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A Literature Review on Vocational Interest Measurements Using Bibliometric Analysis

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Abstract. Vocational interest assessments play an important role in supporting high school students in identifying appropriate career paths, particularly for those planning to pursue tertiary education. Nevertheless, a comprehensive evaluation of the literature is essential to assess the relevance, gaps, and current state of vocational interest measurement. Therefore, this study aimed to analyze global publication trends and research related to vocational interest assessment. Using a bibliometric approach, 232 articles were retrieved from the Dimensions AI database, covering the period from 1924 to 2024. The Journal of Vocational Behavior emerged as the most prominent journal in this field, while James B. Round from the University of Illinois, Urbana-Champaign was identified as the most influential author. Between 2014 and 2024, 62 relevant publications were recorded, including six from Indonesia. This study offered insights into publication growth, author affiliations, and key themes while identifying underdeveloped areas requiring further exploration in the measurement of vocational interest.

Keywords: assessment; bibliometrics; instrument; psychometrics properties; vocational interest

Introduction

Vocational interest measures play a crucial role in helping individuals map careers according to their personality constructs (Ackerman & Heggestad, 1997; Garcia-Sedeño et al., 2009; Su & Rounds, 2021). In educational settings, these recommendations serve as career counseling tools to help determine the most suitable academic programs for students; thus, measuring vocational interest assists students in avoiding the wrong major (Ali, 2018; Reardon, 2017; Stoll et al., 2020). Meanwhile, mapping the interest areas in industrial and organizational contexts is essential for evaluating positions that best fit employees' personalities (Batista & Gondim, 2023; Van Vianen, 2018). Therefore, interest areas are one of the crucial aspects to consider in career decision-making, alongside intelligence, talent, and personality traits (Ali, 2018; Bergner, 2020; Hanna & Rounds, 2020).

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Vocational interest measurement, deeply rooted in the person-environment-fit (P-E) theory, highlights the need for aligning individual interests with career choices to enhance satisfaction and performance (Hoff et al., 2019). The P-E theory emphasizes the importance of congruence between interest areas and pursued career fields ("Interest congruence and performance: Revisiting recent meta-analytic findings", 2017; Van Vianen, 2018). Such congruence fosters positive outcomes, including high motivation, satisfaction, and individual performance, in both academic and professional domains (Ertl et al., 2022; Nye et al., 2021). Conversely, individuals experiencing incongruence between their interests and career paths may manifest distress, burnout, absenteeism, and low work engagement, leading to physiological symptoms, such as high blood pressure and decreased immunity (Brandstätter et al., 2016; Kim & Lee, 2019; Li et al., 2022). Incongruence often leads to turnover intentions and even actual employee turnover (Van Iddekinge et al., 2011). According to the P-E theory, this phenomenon occurs because humans inherently need environments that match their characteristics (Van Vianen, 2018).

Vocational interest measurements are foundational for career exploration, providing career recommendations for individuals and serving as a basis for career planning (Brandt, 1977). A study by Cadaret and Hartung (2020) showed how vocational interest assessment can serve as a basis for identifying clients' career interests before interventions are provided. The study found an increase in vocational identity and career adaptability, especially in the aspects of concern (ability to plan an occupational future), curiosity (ability to explore occupational options), and confidence (ability to overcome barriers in career decision-making). These findings underscore the role of vocational interest measurement. Moreover, vocational interest assessments should have been done since adolescence to encourage individual career exploration (Sung et al., 2017; Zytowski, 1976). Early exposure and introduction to various occupations are expected to help individuals build self-knowledge about various career fields (Ayriza et al., 2020).

Given the current urgency, researchers have been developing various such instruments. Based on studies on these tools, there appears to be a trend shift in developing vocational interest instruments, particularly in terms of format (Weißmann et al., 2022). In addition to the changes in trends in vocational interest instruments, questions regarding the relevance of the constructs, models, and psychometric properties of these instruments should also be raised (Yudiana et al., 2019). Instruments that are not well-maintained can produce results that fail to accurately reflect an individual's actual interests. In this context, the vocational interest instruments listed in the Official Order of the Indonesian Psychological Association (Surat Keputusan HIMPSI) No. 024/SK/PP-HIMPSI/VIII/18 (e.g., RMIB, SSCT, and the Kuder Occupational Interest Survey (KOIS)) should be re-evaluated, in terms of their psychometric properties. Although maintaining the integrity of measurement tools is critical, studies on the psychometric properties of these vocational interest instruments remain scarce (Yudiana et al., 2019). Therefore, a more comprehensive examination of publication trends in vocational interest instruments is essential.

The contribution of each country to the scientific study of vocational interest also needs to be evaluated. It is important to determine whether these publications are still predominantly

dominated by Western-based studies the Eastern population has been adequately represented. This publication gap relates to the condition known as WEIRD (Western, Educated, Industrialized, Rich, and Democratic) psychology (Arnett, 2008; Thalmayer et al., 2021). Despite their importance, systematic evaluations of vocational interest measurement remain scarce, leaving the cultural fairness of existing tools unclear (Li et al., 2018).

Based on these urgencies, conducting bibliometric studies is essential. Bibliometrics is used to observe trends, relevance, gaps, and urgencies in vocational interest assessment. Bibliometric analysis can provide a state-of-the-art overview of the current publication landscape on vocational interest instruments. This evaluation includes assessing the annual publication growth rate on this topic, countries of corresponding authors, geomapping of country-based scientific production, institutional affiliations, the most productive journals in this area, the most globally cited articles, relevant terms in this publication topic, as well as co-authorship analysis and keyword cluster map. Such evaluation is crucial for identifying underdeveloped areas that still need to be addressed.

Thus, the present study aimed to analyze publication trends and literature related to vocational interest measurement over the past century (1924-2024). This study would benefit scholars, education practitioners, career counselors, instrument developers, researchers in the field of vocational interest, and prospective students who are about to choose majors or careers.

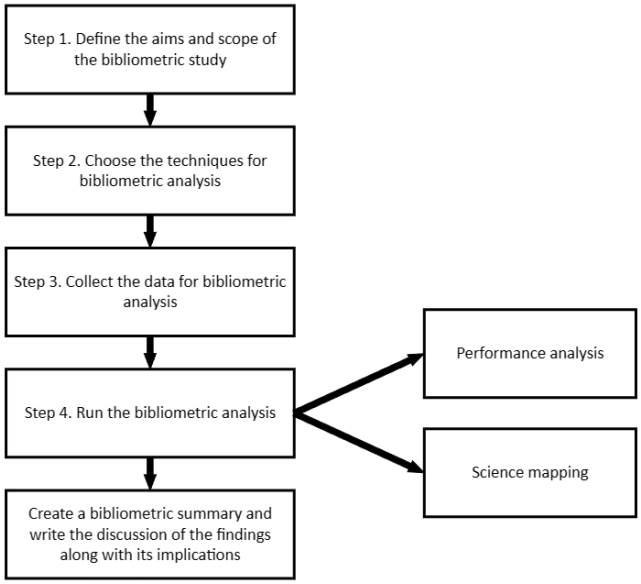
Method

This study employed a literature review method, incorporating bibliometric analysis techniques. A literature review is a research approach that aims to synthesize findings from previous studies to assess the existing knowledge regarding a particular research topic or field (Snyder, 2019). Meanwhile, bibliometrics is a technique used in literature reviews, which evaluates the state of knowledge based on publication trends of scholarly articles (Donthu et al., 2021). In the current study, the bibliometric analysis procedure was conducted following the guidelines provided by Donthu et al. (2021).

Based on the aforementioned guideline, the stages of conducting a bibliometric analysis include: 1) defining the scope: establishing boundaries regarding the objectives of the study, the timeframe, and the types of publications included in the analysis; 2) selecting analysis techniques: choosing the appropriate bibliometric methods to achieve the study's goals; 3) collecting bibliometric data: gathering relevant data through data mining from selected databases; 4) performing bibliometric analysis: analyzing the collected data using necessary metrics; and 5) reporting findings: presenting the results, discussion and their implications in the analysis (Donthu et al., 2021). More specifically, the research procedure is illustrated in Figure 1.

Figure 1

Bibliometrics Procedure (Donthu et al., 2021)



Bibliometric analysis was chosen to map publication trends related to vocational interest measurement over the past century, from 1924 to 2024. This mapping helps the researcher understand the relevance, gaps, and current urgency in the discourse of vocational interest measurement. The bibliometric analysis technique in this study combined performance analysis and science mapping (van Eck & Waltman, 2010). Performance analysis refers to a summary of constituent profiles, e.g., researchers, institutions, countries, and journals, that have been productive in studying vocational interest measurement. Meanwhile, science mapping refers to a summary of the intellectual structure through mapping co-authorships and keyword clusters.

The data collection process utilized the Dimensions AI database. Dimensions AI is a comprehensive research database that provides a wide range of scientific publication data from indexed and accredited journals. It supports data integration and follows open science principles, particularly the principle of open access. Therefore, Dimensions AI offers free accessibility and transparency for the readers. The keywords used in the identification were "vocational interest" and (“instrument” or “tools” or “assessment” or “questionnaire” or “rmib” or “holland” or “riasec” or “sds” or “scii” or “svib” or “jvis” or “kuder” or “cai” or “pii” or “eii” or “pictorial” or “scct”) and (“validity” or “reliability” or “psychometrics” or “properties” or “property” or “cfa” or “efa” or “construct”).” Those keywords were selected based on selected literature in a preliminary study, including the vocational interest measurement list by the Official Order of the Indonesian Psychological Association No. 024/SK/PP-HIMPSI/VIII/18.

The database search yielded 232 articles, all of which were imported into the data processing applications, Vosviewer version 1.6.20 (van Eck & Waltman, 2010), and the ‘bibliometrix’ package

(Aria & Cuccurullo, 2017) in RStudio. Analysis of titles and abstracts resulted in 4,457 terms. The researchers then set a minimum threshold of 10 appearances, bringing down the terms to 145. Then, 60% of terminologies with the highest relevance values were selected, resulting in 87 terminologies analyzed in the bibliometric analysis (the data analysis can be accessed in the Supplementary section).

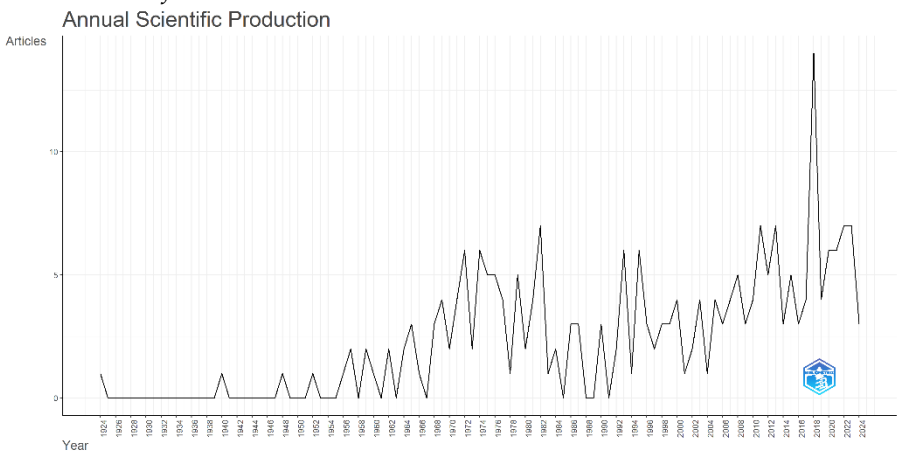
Result

This study focused on mapping trends in vocational interest measurement, with a specific emphasis on the instruments' psychometric properties. Through the data scraping process conducted on the Dimension AI, a total of 232 relevant research articles spanning from 1924 to 2024 were obtained. Descriptions related to author (AU), document type (DT), publication year (PY), title (TI), and total citations (TC) did not have missing values. However, missing values were found in the journal name (0.43%), abstract (0.86%), affiliation (0.86%), and DOI (0.86%), but these descriptions still fell within the "good" category, allowing the researcher to proceed with data analysis. The articles came from 79 journals, with an annual publication growth rate in this topic of 1.1%.

Performance analysis was conducted by mapping publication years, corresponding authors' countries, geo-mapping of countries' scientific production, institutional affiliations, and the most productive journals discussing the topic of vocational interest measurement. Figure 1 shows the mapping of publication year trends. The average age of articles on this topic is 28 years old. Regarding productivity, 2018 stood out as the most productive year for publications on vocational interest measurement, with 14 articles published, accounting for 6.03% of the total. In more detail, the distribution of publication years of articles on the topic of vocational interest measurement is provided in Figure 2.

Figure 2

Annual Scientific Production



Twenty seven countries were involved in the studies on vocational interest measurement from 1924 to 2024. The United States was found as the country with the highest production of scholarly articles (126 articles), followed by Germany (17 articles) and Australia (11 articles). Most articles discussed instruments, such as the Strong Vocational Interest Blank (SVIB) (Dolliver et al., 1972; Johnson et al., 1975; Strong et al., 1964), Strong Campbell Interest Inventory (SCII) (Betz & Taylor, 1982; Haviland & Hansen, 1987; Lubinski et al., 1995), and the Jackson Career Explorer (Schermer, 2019; Schermer, 2012). Indonesia ranked sixth with six articles on vocational interest measurement published. These six articles consist of studies by Nurcahyo (2019) and Nurcahyo and Valentina (2022) on the Pictorial Vocational Interest Inventory (PVII), a study by Artiawati et al. (2023) on the Ubaya Vocational Interest Inventory (UBVII), a study by Yudiana et al. (2019) on the Padjajaran Interest Inventory (PII), a study by Fatuhrahmah et al. (2020) on the Self-directed Search Holland (SDS-Holland), and a study by Suwondo and Subagyo (2014) on vocational interest learning scales. However, this study was limited to publications in English and excluded other languages. All articles or other sources in the Indonesian language were not included in the present study. The distribution of countries' scientific production is provided in Table 1, and its geo-mapping in Figure 3.

Table 1

Countries' Scientific Production on Vocational Interest Topics

No.	Region	N	No.	Region	N
1	United States	126	11	Argentina	2
2	Germany	17	12	Netherlands	2
3	Australia	11	13	Nigeria	2
4	Canada	9	14	Portugal	2
5	Israel	9	15	Romania	2
6	Indonesia	6	16	South Africa	2
7	Brazil	5	17	South Korea	2
8	China	5	18	Switzerland	2
9	Columbia	4	19	United Kingdom	2
10	Belgium	3	20	Bulgaria	1

The bibliometric analysis also reviewed the most relevant publications on the topic of vocational interest. These scientific journals include the Journal of Vocational Behavior, published by Academic Press Inc. (43 articles); the Journal of Counseling Psychology, published by the American Psychological Association (29 articles); and the Journal of Career Assessment, published by SAGE Publications Inc. (24 articles). Based on these relevant journals, studies on vocational interest measurement are predominantly published in journals focusing on applied psychology, organizational behavior, and human resource management. Table 2 and Figure 4 describe these journal sources in more detail.

Figure 3

Geo-mapping of Scientific Production Based on Country

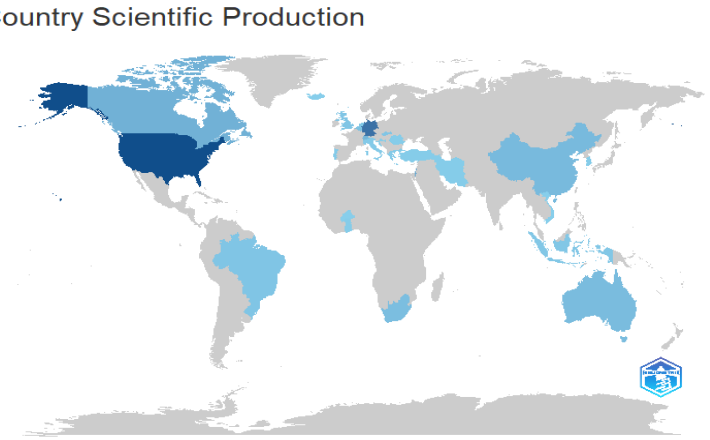


Table 2

Most Relevant Journal Sources

No.	Sources	Publisher	Articles
1	Journal of Vocational Behavior	Academic Press Inc.	43
2	Journal of Counseling Psychology	American Psychological Association	29
3	Journal of Career Assessment	SAGE Publications Inc.	24
4	Journal of Applied Psychology	American Psychological Association	18
5	Educational and Psychological Measurement	SAGE Publications Inc.	8
6	Measurement and Evaluation in Counseling and Development	Taylor and Francis Ltd.	6
7	Psychological Bulletin	American Psychological Association	6
8	International Journal for Educational and Vocational Guidance	Springer Netherlands	5
9	Journal of Consulting and Clinical Psychology	American Psychological Association	4
10	Psychological Reports	SAGE Publications Inc.	4

The most productive journals discussing vocational interest that had been successfully identified were then reviewed for their influence indices, i.e., the h-index, g-index, m-index, and total number of citations (TC). The analysis showed that the Journal of Vocational Behavior has an h-index of 19, followed by the Journal of Career Assessment with an h-index of 15, and the Journal of Counseling Psychology with an h-index of 13. The most influential journals publishing articles about vocational interest measurement are listed in Table 3.

Figure 4

Stages of Literature Screening

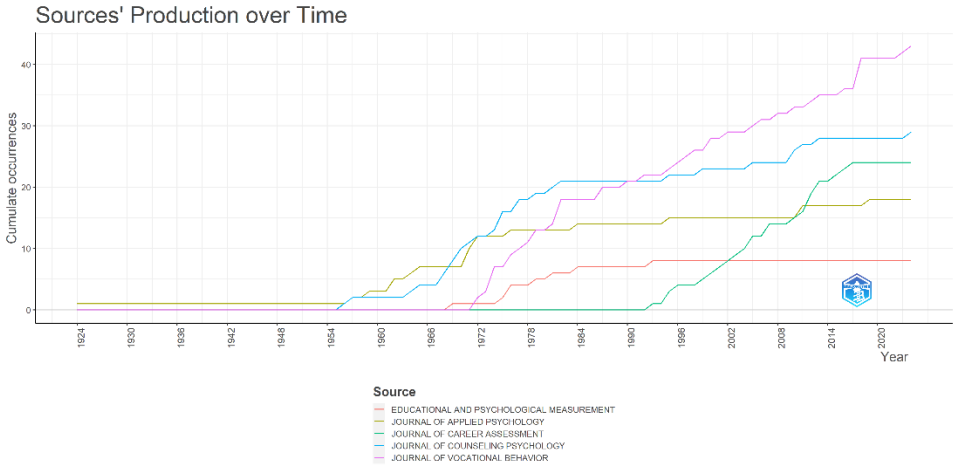


Table 3

Sources' Local Impact

Element	h_index	g_index	m_index	TC
Journal of Vocational Behavior	19	31	0.358	1,003
Journal of Career Assessment	15	24	0.469	723
Journal of Counseling Psychology	13	21	0.188	482
Journal of Applied Psychology	8	18	0.079	551
Psychological Bulletin	5	6	0.059	1,655

Note: h_index = number of papers that have been cited; g_index = citation performance for a set of articles; m_index = h-index per year since first publication; TC = Times cited

After conducting a performance analysis on the bibliometric data, the researcher followed up with a science mapping using co-authorship and keyword cluster map analyses. Co-authorship analysis was conducted using the Dimension AI database, with the assistance of VosViewer. The results of the co-authorship analysis indicated the presence of four clusters in the related topic, with two major clusters led by Rounds and Tracey. These two clusters intersected in the study by Anderson et al. (1997), regarding gender invariance in Holland's vocational interest model, and Tracey and Rounds (1993) meta-analysis evaluation of Holland (1973) and Gati (1982) vocational interest models. The co-authorship analysis is presented in Figure 5.

The analysis involved the identification of the most influential articles about vocational interest measurement. It was found that the study by Ackerman and Heggestad (1997), which pertains to the evaluation of the relationship between personality constructs, vocational interests, and intelligence, further solidified Holland (1973) interest model, became the most influential article on this topic. The five most influential articles on the topic of vocational interest measurement are listed in Table 4.

Figure 5

Co-authorship Analysis

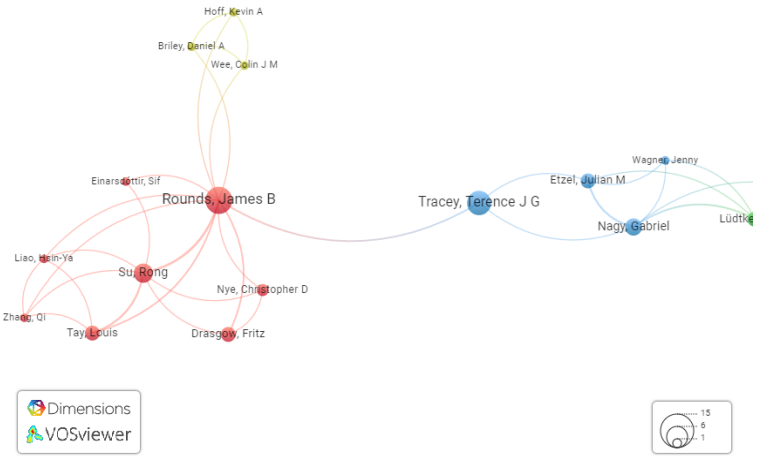


Table 4

Most Global Cited Documents

Author(s)	Paper	Journal	Total Citations	Citations per Year	Normalized Citations
Ackerman and Heggestad (1997)	Intelligence, personality, and interests: Evidence for overlapping traits.	Psychological Bulletin	1,237	44.18	1.90
Lubinski et al. (1995)	Scientific and Social Significance of Assessing Individual Differences: "Sinking Shafts at a Few Critical Points"	Annual Review of Psychology	274	10.96	2.99
Nye et al. (2012)	Vocational Interests and Performance: A Quantitative Summary of Over 60 Years of Research	Perspectives on Psychological Science	270	20.77	3.97
Lippa (1998)	Gender-related individual differences and the structure of vocational interests: The importance of the people–things dimension.	Journal of Personality and Social Psychology	269	9.96	2.37
Tracey and Rounds (1993)	Evaluating Holland's and Gati's Vocational-Interest Models	Psychological Bulletin	245	7.66	4.15

The keyword cluster mapping was conducted using the VosViewer application. A total of 87 terminologies were analyzed. The top ten most relevant terms obtained include self-rating (4.22), personality trait (3.88), PVII (3.04), outcome (2.67), big (2.39), ability (2.23), significant relationship (2.05), SCII (1.91), intelligence (1.86), and SCCT (1.74). It was found that self-rating instruments, or personal assessments, dominate instruments for measuring vocational interest. Research related to

personality traits and intelligence aspects also highlighted relevant studies. Moreover, the emergence of terms "PVII" and "SCII" also indicates a transition in the use of vocational interest instruments from the Self-Directed Search-Holland (SDS-Holland) to the Pictorial Vocational Interest Inventory (PVII). The relevant terms are presented in Table 5.

Table 5

Relevance Terminology

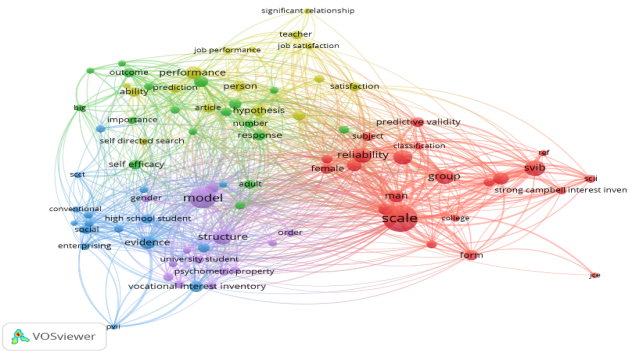
No	Term	Relevance	No	Term	Relevance
1	self-rating	4.22	11	jce	1.66
2	personality trait	3.88	12	ref	1.65
3	pvii	3.04	13	vocational personality	1.61
4	outcome	2.67	14	strong campbell interest inventory	1.57
5	big	2.39	15	teacher	1.53
6	ability	2.23	16	vocational interest inventory	1.49
7	significant relationship	2.05	17	incremental validity	1.32
8	scii	1.91	18	enterprising	1.32
9	intelligence	1.86	19	job performance	1.29
10	scct	1.74	20	svib	1.26

Notes: PVII = Pictorial Vocational Interest Inventory; SCII = Strong-Campbell Interest Inventory; SCCT = Social Cognitive Career Theory; JCE = Jackson Career Explorer; SVIB = Strong Vocational Interest Blank

The keyword cluster map reveals five major clusters related to vocational interest measurement (See Figure 6). Based on the network visualization, it is evident that the studies on vocational interest measurement primarily focused on testing the psychometric properties of vocational interest measurement tools, e.g., PVII, SDS-Holland, SVIB, SCII, and JCE. In the network visualization, the SCCT theory is closely associated with studies examining variables like self-efficacy and personality traits, aligning with the focus of SCCT itself. Additionally, the network visualization indicates that the studies employing tests for predictive validity are closely linked to job performance and job satisfaction. Interestingly, job motivation, which has been found to be an internal driving force for performance, does not appear prominently in the keyword cluster map.

Figure 6

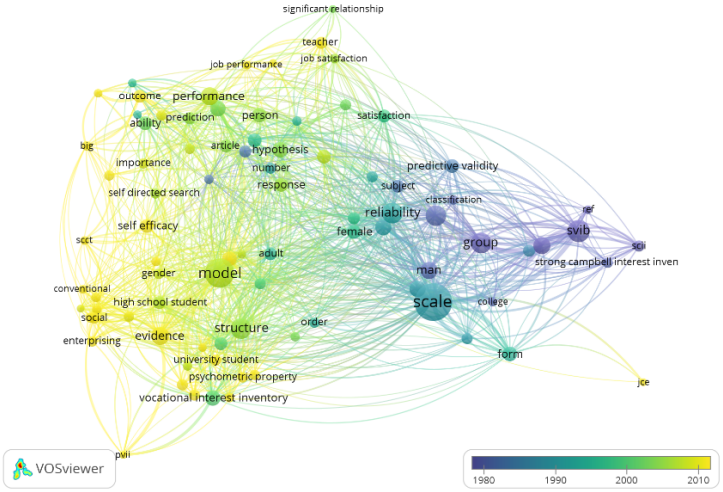
Keyword Cluster Map Based on Network



The keyword cluster map is further extended to the analysis of yearly publications (See Figure 7). It is noted that there has been a shift in the topics from verbal measurement tools (e.g., SVIB, SCII, and JCE) toward pictorial measurement tools (e.g., PVII). Meanwhile, SDS-Holland and the RIASEC models were still considered relevant and continued to be investigated until 2010. The analysis also indicates that studies on predictive validity in vocational interest measurement began to decline in the 1980s. Therefore, more relevant studies on predictive validity are needed in the future.

Figure 7

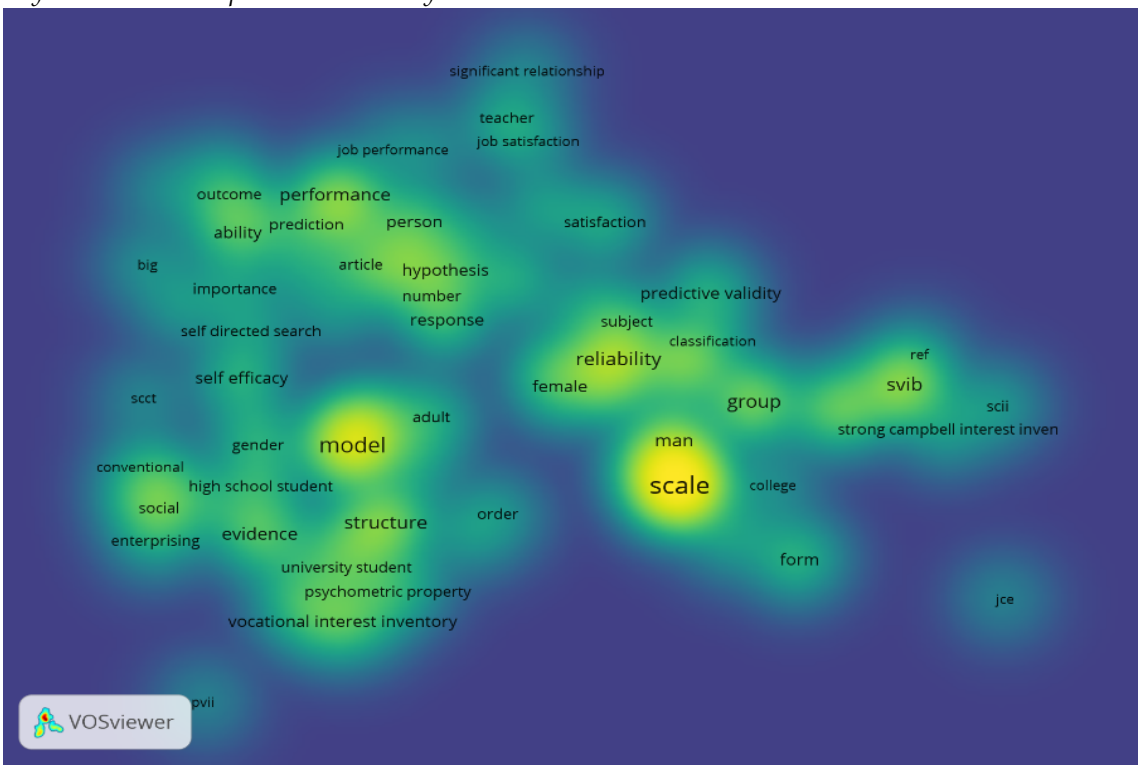
Keyword Cluster Map Based on Publication Year



The keyword cluster map is further extended to the analysis of publication density (See Figure 8). The terms "scale" and "model" emerge prominently in the analysis, indicating a significant focus of studies on vocational interest measurement around these two terms. However, some terms, such as "JCE" and "PVII," appear dim and separated from other variables. Further investigation of these two instruments is needed in the future.

Figure 8

Keyword Cluster Map Based on Density



Discussion

The implications of vocational interest measurement are based on the person-environment fit (P-E) theory (Hoff et al., 2019; Van Vianen, 2018). P-E theory postulates that individuals with congruent vocational interests and career environment may demonstrate optimal performance, satisfaction, and work motivation (Ertl et al., 2022; Nye et al., 2021; Pozzebon et al., 2015). Thus, measuring vocational interests to find the most fitting and congruent career environment for individuals will benefit their well-being and help them avoid distress, burnout, and disruptive physiological symptoms (Brandstätter et al., 2016; Kim & Lee, 2019). Failure to achieve congruence not only harms individuals personally but also affects organizations or companies. The high absenteeism rate among individuals experiencing incongruence is tangible proof for companies to ensure congruence between their employees' vocational interests and the workplace (Li et al., 2022). This is why vocational interest measurement tools become critical in career decision-making.

Researchers must ensure that the vocational interest measurement tools used in their respective regions exhibit strong psychometric properties. Additionally, ensuring the relevance of the constructs employed in these measurement tools is crucial. This study utilized bibliometric analysis to evaluate

trends in studies on vocational interest measurement from 1924 to 2024. The data scraping results from the Dimension AI database identified 232 relevant articles from 79 accredited journals. The annual publication growth rate on this topic was 1.1%.

The publications on vocational interest measurement have fluctuated. There was an increase in publications on this topic between 1967 and 1982, followed by a decline, before another rise between 1993 and 2023. From 2014 to 2024, 62 articles were published. Meanwhile, from 2019 to 2024, 33 articles related to vocational interest measurement were published.

The science mapping through the keyword cluster map reveals that Holland's Structure of Interest construct has been continuously researched since its emergence in the 1970s. This further strengthens the argument that Holland (1973) construct remains the most robust vocational interest construct to date. Other measurements that should be further examined in future research include the Jackson Career Explorer (JCE) developed by Schermer (2012), which is a short and continuous version of the Jackson Vocational Interest Survey (JVIS). Moreover, further research on the predictive validity of vocational interest assessment related to job satisfaction, work motivation, and job performance is still needed.

These vocational interest instruments have been categorized into verbal and pictorial (Weißmann et al., 2022). Verbal instruments have the advantage of presenting items clearly via words, but their validity and accuracy in item interpretation depend on clients' reading and comprehension abilities (Weißmann et al., 2022). Examples of verbal instruments include the Self-Directed Search Holland (SDS-Holland) (Holland et al., 1994), the Strong Interest Inventory (SII); (Donnay & Borgen, 1996), and the Kuder Occupational Interest Survey (Zytowski, 1976). Conversely, vocational interest instruments in pictorial form comprise items depicted as images or photographs, which raises the potential for ambiguity, resulting in unclear information captured by clients (Weißmann et al., 2022). Some examples of pictorial instruments include the Iconographic Professional Interest Inventory (3IP); (Boerchi & Magnano, 2015), the Pictorial and Descriptive Interest Inventory (PDII); (Šverko et al., 2014), and the Pictorial Vocational Interest Inventory (PVII); (Nurcahyo, 2019).

The keyword cluster maps and term relevance also reveal a gradual shift in the trend of using vocational interest measurement tools. This shift is shown by the emergence of terms from pictorial-based interest measurement tools (Nurcahyo, 2019; Nurcahyo & Valentina, 2022; Šverko et al., 2014), compared to the verbal-based tools that have been traditionally used (Holland, 1973; Holland et al., 1994; Johansson & Campbell, 1971; Zytowski, 1976). The pictorial-based measurement tools have great potential in the future, considering their advantages to be applied to adolescent clients (aged 12-18), individuals with cognitive impairments, and people with language limitations (Weißmann et al., 2022).

The bibliometric analysis in this study highlights not only science mapping but also performance analysis of cross-country publications. The analysis found that most studies on vocational interest measurement were concentrated in the United States. This finding validates criticisms of WEIRD (Western Educated Industrialized Rich and Democratic); (Anglada-Tort & Sanfilippo, 2019; Hendriks et al., 2018; Hernández-Torrano, 2019; Vijayabanu & Therasa, 2019). The term "WEIRD" criticizes

studies in psychology, which are mostly dominated by participants from Western, educated, industrialized, rich, and democratic countries. Studies by Arnett (2008) and then Thalmayer et al. (2021) revealed that from 2014-2018, the six leading journals in each sub-discipline of psychology were still dominated by studies from America. It can be said that only 11% of the world's population is represented in the top psychology journals, while the remaining 89% are overlooked. This imbalance is of special concern in the subfield of psychometrics, where the implementation of foreign measurement tools not only requires adaptation but also instigates the need to construct measurement tools with cultural values that are more suitable in the Eastern context (Li et al., 2018).

Limitation

This study is limited by its exclusive reliance on a bibliometric methodology, which restricts its ability to explore the conceptual paradigms and the most widely adopted interest assessment tools currently referenced across the globe. Moreover, the bibliometric analysis was confined to English-language publications indexed in the Dimensions AI database. Consequently, articles published in non-English languages or those not indexed within Dimensions AI could not be retrieved or analyzed in this study. Future research should take these methodological and database limitations into account and consider the following recommendations to enhance the comprehensiveness and cross-cultural representativeness of subsequent analyses.

Despite the results, this study had several limitations, one of which pertained to the restricted scope of search keywords that focused solely on factor analysis. Meanwhile, psychometrics actually encompasses four primary domains: (1) multivariate statistics; (2) structural equation modeling; (3) factor analysis; and (4) test theory. Consequently, this study concentrated exclusively on articles that examine internal structural validation, while articles evaluated using modern test theories (e.g., Rasch or item response theory) were excluded from the search results.

Conclusion

This study offers insights into publication growth, author affiliations, and key themes while identifying underdeveloped areas requiring further exploration in the measurement of vocational interest. A total of 232 relevant articles were identified from the Dimensions AI database spanning from 1924 to 2024. Most of the articles on vocational interest were published in 2018. The Journal of Vocational Behavior emerged as a journal with the highest contribution in the discourse of vocational interest measurement, with James B. Round being the most influential author on the topic. A total of 62 articles regarding vocational interest measurement have been published over the past decade (2014-2024), with most articles being studies conducted in the United States.

Implication

This bibliometric study highlighted several critical areas that psychologists should consider. For psychologists, understanding trends in the development of vocational interest assessments can help

them select relevant tools that align with evolving job markets, societal values, and contemporary educational practices. Psychologists must ensure that the tools they use are grounded in evidence-based practice, allowing vocational interest measurements to be conducted accurately and effectively. Conversely, tools lacking evidence of validity and reliability should be avoided until their psychometric properties are thoroughly established.

This study also provided insights for psychology researchers regarding areas where knowledge gaps remain, guiding future research directions. Further research from non-WEIRD (Western, Educated, Industrialized, Rich, and Democratic) countries, including Indonesia, is needed to reduce the biases often seen in WEIRD-based research. Lastly, it is essential for future studies to not only demonstrate the internal structure of these measurement tools but also to show their effectiveness through concurrent and predictive validity, which is crucial for advancing the field.

Recommendations

Further investigation through a scoping review is highly necessary to identify and compare these measurement tools to determine the most reliable option for measuring vocational interest within the Indonesian context. Additionally, research in psychometrics is crucial to assess the relevance of the psychometric properties of these measurement tools before they are used in practical settings and decision making.

Declaration

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Authors' Contributions

RSB did the conceptualization, data analysis and wrote original draft. NAA did the review and editing the manuscript.

Conflict of Interest

The author reports no conflict of interest in this study.

AI Use Disclosure

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References

Ackerman, P. L., & Heggestad, E. D. (1997). Intelligence, personality, and interests: Evidence for overlapping traits. *Psychological Bulletin*, *121*(2), 219–245. https://doi.org/10.1037/0033-2909.121.2.219

Ali, R. (2018). "Wrong Majors Phenomenon": a Challenge for Indonesia in Molding Globally Competent Human Resources to Encounter Demographic Dividend. *JKAP (Jurnal Kebijakan dan Administrasi Publik)*, *22*(1), 52. https://doi.org/10.22146/jkap.30242

Anderson, M. Z., Tracey, T. J., & Rounds, J. (1997). Examining the invariance of Holland's vocational interest model across gender. *Journal of Vocational Behavior*, *50*(3), 349–364. https://doi.org/10.1006/jvbe.1996.1550

Anglada-Tort, M., & Sanfilippo, K. R. M. (2019). Visualizing music psychology: A bibliometric analysis of psychology of music, music perception, and musicae scientiae from 1973 to 2017. *Music & Science*, *2*(1). https://doi.org/10.1177/2059204318811786

Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, *11*(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007

Arnett, J. J. (2008). The neglected 95%: Why American psychology needs to become less American. *American Psychologist*, *63*(7), 602–614. https://doi.org/10.1037/0003-066x.63.7.602

Artiawati, A., Kesumaningsari, N. P. A., Muttaqin, D., Kartika, A., Putri, K. S., Paramita, M. F. T., Putra, A., Handani, F., & Yohan, A. (2023). The early-stage development and content validity examination of Ubaya vocational interest inventory. *Journal of Educational, Health and Community Psychology*, *1*(1), 128. https://doi.org/10.12928/jehcp.v1i1.25379

Ayriza, Y., Triyanto, A., Setiawati, F. A., & Gunawan, N. E. (2020). Exploring children's career interests and knowledge based on holland's theory. *International Journal of Instruction*, *13*(4), 643–662. https://doi.org/10.29333/iji.2020.13440a

Batista, J. S., & Gondim, S. M. G. (2023). Personality and Person-Work Environment Fit: A Study Based on the RIASEC Model. *International Journal of Environmental Research and Public Health*, *20*(1). https://doi.org/10.3390/ijerph20010719

Bergner, S. (2020). Being smart is not enough: Personality traits and vocational interests incrementally predict intention, status and success of leaders and entrepreneurs beyond cognitive ability. *Frontiers in Psychology*, *11*(February), 1–19. https://doi.org/10.3389/fpsyg.2020.00204

Betz, N. E., & Taylor, K. M. (1982). Concurrent validity of the Strong-Campbell Interest Inventory for graduate students in counseling. *Journal of Counseling Psychology*, *29*(6), 626–635. https://doi.org/10.1037/0022-0167.29.6.626

Boerchi, D., & Magnano, P. (2015). Iconographic professional interests inventory (3IP): A new validation study. *Europe's Journal of Psychology*, *11*(4), 571–596. https://doi.org/10.5964/ejop.v11i4.927

Brandstätter, V., Job, V., & Schulze, B. (2016). Motivational incongruence and well-being at the workplace: Person-job fit, job burnout, and physical symptoms. *Frontiers in Psychology*, *7*(AUG), 1–11. https://doi.org/10.3389/fpsyg.2016.01153

Brandt, J. D. (1977). Model for the delivery of career development programs by the college counseling center. *Journal of Counseling Psychology*, *24*(6), 494–502. https://doi.org//0022-0167.24.6.494

Cadaret, M. C., & Hartung, P. J. (2020). Efficacy of a group career construction intervention with urban youth of colour. *British Journal of Guidance and Counselling*, *0*(0), 1–13. https://doi.org/10.1080/03069885.2020.1782347

Dolliver, R. H., Irvin, J. A., & Bigley, S. S. (1972). Twelve-year follow-up of the strong vocational interest blank. *Journal of Counseling Psychology*, *19*(3), 212–217. https://doi.org/10.1037/h0032736

Donnay, D. A., & Borgen, F. H. (1996). Validity, sStructure, and content of the 1994 strong interest inventory. *Journal of Counseling Psychology*, *43*(3), 275–291. https://doi.org/10.1037/0022-0167.43.3.275

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*(April), 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Ertl, B., Hartmann, F. G., & Wunderlich, A. (2022). Impact of interest congruence on study outcomes. *Frontiers in Psychology*, *13*(March). https://doi.org/10.3389/fpsyg.2022.816620

Fatuhrahmah, U., Darusmin, D. F., & Widiana, H. S. (2020). The intertwining of vocational aptitude and interest: A study among university students in Indonesia. *Psychology, Evaluation, and Technology in Educational Research*, *3*(1), 44–52. https://doi.org/10.33292/petier.v3i1.58

Garcia-Sedeño, M., Navarro, J. I., & Menacho, I. (2009). Relationship between personality traits and vocational choice. *Psychological Reports*, *105*(2), 633–642. https://doi.org/10.2466/PR0.105.2.633-642

Gati, I. (1982). Testing models for the structure of vocational interests. *Journal of Vocational Behavior*, *21*(2), 164–182. https://doi.org/10.1016/0001-8791(82)90027-6

Hanna, A., & Rounds, J. (2020). How accurate are interest inventories? A quantitative review of career choice hit rates. *Psychological Bulletin*, *146*(9), 765–796. https://doi.org/10.1037/bul0000269

Haviland, M. G., & Hansen, J.-I. C. (1987). Criterion validity of the Strong-Campbell Interest Inventory for American Indian college students. *Measurement and Evaluation in Counseling and Development*, *19*(4), 196–201. https://doi.org/10.1080/07481756.1987.12022840

Hendriks, T., Warren, M. A., Schotanus-Dijkstra, M., Hassankhan, A., Graafsma, T., Bohlmeijer, E., & de Jong, J. (2018). How WEIRD are positive psychology interventions? A bibliometric analysis of randomized controlled trials on the science of well-being. *The Journal of Positive Psychology*, *14*(4), 489–501. https://doi.org/10.1080/17439760.2018.1484941

Hernández-Torrano, D. (2019). Mapping global research on child well-being in school sontexts: A bibliometric and network analysis (1978–2018). *Child Indicators Research*, *13*(3), 863–884. https://doi.org/10.1007/s12187-019-09659-x

Hoff, K. A., Perlus, J. G., & Rounds, J. (2019). Vocational interests: Revisiting assumptions about their development and what they predict. In *International handbook of career guidance* (pp. 673–692). Springer International Publishing. https://doi.org/10.1007/978-3-030-25153-6_31

Holland, J. L. (1973). *Making vocational choices: A theory of careers*. Prentice–Hall.

Holland, J. L., Johnston, J. A., & Francis Asama, N. (1994). More evidence for the relationship between Holland's personality types and personality variables. *Journal of Career Assessment*, *2*(4), 331–340. https://doi.org/10.1177/106907279400200401

Interest congruence and performance: Revisiting recent meta-analytic findings. (2017). *Journal of Vocational Behavior*, *98*(May 2014), 138–151. https://doi.org/10.1016/j.jvb.2016.11.002

Johansson, C. B., & Campbell, D. P. (1971). Stability of the strong vocational interest blank for men. *Journal of Applied Psychology*, *55*(1), 34–36. https://doi.org/10.1037/h0030627

Johnson, R. W., Flammer, D. P., & Nelson, J. G. (1975). Multiple correlations between personality factors and SVIB occupational scales. *Journal of Counseling Psychology*, *22*(3), 217–223. https://doi.org/10.1037/h0076762

Kim, J. G., & Lee, K. H. (2019). Major incongruence and occupational engagement: A moderated mediation model of career distress and outcome expectation. *Frontiers in Psychology*, *10*(OCT), 1–11. https://doi.org/10.3389/fpsyg.2019.02360

Li, J., Xu, C., Li, C., & Zhang, H. (2018). Construction of vocational interests scale for young Chinese. *Journal of Pacific Rim Psychology*, *12*. https://doi.org/10.1017/prp.2017.26

Li, J., Flores, L. Y., Yang, H., Weng, Q., & Zhu, L. (2022). The role of autonomy support and job crafting in interest incongruence: A mediated moderation model. *Journal of Career Development*, *49*(5), 1181–1195. https://doi.org/10.1177/08948453211033903

Lippa, R. (1998). Gender-related individual differences and the structure of vocational interests: The importance of the people–things dimension. *Journal of Personality and Social Psychology*, *74*(4), 996–1009. https://doi.org/10.1037/0022-3514.74.4.996

Lubinski, D., Benbow, C. P., & Ryan, J. (1995). Stability of vocational interests among the intellectually gifted from adolescence to adulthood: A 15-year lLongitudinal study. *Journal of Applied Psychology*, *80*(1), 196–200. https://doi.org/10.1037/0021-9010.80.1.196

Nurcahyo, F. (2019). Development and psychometric properties of Pictorial Vocational Interest Inventory for Indonesian adolescents. *Electronic Journal of Research in Educational Psychology*, *17*(47), 213–236. https://doi.org/10.25115/ejrep.v17i47.2132

Nurcahyo, F., & Valentina, T. D. (2022). Evidence of validity based on the relation to other variable of Pictorial Vocational Interest Inventory. *Electronic Journal of Research in Educational Psychology*, *21*(59), 205–222. https://doi.org/10.25115/ejrep.v21i59.6364

Nye, C. D., Prasad, J., & Rounds, J. (2021). The effects of vocational interests on motivation, satisfaction, and academic performance: Test of a mediated model. *Journal of Vocational Behavior*, *127*(April), 103583. https://doi.org/10.1016/j.jvb.2021.103583

Nye, C. D., Su, R., Rounds, J., & Drasgow, F. (2012). Vocational interests and performance: A quantitative summary of over 60 years of research. *Perspectives on Psychological Science*, *7*(4), 384–403. https://doi.org/10.1177/1745691612449021

Pozzebon, J. A., Visser, B. A., & Bogaert, A. F. (2015). Vocational interests, personality, and sociosexuality as indicators of a general masculinity/femininity factor. *Personality and Individual Differences*, *86*, 291–296. https://doi.org/10.1016/j.paid.2015.06.019

Reardon, R. C. (2017). Enhancing self-help career planning using theory-based tools. *Journal of Career Assessment*, *25*(4), 650–669. https://doi.org/10.1177/1069072716653376

Schermer, J. A. (2019). The Jackson career explorer: Correlates with self-monitoring and social desirability. *Psychological Reports*, *122*(4), 1516–1528. https : / / doi . org / 10 . 1177 / 0033294118781321

Schermer, J. A. (2012). The Jackson Career Explorer: Two further validity studies. *Journal of Career Assessment*, *20*(4), 507–519. https://doi.org/10.1177/1069072712450288

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*(August), 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Stoll, G., Einarsdóttir, S., Song, Q. C., Ondish, P., Sun, J. J., & Rounds, J. (2020). The roles of personality traits and vocational interests in explaining what people want out of life. *Journal of Research in Personality*, *86*, 103939. https://doi.org/10.1016/j.jrp.2020.103939

Strong, E. K., Berdie, R. F., Campbell, D. P., & Clark, K. E. (1964). Proposed scoring changes for the Strong Vocational Interest Blank. *Journal of Applied Psychology*, *48*(2), 75–80. https://doi.org/10.1037/h0043502

Su, R., & Rounds, J. (2021). Vocational interests. In *Career development, employment and disability in rehabilitation: From theory to practice*. Springer Publishing Company. https://doi.org/10.1891/9780826158161.0011

Sung, Y. T., Cheng, Y. W., & Hsueh, J. H. (2017). Identifying the career-interest profiles of junior-high-school students through latent profile analysis. *Journal of Psychology: Interdisciplinary and Applied*, *151*(3), 229–246. https://doi.org/10.1080/00223980.2016.1261076

Suwondo, C. N., & Subagyo, S. (2014). Related vocational interest to learning and entrepreneurial learning achievement with entrepreneurship interest on the studens automotive engineering islamic vocational school yogyakarta academic year 2013/2014. *TAMAN VOKASI*, *2*(1). https://doi.org/10.30738/jtvok.v2i1.232

Šverko, I., Babarović, T., & Medugorac, V. (2014). Pictorial assessment of interests: Development and evaluation of Pictorial and Descriptive Interest Inventory. *Journal of Vocational Behavior*, *84*(3), 356–366. https://doi.org/10.1016/j.jvb.2014.02.008

Thalmayer, A. G., Toscanelli, C., & Arnett, J. J. (2021). The neglected 95% revisited: Is American psychology becoming less American? *American Psychologist*, *76*(1), 116–129. https://doi.org/10.1037/amp0000622

Tracey, T. J., & Rounds, J. B. (1993). Evaluating Holland's and Gati's vocational-interest models: A structural meta-analysis. *Psychological Bulletin*, *113*(2), 229–246. https://doi.org/10.1037/0033-2909.113.2.229

Van Iddekinge, C. H., Roth, P. L., Putka, D. J., & Lanivich, S. E. (2011). Are you interested? A meta-analysis of relations between vocational interests and employee performance and turnover. *Journal of Applied Psychology*, *96*(6), 1167–1194. https://doi.org/10.1037/a0024343

Van Vianen, A. E. (2018). Person-environment fit: A review of its basic tenets. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*, 75–101. https://doi.org/10.1146/annurev-orgpsych-032117-104702

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

Vijayabanu, C., & Therasa, C. (2019). Bibliometric evidence : Statistical outcome of Personality – Psychology research using Scopus database from 1860 to 2017. *COLLNET Journal of Scientometrics and Information Management*, *13*(1), 183–197. https://doi.org/10.1080/09737766.2019.1583837

Weißmann, R., Bartosch, U., & Thomas, J. (2022). Development and psychometric properties of the Nonverbal Vocational Interest Scale (NVIS). *Cogent Education*, *9*(1). https://doi.org/10.1080/2331186X.2022.2084957

Yudiana, W., Reswara, I. P., Wiyono, S., & Purwono, R. U. (2019). Padjadjaran interest inventory: Evaluation of psychometric properties. *Jurnal Psikologi*, *46*(1), 19–31. https://doi.org/10.22146/jpsi.38684

Zytowski, D. G. (1976). Predictive validity of the Kuder Occupational Interest Survey: A 12- to 19-year follow-up. *Journal of Counseling Psychology*, *23*(3), 221–233. https://doi.org/10.1037/0022-0167.23.3.221