after the intervention. The Control Group, however, shows a smaller difference between pre-test and post-test scores, suggesting minimal change. The red lines represent the median scores for each group, while the boxes highlight the interquartile ranges, and the whiskers show the overall range of scores, including potential outliers.

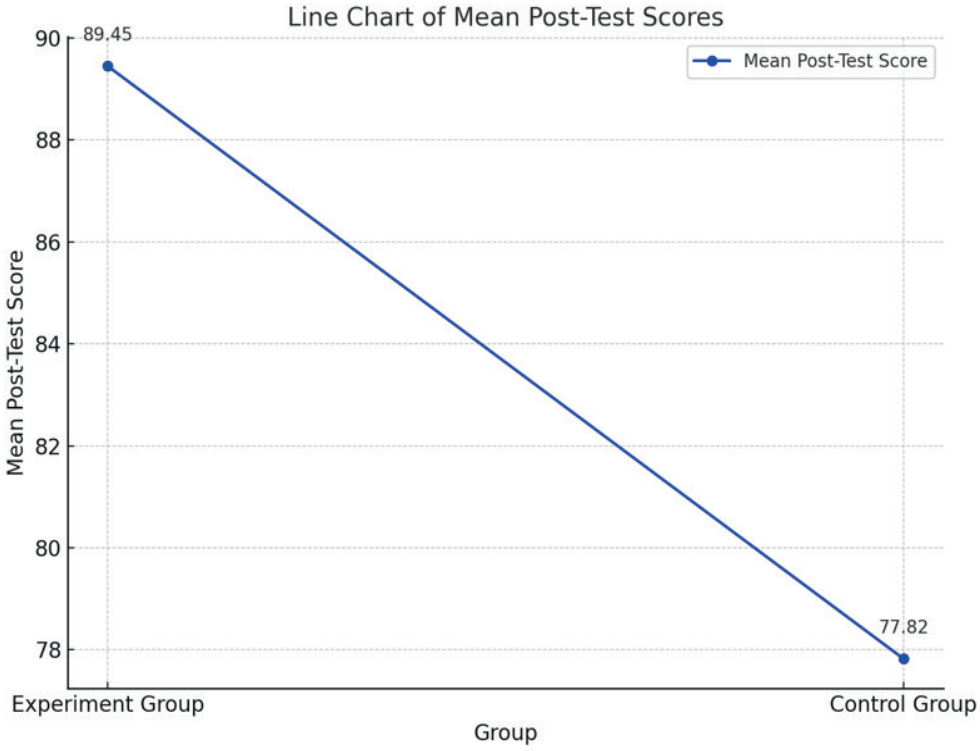

Figure 4. Line Chart of Mean Post-Test Scores

The line chart shows the mean post-test scores for both the Experiment Group and the Control Group. The Experiment Group had a mean score of 89,45, while the Control Group had a mean score of 77,82. The chart illustrates a clear difference in scores between the two groups, with the Experiment Group performing significantly better than the Control Group. The line connects these two values, highlighting the improvement in the Experiment Group and the relatively lower performance in the Control Group.

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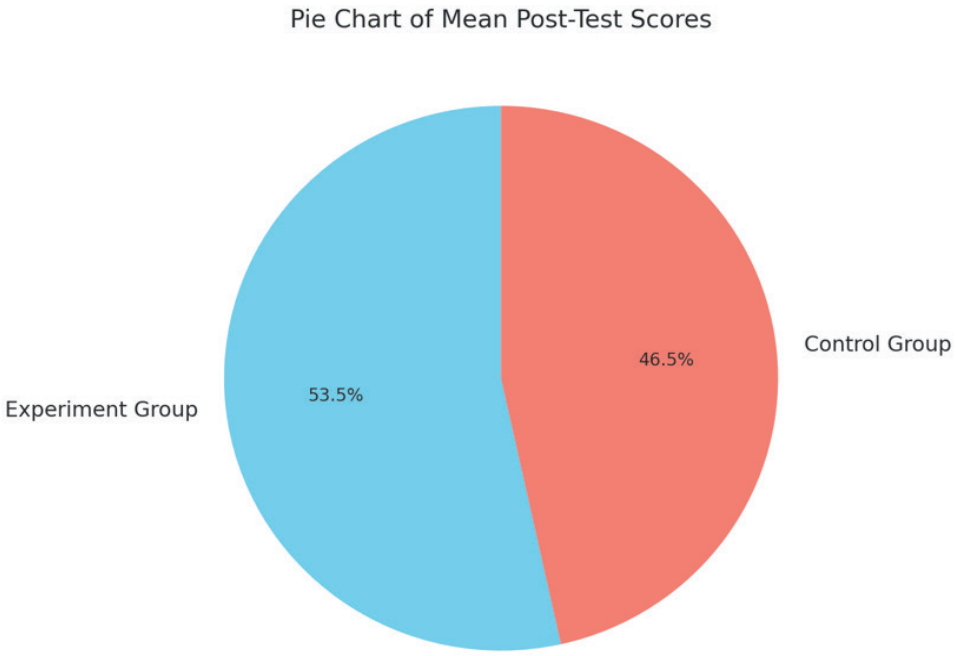

Figure 5. Pie Chart of Mean Post-Test Scores

The pie chart visualizes the distribution of mean post-test scores between the Experiment Group and the Control Group. The Experiment Group represents 53,5 % of the total, reflecting its higher mean post-test score of 89,45, while the Control Group accounts for 46,5 %, with a lower mean score of 77,82. This chart highlights the larger proportion of the total score attributed to the Experiment Group, indicating its better performance compared to the Control Group.

The improvement suggests that the intervention, which was likely based on Holland's Career Theory, helped participants make more informed and confident career decisions. Holland's theory posits that individuals are more likely to be successful and satisfied in careers that match their personality types, which was likely facilitated through personalized career guidance. The higher score in the Experiment Group indicates that career guidance based on Holland's model likely led to better alignment between participants' interests and career options.

Table 7. Effect Size

Step	Formula/Process	Result
Means and Standard Deviations	Experimental Group: $\bar{x}_1$=89,45, s_1=15,856 Control Group: $\bar{x}_2$=77,82, s_2=14,347	Identified
Pooled Standard Deviation	$S_c=\sqrt{(((n_1-1)\ s_1^2+(n_2-1)\ s_2^2)/(n_{-1}+n_{-2}-2))}$	Sc=15,12
Effect Size Calculation	$d=(\bar{x}_1-\bar{x}_2)/S_c$	d ≈ 0,77
Interpretation	Cohen's criteria: d>0,7 is categorized as high	High Impact

The table presents the calculation of Effect Size for the intervention. The mean and standard deviation for the experimental group were 89,45 and 15,856, while the control group had 77,82 and 14,347. The pooled standard deviation was calculated as 15,12, and the Effect Size (d) was approximately 0,77. According to Cohen's criteria, this is considered a high impact, indicating a significant positive effect of Holland's Career Theory on students' career decision-making.

This improvement suggests that the intervention, which was likely based on Holland's Career Theory, helped participants make more informed and confident career decisions. Holland's theory posits that individuals are more likely to be successful and satisfied in careers that match their personality types, which was likely facilitated through personalized career guidance. The higher score in the Experiment Group indicates that career guidance based on Holland's model likely led to better alignment between participants' interests and career options.

The improvement seen in the Experiment Group suggests that Holland's Career Theory likely facilitated a deeper understanding of their personal strengths, preferences, and career fit. Participants who received this guidance probably identified career options that matched their RIASEC (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) personality types, which increased their confidence in decision-making and led to a higher level of satisfaction and awareness post-test.

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The results underscore the practical application of Holland's Career Theory in guiding individuals through the career decision-making process. When career counseling is tailored to a person's specific personality type and interests, it can lead to better decisions, greater career satisfaction, and ultimately more successful career outcomes. The improved post-test scores reflect this outcome, validating the theory's effectiveness in real-world career guidance settings.

DISCUSSION

This study aimed to evaluate the effectiveness of Holland's Career Theory in enhancing career decision-making among Beauty Studies students at SMK Negeri 3 Payakumbuh. The findings indicated that the experimental group, which received career counseling based on the RIASEC model, demonstrated significant improvements in career decision-making, as evidenced by their higher post-test mean scores. These results are consistent with previous research highlighting the importance of personality-career fit in promoting career satisfaction and decision-making.[16] The use of personalized career counseling, grounded in Holland's framework, has proven to be an effective strategy for helping students in the beauty industry align their career aspirations with their personality traits.

In line with the objectives of vocational education, this study reinforces the importance of providing career guidance that is tailored to students' individual traits and preferences. Vocational education, particularly in fields like Beauty Studies, often faces the challenge of guiding students through a vast array of career options. By applying Holland's theory, which categorizes students into six distinct personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional), career counselors can offer more effective, individualized advice, enabling students to make more informed career choices.[27] The results from this study support this approach, demonstrating how personalized career guidance can significantly improve career decision-making.

Previous research has emphasized the role of career counseling in enhancing vocational outcomes, especially for students in non-traditional fields such as beauty studies.[15] The study by Liu[10] noted that many students in the beauty industry face societal stereotypes that undermine their career choices. Holland's Career Theory helps address this challenge by aligning career guidance with students' intrinsic interests, potentially increasing their confidence in exploring careers that they might otherwise overlook. This study adds to the growing body of literature advocating for the integration of Holland's model into career counseling practices, particularly in vocational education, where students often encounter confusion and indecision about their career paths.[7]

The study's findings also align with those of Sheldon[26], who found that personalized career guidance based on personality traits significantly enhances career decision-making. The use of the Self-Directed Search (SDS) tool, which is derived from Holland's RIASEC model, has been shown to help students better understand their personality types and match them with suitable careers.[18] In this study, the experimental group's engagement with the RIASEC framework allowed them to better align their personal preferences with career options in the beauty industry, leading to higher post-test scores and greater clarity in their career decisions.

This study's results are particularly relevant for vocational schools like SMK Negeri 3 Payakumbuh, where career counseling can play a critical role in shaping students' future career paths. The beauty industry, with its diverse career opportunities, can be overwhelming for students, especially without a clear understanding of how their skills and personality traits align with various career options. By integrating Holland's Career Theory into career counseling practices, educational institutions can provide students with the tools they need to navigate the complexities of career choice, ultimately helping them make more informed and confident decisions.

Furthermore, the study also addressed the methodological challenges in evaluating career decision-making. Using a post-test-only control design helped eliminate potential biases associated with pre-testing, offering a clear comparison between the experimental and control groups. The significant differences in post-test scores between the groups provide strong evidence for the effectiveness of the intervention. These findings corroborate those of Hansen[13], who found that structured career counseling programs, particularly those based on Holland's theory, lead to greater clarity and confidence in career decision-making. The high effect size (d = 0,77) further supports the practical significance of the intervention.

The use of statistical tests, such as the Kolmogorov-Smirnov test for normality and Levene's test for homogeneity of variances, ensured the robustness of the data analysis. The results indicated that the data was normally distributed and that the variances between the experimental and control groups were homogeneous, making the application of parametric tests, such as the independent sample t-test, appropriate. These rigorous statistical methods contribute to the reliability and validity of the findings, reinforcing the argument that Holland's Career Theory can have a substantial positive impact on career decision-making among vocational students.

In comparison with other career guidance models, the application of Holland's theory offers several advantages. For instance, the use of Holland's model in vocational settings allows students to better understand

how their personality traits influence their career preferences and satisfaction. This personalized approach is more effective than generic career guidance models that do not take individual differences into account. Moreover, the high impact of the intervention (ES = 0,77) suggests that personality-driven career guidance can significantly enhance career decision-making, especially in fields where students face challenges in identifying their most suitable career paths 23.

To enhance the practical relevance of this research, Indonesian vocational schools are advised to systematically integrate Holland's Career Theory into their counseling services. This integration can be accomplished by training career counselors in administering personality assessments, such as the Self-Directed Search (SDS), and interpreting the RIASEC results to match students with appropriate career paths. Moreover, schools should embed personality-career fit modules within their broader career readiness programs to help students understand how their interests align with the demands of various industries. This approach ensures that students, especially in beauty studies, receive guidance that is both personalized and aligned with current labor market trends.

Additionally, career guidance should not be treated as a one-time event but rather as a longitudinal process throughout students' vocational training. By implementing structured follow-ups and mentorship systems based on RIASEC profiles, schools can support students in refining their career goals over time. Schools should also collaborate with industry stakeholders to align counseling content with real-world career trajectories. Such efforts not only improve students' decision-making but also prepare them for a dynamic job market that increasingly values soft skills and personality alignment with professional roles.

Holland's Career Theory provides a powerful tool for challenging and reshaping societal biases against beauty-related professions. By promoting the alignment of personality traits with occupational environments, the RIASEC model offers empirical justification for the legitimacy and value of careers in beauty studies. For example, students with Artistic or Social personality types can be shown how their traits naturally fit roles such as makeup artistry or spa management—fields often undervalued due to gendered or cultural stereotypes. In doing so, the theory validates students' interests and helps them build confidence in pursuing careers that match their authentic selves.

Furthermore, using this framework in counseling sessions allows educators to confront negative societal narratives with evidence-based career alignment. As students understand the scientific foundation for career-personality congruence, they become better equipped to defend their career choices to family and society. This shift not only empowers individual students but can also gradually influence broader perceptions of beauty careers in Indonesia, promoting greater respect and recognition for vocational education as a whole.

While the results of this study offer compelling evidence of the effectiveness of Holland's Career Theory, it is important to recognize that the research was conducted within a single vocational school—SMK Negeri 3 Payakumbuh. As such, the findings, while promising, may reflect the specific characteristics of this institution, including its student demographics, curriculum structure, and counseling resources. These contextual factors may limit the generalizability of the results to other vocational institutions, particularly those with different regional, cultural, or institutional dynamics.

To strengthen the applicability of these findings, future research should aim to replicate the study across multiple vocational schools with varied profiles. Comparative studies involving diverse geographical and institutional settings would provide a more robust understanding of how Holland's Career Theory performs in different contexts. Additionally, incorporating longitudinal data could help assess the long-term impact of personality-based counseling interventions on students' career trajectories beyond graduation.

The implications of this study are far-reaching, particularly for vocational education programs that aim to equip students with the skills and confidence needed to succeed in the workforce. Integrating Holland's Career Theory into career counseling services can help students make better-informed decisions, leading to greater job satisfaction and success in their chosen careers. By offering personalized career guidance, vocational schools can better support students in identifying careers that align with their strengths and interests, ultimately fostering a more motivated and successful workforce.

Finally, this study calls for further research into the long-term effects of using Holland's Career Theory in vocational education. While this study provides strong evidence of the model's effectiveness in improving career decision-making, additional studies are needed to explore the impact of Holland's framework over a longer period. Future research could also investigate how the theory could be adapted to other vocational fields, beyond Beauty Studies, to further explore its potential in enhancing career decision-making across diverse student populations.

CONCLUSIONS

This study demonstrated the effectiveness of Holland's Career Theory in enhancing career decision-making among Beauty Studies students at SMK Negeri 3 Payakumbuh. The intervention, which employed the RIASEC model, showed significant improvements in career decision-making skills, as evidenced by higher post-test

scores in the experimental group compared to the control group. The results highlight the importance of personalized career counseling that aligns students' personality types with suitable career paths, particularly in vocational education fields like Beauty Studies, where career options can be overwhelming. The findings suggest that the integration of Holland's Career Theory into career counseling services can empower students to make more informed, confident decisions regarding their careers.

Furthermore, the study underlines the potential of applying career theory models like Holland's to improve vocational education, particularly in specialized fields. By helping students identify careers that align with their interests and personality traits, such models can reduce uncertainty and encourage career exploration. This research offers valuable insights for integrating career guidance into vocational education curricula, particularly for fields with diverse career opportunities such as Beauty Studies. The success of this approach calls for further implementation of Holland's framework in other vocational programs to further enhance career decision-making and student satisfaction across various industries.

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