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Research Article

Applying the Holland RIASEC Model Using FIKR (Facet, Insight, Knowledge and Resilience) Profiling Assessment Tool to Optimize Talent Placement in the Petrochemical Industry

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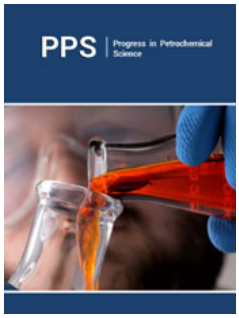

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Abstract

This study applies the Holland RIASEC model using the FIKR (facet, insight, knowledge and resilience) profiling assessment tool to a sample of 100 respondents to assess their suitability for roles as researchers and CEOs within the petrochemical industry. The analysis focuses on identifying individuals whose personality traits align with the demands of these positions, particularly emphasizing the Investigative (I), Realistic (R), Enterprising (E) and Conventional (C) dimensions. The findings reveal that individuals with high Investigative and Realistic scores are best suited for research roles. In contrast, those with high Enterprising and Conventional scores, combined with strong Realistic traits, are ideal candidates for leadership positions. These insights are crucial for developing targeted talent management strategies that align personal strengths with professional roles in the petrochemical industry.

Keywords: Holland RIASEC model; Petrochemical industry; Career alignment; Leadership roles; Talent management

Introduction

As the petrochemical industry evolves, aligning individual traits with professional roles will become increasingly important. This study offers a methodical approach to talent management, ensuring that individuals are placed in roles where they can maximize their potential and contribute effectively to the industry's growth and success. The petrochemical industry is a cornerstone of modern industrial infrastructure, providing the raw materials necessary for countless products and processes [1]. Given the industry's complexity, identifying and placing the right individuals in research and leadership roles is essential for maintaining innovation and operational efficiency. The Holland RIASEC model with six personality types-Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E)-and Conventional (C), is a valuable tool in this context, as it systematically categorizes individuals based on their personality traits, providing insights into which careers they are most likely to succeed [2]. Research roles within the petrochemical industry require specific skills, particularly those associated with the Holland model's I and R dimensions. Individuals who score highly in these areas are typically strong in analytical thinking and problem-solving, making them well-suited for roles that involve extensive scientific inquiry and technical tasks [3,4].

These roles are critical for driving the innovation needed to keep the petrochemical industry competitive and sustainable. On the other hand, leadership roles within the petrochemical industry demand a different combination of traits [5]. High scores in Enterprising and Conventional dimensions and strong Realistic traits suggest a natural

aptitude for management and strategic decision-making within a structured environment [3]. The petrochemical industry was selected for this study due to its significant contribution to the global economy, its substantial environmental impact and the inherent occupational risks associated with the sector [6]. The industry's reliance on non-renewable fossil fuels and energy-intensive operations [6] further underscores the need for strategic talent placement to drive innovation and sustainability. The FIKR (facet, insight, knowledge and resilience) profiling assessment tool has been used by Humanology Sdn. Bhd. This study aims to apply the RIASEC model using FIKR profiling assessment tool to identify individuals within a sample of 100 respondents, aiming to identify those most suited for research and leadership roles within the petrochemical industry. By focusing on the key traits relevant to these positions, this research provides valuable insights into how personality assessments can inform career alignment in this sector [7].

Methodology

Humanology SDN BHD provided us with independent samples of valid 100 participants. Each participant provided a full set of item responses on a 200-item. This The questionnaire is quantitative type (dichotomous survey scale) with Yes (1) or No (0) surveys. This allows the respondents to provide quick, straightforward answers by choosing between the two options. The 200-item included the personality traits needed to assess the Holland codes, namely, R included Endurance, Variety and Aggressive; I included Self-criticism, Analytical and Intellectual; A included Intuition, Emotional and Perceiver; S included Dependent, Nurturance and Extrovert; E included Extrovert, Achievement and Control; and C included Support, Structure, Self-conceptual and Autonomy. The study involved a sample of 100 respondents who were assessed using the Holland RIASEC model using FIKR profiling assessment tool, a widely recognized tool for career assessment. The primary focus was on identifying individuals suitable for research roles, which require high scores in the I and R dimensions and leadership roles, which require high scores in the E, C and R dimensions. Data was collected through a structured survey, and the results were analyzed to determine the suitability of each respondent for these roles.

Results

Table 1 shows the overall summary of overview of the suitability of respondents for petrochemical industry based on their RIASEC model scores using FIKR profiling assessment tool. The analysis of the 100 respondents based on the Holland RIASEC model using FIKR profiling assessment tool reveals a varied distribution of traits, providing insights into their potential career alignments. The R dimension, which scored an average of 22.5, indicates a significant inclination towards practical, hands-on tasks among the respondents. This is further highlighted by the range of scores from 11 to 30, suggesting that while some individuals may have a moderate preference for realistic activities, a substantial portion is highly inclined towards technical and physical tasks. Such traits are particularly valuable in fields like engineering, construction and other technical professions where practical application is paramount. The I dimension, with an average score of 18.9 and a range of 4 to 28, reflects the respondents' analytical and problem-solving capabilities. Individuals who scored above 21 are likely to be strong candidates for research-oriented roles, scientific inquiry and other professions requiring high cognitive engagement. The presence of individuals with high Investigative scores points to a significant potential for success in academic research, healthcare, IT and similar fields were analytical thinking and curiosity drive innovation and discovery.

Table 1: Overall summary of overview of the suitability of respondents for petrochemical industry based on their RIASEC model scores using FIKR profiling assessment tool.

No.	Dimension	Average Score	Score Range	Interpretation	Potential Career Alignments
1	Realistic (R)	22.5	11 to 30	Significant inclination towards practical, hands-on tasks; valuable in technical and physical task-oriented fields.	Engineering, Construction, Technical Professions
2	Investigative (I)	18.9	4 to 28	Reflects strong analytical and problem-solving capabilities; high scores suggest potential in research and cognitive-driven fields.	Academic Research, Healthcare, IT, Scientific Inquiry
3	Artistic (A)	16.4	7 to 29	Moderate creativity and expressive abilities; high scores indicate a strong affinity for creative professions.	Arts, Design, Media
4	Social (S)	21.5	9 to 28	Demonstrates capability in interpersonal interactions; readiness for roles requiring strong communication and empathy.	Counselling, Teaching, Social Work
5	Enterprising (E)	20.4	N/A	Indicates a propensity for leadership and entrepreneurial roles; strong potential for management positions.	Executive Roles, Entrepreneurial Endeavours, Management in Corporate Settings
6	Conventional (C)	29.6	N/A	High suitability for structured environments with a focus on leadership and organizational tasks.	Administrative Roles, Leadership Positions, Structured Corporate Roles, including in the Petrochemical Industry

The A trait, which averaged 16.4 with scores ranging from 7 to 29, suggests moderate creativity and expressive abilities among the respondents. Those scoring above 22 may have a strong affinity for creative professions, such as arts, design and media. However, the relatively lower average indicates that while creativity is present, it is not the most dominant trait in this group. This could imply that while some respondents may pursue artistic careers, the majority may lean towards more structured roles that do not heavily rely on artistic expression. The S traits, with an average score of 21.5, demonstrate the respondents' capability to engage in interpersonal interactions and community-focused roles. The range of 9 to 28 suggests that there is a diversity of social skills within the group, with some individuals excelling in roles that require strong communication and empathy, such as counselling, teaching and social work. High scores in this dimension indicate a readiness to work in professions that involve helping others and building relationships, which are crucial in the social and community service sectors. Finally, the analysis of E and C traits reveals a strong potential for leadership and organizational roles. With average scores of 20.4 for Enterprising and 29.6 for Conventional, the data suggests that many respondents are well-suited for structured environments where they can utilize their leadership and administrative skills. High Enterprising scores indicate a propensity for entrepreneurial endeavors and management positions, making these individuals likely candidates for executive roles in corporate settings, including the petrochemical industry.

Discussion

Aligning talent with roles in the petrochemical industry: Insights from the RIASEC model

The analysis of 100 respondents based on the Holland RIASEC model using FIKR profiling assessment tool provides valuable insights into the alignment of individual traits with roles in research and leadership within the petrochemical industry [4,7].

Researcher roles

Individuals with high scores in the I and R traits emerged as strong candidates for research positions. These individuals exhibit a natural inclination towards analytical thinking, problem-solving and a preference for hands-on, practical tasks [3,7]-essential qualities for research roles in the petrochemical industry. The data showed that respondents such as individual 4, with a R score of 27 and an I score of 24 and individual 8, with a R score of 30 and an I score of 24, are well-suited for research-oriented roles [8]. Their ability to engage in rigorous scientific inquiry and apply practical solutions makes them ideal for contributing to innovation and technical advancements within the industry [9].

CEO and leadership roles

Conversely, individuals with high scores in the E, C and R traits were identified as potential leaders, particularly in the structured and regulated environment of the petrochemical industry. These individuals demonstrated strong leadership capabilities, organizational skills and a preference for structured tasks, which are critical for executive roles such as CEOs [7,10,11]. For example, individual 51, with scores of 30 in R, 28 in E and 39 in C and individual 95, with scores of 29 in R, 30 in E and 27 in C, exhibit the necessary traits to excel in leadership positions within the petrochemical industry [12]. The analysis highlights the effectiveness of the RIASEC model using FIKR profiling assessment tool in identifying potential candidates for specialized career paths in the petrochemical industry. This understanding can inform talent management strategies, ensuring that individuals are placed in roles that align with their strengths and contribute to the overall success of the industry.

Balanced traits

While the analysis focused on individuals with distinct strengths in specific RIASEC dimensions using FIKR profiling assessment tool, it is important to note that a balance of traits can also be beneficial for certain roles. The petrochemical industry requires a diverse range of skills and competencies and individuals with a blend of RIASEC dimensions using FIKR profiling assessment tool may excel in roles that demand a more versatile skillset [6,13]. By leveraging the insights from the RIASEC model using FIKR profiling assessment tool, the petrochemical industry can optimize its talent management strategies. This will ensure that the right individuals are placed in the right roles, ultimately driving innovation, efficiency and growth within the sector.

Alternative career paths

It is worth noting that the RIASEC model using FIKR profiling assessment tool can also be useful in identifying alternative career paths for individuals within the petrochemical industry [14]. Individuals with strong A or S traits, for example, may be well-suited for roles in marketing, communication or human resources, where their unique capabilities can contribute to the organization's overall success [15].

Therefore, the RIASEC model using FIKR profiling assessment tool has proven to be a robust tool for identifying suitable candidates for specific roles within the petrochemical industry. By focusing on key traits relevant to research and leadership, the analysis has highlighted individuals likely to succeed in these demanding and specialized roles, while offering guidance on alternative career paths for those with different strengths. This approach not only enhances career alignment but also ensures that organizations can effectively leverage the diverse talents of their workforce.

Conclusion

In conclusion, the RIASEC model using FIKR profiling assessment tool proves to be a powerful tool for assessing individual suitability for specific career paths within the petrochemical industry. The analysis of 350 respondents highlighted a diverse range of strengths and potential career alignments. While a small percentage of individuals demonstrated the ideal combination of traits for research and leadership roles, the majority showed strengths in other areas that could be leveraged in different capacities. This underscores the need for a nuanced approach to

talent management, where individuals are guided towards roles that align with their natural strengths, ultimately leading to more effective and fulfilling career trajectories within the industry.

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