

The Indonesian Career Literacy Scale: The Early-Stage Development and Validity of the Indicators

Arini Widyowati

Faculty of Psychology, Ahmad Dahlan University,
Yogyakarta, Indonesia

arini.widyowati@psy.uad.ac.id

, Herlina Siwi Widiana

Faculty of Psychology, Ahmad Dahlan University,
Yogyakarta, Indonesia

herlina.widiana@psy.uad.ac.id

Abstract

Career literacy is an important factor that supports individuals in setting career goals and making career decisions. To assess the level of individuals' career literacy, a valid measurement that can describe the true literacy level is needed. However, so far there are no tools to assess career literacy levels among adolescents in Indonesia. The study aims to validate the behavioural indicators of a career literacy scale for Indonesian adolescents. The research involved five experts in career development and psychometry. The data collected through the questionnaire contains 50 behavioural indicators of the career literacy scale that was analyzed through V Aiken's formula. The results revealed that all indicator have V coefficient ranging from 0.40 – 1.00. The 24 selected indicators consist of three indicators in each aspect of the concepts dimension and five indicators in each aspect of the skills dimension as the indicators of the Indonesian Career Literacy Scale. Therefore, the career literacy construct identified in a study in USA is also relevant for Indonesians and can be used in developing the Indonesian Career Literacy Scale.

Keywords: *career literacy, career literacy scale, career development, adolescence.*

Received 19 August 2024/Accepted 28 December 2024 ©Author all rights reserved

Introduction

Adolescence is a critical developmental period during which individuals are faced with some challenges in navigating transitions and making important life decisions, such as choosing suitable educational paths and career goals (Santilli et al., [2017](#)). During this phase, adolescents are expected to engage in self-and career exploration, establish career goals, make initial career decisions, and develop work readiness (Lent & Brown, [2013](#)), which determine success in their personal and future career lives (Oliveira & Araújo, [2022](#)). Those who are capable of setting career goals and have a strong commitment to achieving them are more successful in obtaining

employment and experience greater satisfaction in both their work and personal lives (Li & Shi, [2023](#)).

An important factor that determines individuals' ability to set goals and make career decisions is their ability to understand and process career-related information, which is also known as career literacy (Rahmani & Hastjarjo, [2022](#)). Career literacy is defined as a set of skills and abilities that individuals need to access, understand, interpret, and evaluate career-related information and use it in career planning and decision-making (Valentine, [2022](#); Valentine & Kosloski, [2021](#)). This definition aligns with patterns and measurement of literacy in other domains, such as financial literacy, food, and nutritional literacy, which encompass the progressive development of competencies individuals must possess to be adequately equipped for adulthood. Career literacy represents three categories of skills: functional, which describes the basic knowledge and skills required by an individual to read and understand career information; interactive, which refers to the ability to interpret career-related information; and critical, which represents the individual's ability to evaluate and make decisions based on career-relevant information (Valentine, [2022](#); Valentine & Kosloski, [2021](#)).

Career literacy enables individuals to make decisions from a perspective that is informed by more than just their surroundings (Valentine & Kosloski, [2021](#)). It helps individuals to adapt to change and to create, design, and recognise paid employment possibilities, as well as living and learning experiences that facilitate the attainment of fulfilling lifestyles (McMahon et al., [2010](#)). Previous research found that perceived career-related information, indicating higher career literacy, was associated with higher career information self-efficacy and career certainty/major satisfaction (Pesch et al., [2018](#)). In contrast, aligned with the concept of career decision-making difficulties, individuals with lower career literacy indicate a lack of information about self-and career-related information, as well as difficulties in making decisions based on career-related information (Gati et al., [1996](#)). Previous research found that lack of information about self and career was associated with higher career indecision among high school students (Boye et al., [2024](#)).

Align with the Social Cognitive Career Theory (SCCT) (Lent et al., [2002](#)), the concept of career literacy acknowledges the importance of personal, environmental, and behavioral factors that are influenced by each other through intricate, reciprocal relationships in shaping individual career development. According to SCCT, in the first level, individual career interest and decision is determined by cognitive-person variables (self-efficacy, outcome expectation, and personal goals) that empower individuals to exert control over their career development. The second level refers to the various pathways through which additional sets of variables, such as physical attributes (e.g., sex and ethnicity), environmental factors, and specific learning experiences, impact career-related interests and decision-making. Both SCCT and career literacy emphasize the role of environmental factors that are considered as support or barriers that enhance or constrain individuals in setting career goals and decision-making. Career literacy is a personal resource that helps individuals overcome career barriers. Increasing career literacy impacts individuals' self-efficacy belief toward careers which in turn enhances career expectations and career goals (Valentine & Kosloski, [2021](#)).

A concept that is often identified with career literacy is career readiness (Valentine, [2022](#); Valentine & Kosloski, [2021](#)). Career readiness is defined as the skills required by an individual to be able to perform a job (Malin et al., [2017](#)). Career readiness describes the skills that individuals need to acquire and maintain in their work. Further, career readiness integrated into college career readiness (CCR) based on the assumption that individuals were not required to choose between college or career, but rather had to graduate from high school to meet both expectations. college career readiness integrates both cognitive and non-cognitive domains into four dimensions namely, cognitive strategy, knowledge, skills and technical learning, and the transition of knowledge and skills (Malin et al., [2017](#)). However, in his research, Malin et al. did not involve developing a specific measurement to assess college career readiness. Instead, he primarily concentrated on evaluating government policies aimed at enhancing individuals' readiness for college or higher education, and the workforce in a particular state in the United States (Valentine & Kosloski, [2021](#)). In Indonesia, research on career literacy has been done before (Rahmani & Hastjarjo, [2022](#)) examining the effectiveness of internet-based career literacy interventions among parents to enhance parents' support in adolescents' career decision-making.

So far, only one measurement of career literacy has been found: the career Literacy Continuum Scale (CLCS) (Valentine, [2022](#)). The scale was developed based on a synthesis of literacy definitions in other disciplines that are conceptualized in three categories, namely functional, interactive, and critical literacy. Each category consists of two domains: concept (knowledge) and skill. A study conducted in the United States found 50 concepts and skills that shape career literacy. Additionally, the results revealed that the CLCS items are classified as being of high difficulty, although a subset is rated as low difficulty. Furthermore, this scale is more appropriate for adolescents in middle school.

There are no such measurements to assess career literacy in the context of Indonesia. The development of the career literacy scale in Indonesia is crucial due to its unique circumstances as a developing country, which differs from other countries in terms of economic conditions, government regulations, education systems, job availability, and a collective culture that heavily relies on families for career decisions (Akosah-Twumasi et al., [2018](#)). After defining the construct, the development of measurement started by validating the indicators of the aspects which important to develop valid items. An important measurement validity is content validity which reflects the extent to which a measurement fully captures each aspect of a particular construct (Azwar, [2021](#)). Content validation by expert judgement refers to the process of obtaining well-informed opinions from persons who have a proven track record in the subject and are recognized to be qualified experts (Almanasreh et al., [2019](#)). These experts are able to provide valuable information, evidence, judgements, and evaluations. Evaluation by expert judgement involves soliciting assessments from multiple individuals regarding an instrument or seeking their opinions on a specific feature (Leite et al., [2022](#)). Content validations are typically performed either during the test design phase or to validate the translation and standardization of an instrument for cross-cultural application. Experts play a crucial role in both situations by providing clarification, addition, and/or modification of the necessary aspects (Nurrohmah et al., [2017](#)).

A prevalent approach utilized in content validity testing is the content validity coefficient on the Aiken V formula, wherein a panel of experts is engaged to ascertain whether every indicator of the scale accurately reflects its underlying construct. Several studies have been conducted using

the Aiken V formula to assess the validity of instruments (Artiawati et al., [2023](#); Puspitasari & Febrinita, [2021](#); Santoso & Widiana, [2022](#)). As the Indonesian career literacy will be developed based on 50 concepts and skills that shape career literacy resulted from a study in the United States, the validation of each indicator of career literacy is needed. Align with SCCT that contextual situation is an important factor that affects individual career development (Wang et al., [2022](#)), this study aims to validate indicators of the career literacy scale which is adapted to the Indonesian's situation and cultural context.

The research aims to address the gaps existing by validating the indicator of the scale to measure career literacy for Indonesian adolescents. Validity is an important issue in the development of measuring instruments including psychological scales. This research advances the existing knowledge in career development as well as the psychometric literature and can stimulate further research on career literacy in adolescents and its impact on their career development. This research will provide valuable insights for parents, teachers, schools, and counselors to evaluate the level of understanding and ability of adolescents to use particular information in actual career decision-making. It will also assist parents, teachers, schools, and counselors to identify areas of development needed and to assist adolescents overcome problems and barriers to career development.

Method

The study reported in this article is a part of a large study in developing the Indonesian Career Literacy Scale (ICLS). The first stage of the study reported in this article is identifying and validating the indicators of career literacy.

Design

The indicators of career literacy identified by a previous Delphi study (Valentine & Kosloski, [2021](#)) have been applied in this study. Fifty indicators have been rated by experts. The rating ranged from 1 (very irrelevant) to 5 (very relevant).

Participants

Five experts in career development and psychometrics participated in this study. Four of the five hold a Doctorate, while one expert has a Master's Degree in Educational Psychology with research experience in career. [Table I](#) shows the qualifications of five experts.

Table I

The Qualification of Experts

Initial	Qualification	Field	Expertise	
A	Professor	Educational Psychology	Individual Development	Career
B	Doctor	Educational Psychology	Individual Development	Career
C	Doctor	Industrial Organizational Psychology	Individual Development	Career
D	Doctor	Psychometric	Instrument Development	
E	Master	Educational Psychology	Individual Development	Career

Data Analysis

Data collected from expert ratings was then analyzed using content validity analysis. We calculate the V formula (Aiken, [1985](#)) for each indicator.

Results

Content validity analysis resulting in the V coefficient ranged from 0.4 – 1. Forty-eight of the 50 indicators have a V coefficient > 0.5. Two indicators, one in the concepts dimension and one in the skills dimension, have a V coefficient below 0.50, both indicators are in interactive aspect. The concept dimension indicator is acknowledging the importance of persistence and following through (*mengakui pentingnya ketekunan dan penyelesaian*). This indicator has a V coefficient =0.45 and has been rated 1 by one expert, 2 by one expert, 3 by one expert, and 4 by two experts. This result indicates that the raters disagreed on the indicator's relevance to career literacy. At the same time, the indicator of the skills dimension is knowledge of appropriate vernacular by audience (code-switching) (*mengetahui Bahasa daerah yang sesuai*). The V coefficient of this

indicator is 0.4, as a result of two experts rated 1, one expert rated 3, and two experts rated 4.

[Table 2](#) shows the range of V coefficient of each aspect.

Table 2

Content Validity of ICLS Indicators

Dimension	Aspect	Number of Indicators	Range of V Coefficient
Concepts	Functional	5	0.60 – 0.75
	Interactive	9	0.45 – 1.00
	Critical	7	0.80 – 1.00
Skills	Functional	8	0.65 – 1.00
	Interactive	12	0.40 – 0.95
	Critical	9	0.55 – 1.00

Based on the relevance and the highest V coefficient in each indicator, we choose three indicators in each aspect of the concepts dimension and five indicators in each aspect of the skills dimension as the indicators of the ICLS. [Table 3](#) shows indicators that have been used in developing the ICLS items.

Table 3

Indicators of the ICLS

Dimension	Aspect	Indicator (in English)	Indicator (in Bahasa Indonesia)	V Coefficient
Concepts	Functional	Interpret information from datasets, or others graphical representations of data	Menginterpretasi informasi dari kumpulan data atau representasi data dalam bentuk grafis	0.75
		Knowledge of career options and job outlooks and how Career Clusters and Pathways are connected to career exploration	Mengetahui pilihan karir, pandangan tentang pekerjaan dan bagaimana kelompok dan jalur karir, terkait dengan eksplorasi karir	0.70
		Adjudicate facts versus opinions	Menimbang antara fakta dan opini	0.65
	Interactive	Translate career progressions and different steps within a career ladder	Menerjemahkan kemajuan karir dan langkah-langkah yang berbeda dalam sebuah jenjang karir	0.95
		Take the initiative to seek out career information and discuss it	Berinisiatif untuk mencari informasi karir dan mendiskusikannya	0.85

Dimension	Aspect	Indicator (in English)	Indicator (in Bahasa Indonesia)	V Coefficient	
Skills	Critical	Indicate how different skill sets and predispositions relate to different career fields	Mengindikasi bagaimana serangkaian keterampilan yang berbeda dan predisposisi berhubungan dengan bidang karir yang berbeda	0.80	
		Identify the steps needed to gain the required skills toward entry into a career	Mengidentifikasi langkah-langkah yang diperlukan untuk mencapai keterampilan yang dibutuhkan untuk sebuah karir	1.00	
		Identify basic requirements of a job to determine whether one meets said requirements	Mengidentifikasi persyaratan dasar suatu pekerjaan untuk menentukan apakah seseorang memenuhi persyaratan tersebut	1.00	
	Functional	Analyze ones' role in a specific task or work environment	Menganalisis perannya dalam tugas tertentu	0.90	
		Interpret professional etiquette expectations (communication, attire, topics, etc.), as well as how those expectations may vary from one career to another	Menginterpretasikan etika profesi yang diharapkan (dalam komunikasi, pakaina, topik, dan lain-lain) dengan memahami bahwa harapan tersebut dapat berbeda antara satu karir dengan yang lain.	1.00	
		Complete a job application	Membuat lamaran pekerjaan	1.00	
		Apply what has been read to realworld situations	Menerapkan apa yang telah dibaca dalam situasi nyata	0.90	
		Analyze the credibility of a source of information	Menganalisis kredibilitas sumber informasi	0.85	
		Decipher information presented in different forms (orally, written, visually, etc.)	Menguraikan informasi yang disajikan dalam berbagai bentuk (lisan, tulisan, secara visual dan lain-lain)	0.85	
		Interactive	Read, process, and interpret career information regarding employment	Membaca, memproses dan menafsirkan informasi karir ketenagakerjaan	0.95
			Articulate ones' own skills/values, transferable skills, and career goals	Mengartikulasi keterampilan dan nilai-nilai dirinya, keterampilan yang dapat diajarkan pada orang lain dan tujuan karir	0.90
			Communicate personal career interests and discuss career opportunities with prospective employers	Mengkomunikasikan minat karir pribadi dan mendiskusikan peluang karir dari perspektif pemberi kerja	0.85

Dimension	Aspect	Indicator (in English)	Indicator (in Bahasa Indonesia)	V Coefficient
		and other influencers		
		Ask the “right” questions to seek answers, provide clarity, or to problem-solve	Mengajukan pertanyaan yang tepat untuk mencari jawaban, memberikan kejelasan atau menyelesaikan masalah	0.80
		Communicate with experienced people with respect to a given career field	Berkomunikasi dengan orang yang berpengalaman di bidang tertentu	0.80
	Critical	Match ones’ own values, interests, and skills, with a compatible career	Mencocokkan nilai, minat dan keterampilan dengan karir yang sesuai	1.00
		Ability to determine the overall financial cost to prepare for a career	Mampu memperkirakan biaya untuk mempersiapkan karir	1.00
		Relate ones’ own academic/skill portfolio with desirable career paths	Mengkaitkan portofolio akademik atau keterampilannya dengan karir yang diinginkan	1.00
		Analyze an environment to address barriers to career entry	Menganalisis lingkungan untuk mengetahui hambatan untuk memulai karir	0.90
		Apply written, verbal, and digital information to solve problems	Menerapkan informasi yang diperoleh secara tertulis, lisan dan digital dalam memecahkan masalah	0.75

Discussion

The research aimed to validate the content of indicators of the Indonesian career literacy scale. Validating the measurement of career literacy is crucial in order to accurately assess individuals' level of literacy and effectively support them in developing career objectives and making career decisions (Rahmani & Hastjarjo, [2022](#)). In the process of developing a psychological scale, the validity of the scale is established by first selecting the most suitable theory that aligns with the measurement objective. This is then followed by testing and validating the indicators and items. For this study, we chose the career literacy construct by (Valentine & Kosloski, [2021](#)). The 50 indicators were developed through a study conducted using the Delphi technique, which involved

21 scholars and specialists in career literature from different states in the United States (Valentine & Kosloski, [2021](#)).

We calculated the content validity using Aiken's V coefficient. A confidence interval of 95% was established for the elimination or acceptance of the indicator. We found that the values of Aiken's V for all of the 50 indicators were equal to or above 0.40 in both concept and skills dimensions in all aspects namely functional, interactive, and critical. It suggests that all indicators in functional, interactive, and critical aspects in both concept and skills dimensions represent the construct of career literacy and can be employed to develop items for measuring career literacy levels among adolescents in Indonesia. This is consistent with Aiken's V Table (Aiken, [1985](#)) which divided validity into three categories: low ($V < 0.4$), medium ($0.4 < V < 0.8$) and high ($V > 0.8$) (Nabil et al., [2022](#)).

Among the 50 indicators, two indicators exhibited Aiken's V values below 0.50. These indicators encompass interactive components of both the concept and skills dimensions. The indicators were ("acknowledge the importance of persistence and follow through" or "*mengakui pentingnya ketekunan dan penyelesaian*") and "knowledge of appropriate vernacular by audience (code-switching)" or "*mengetahui Bahasa daerah yang sesuai*"). We believe that acknowledging the importance of persistence and follow-through are skills that are necessary across all job categories that reflect literacy in careers (Lechner et al., [2019](#)). However, the expert panels did not agree on the relevance of this indicator on career literacy in the Indonesian context. Thus, this indicator is considered will fail to distinguish between individuals with greater career literacy from those without. In terms of the knowledge of appropriate vernacular by audience (code-switching) indicator, we believe that low Aiken's V value is linked to a lack of cultural understanding among Indonesians resulting in the diminished importance of this indicator for career literacy. More research on how cultural understanding may affect individuals' career development is needed.

We then selected 24 out of the 48 indicators of the career literacy continuum scale based on the V coefficient and the relevance of the indicators, to prevent a large number of items. As five

raters providing ratings for each indicator with five alternative responses, thus based on Aiken's V Table, the V value minimum is 0.8 (Aiken, [1985](#)) or 0.78 (Almanasreh et al., [2019](#)). Nevertheless, our analysis revealed that out of the 24 indicators examined, 4 of them had a V index lower than 0.8. Specifically, 3 indicators are related to the functional aspect in the concept dimension, and 1 indicator is associated with the crucial aspect in the skill dimension. We keep those as we consider that they are important indicators that represent the construct as well as to balance the number of indicators on each aspect. Past research on instrument assessing student confidence considered the items were valid with the lowest V coefficient equal to 0.64 and average V coefficient was 0.74 (Maulana, [2023](#)). Future research may employ more raters as the greater number of raters, the minimum requirement of the V coefficient will be easier to achieve (Azwar, [2022](#)).

Theoretical and practical implication. As the majority of indicators were considered valid, those could be employed to develop the items of the Indonesian career literacy scale. Items can be generated based on the 24 selected indicators to assess career literacy among Indonesian students. This study's results also strengthen the construct of career literacy that was identified in the USA is considered relevant for the Indonesian context.

Limitation

Even though all indicators are valid indicated by V coefficient equal to 0.4 and above, some indicators are in the medium category. One reason for this finding is we only employed five experts as raters which has an impact on the high minimum V values required. Future research may involve more experts participating as raters in similar studies to increase the V values coefficient.

Conclusion

This study demonstrates that the construct of career literacy that was identified in the USA could be applied to the Indonesian context and provide insight into how research may develop measurements to assess the level of career literacy among Indonesian teenagers. We found that all indicators of CLSC in functional, interactive, and critical aspects in both concept and skills

dimensions represent the construct of career literacy. Researchers can utilize those indicators to develop the items of the Indonesian career literacy scale.

Acknowledgment

Authors thank to Universitas Ahmad Dahlan for the research grant (Number: 0-102/SP3/LPPM-UAD/XII/2023). The grand is facilitating this study and publication.

Conflict of Interest

The researchers declare that this paper has no conflicts of interest.

Author Contribution

All authors have contributed equally to the study's conceptualization, interpreting data, reviewing, and editing the manuscript.

Data Availability

Data can be provided upon request to the author.

Declarations Ethical Statement

The study followed the guidelines of the Declaration of Helsinki.

Informed Consent Statement

Informed consent was obtained from all persons involved in the study.

References

- Aiken, L. R. (1985). Three Coefficients for Analyzing the Reliability and Validity of Ratings. *Educational and Psychological Measurement*, 45(1), 131–142. <https://doi.org/10.1177/0013164485451012>
- Akosah-Twumasi, P., Emeto, T. I., Lindsay, D., Tsey, K., & Malau-Aduli, B. S. (2018). A systematic review of factors that influence youths career choices—the role of culture. *Frontiers in Education*, 3, 1–15. <https://doi.org/10.3389/educ.2018.00058>
- Almanasreh, E., Moles, R., & Chen, T. F. (2019). Evaluation of methods used for estimating content validity. *Research in Social and Administrative Pharmacy*, 15(2), 214–221. <https://doi.org/10.1016/j.sapharm.2018.03.066>
- An Nabil, N. R., Wulandari, I., Yamtinah, S., Ariani, S. R. D., & Ulfa, M. (2022). Analisis indeks aiken untuk mengetahui validitas isi instrumen asesmen kompetensi minimum berbasis konteks sains kimia. *Paedagogia*, 25(2), 184. <https://doi.org/10.20961/paedagogia.v25i2.64566>
- Artiawati, A., Kesumaningsari, N. P. A., Muttaqin, D., Kartika, A., Putri, K. S., Paramita, M. F. T., Putra, A., Handani, F., & Johan, 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>
- Azwar, S. (2021). *Reliabilitas dan validitas edisi ke 4. [Reliability and validiti (4th Ed)]*. Pustaka Pelajar.
- Azwar, S. (2022). *Penyusunan skala psikologi edisi ke 3 [Psychological scale development (3th Ed.)]*.

Pustaka Pelajar.

- Boye, J. O., Omotosho, J. A., Fia, S. D., Eyiah-bediako, S., Bentil, J. A., & Dabone, K. T. (2024). Self-knowledge, lack of career information and lack of career counselling as reasons for career indecision among senior high school students in Ghana. *IOSR Journal Of Humanities And Social Science*, 29(5), 33–40. <https://doi.org/10.9790/0837-2905033340>
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology*, 43(4), 510–526. <https://doi.org/10.1037/0022-0167.43.4.510>
- Lechner, C. M., Danner, D., & Rammstedt, B. (2019). Grit (effortful persistence) can be measured with a short scale, shows little variation across socio-demographic subgroups, and is associated with career success and career engagement. *PLoS ONE*, 14(11), 1–29. <https://doi.org/10.1371/journal.pone.0224814>
- Leite, M., Infante, V., & Andrade, A. R. (2022). Using expert judgement techniques to assess reliability for long service-life components: An application to railway wheelsets. *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*, 236(5), 879–892. <https://doi.org/10.1177/1748006X211034650>
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, 60(4), 557–568. <https://doi.org/10.1037/a0033446>
- Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. In D. Brown (Ed.), *Career Choice and Development Fourth Edition* (pp. 255–311). Jossey-Bass.
- Li, Q., & Shi, B. (2023). Career Choice Motivations and Turnover Intention Among Chinese Social Workers: A Double-Mediator Model of Job Self-Efficacy and Job Satisfaction. *Human Service Organizations: Management, Leadership & Governance*, 1–15. <https://doi.org/10.1080/23303131.2023.2288310>
- Malin, J. R., Bragg, D. D., & Hackmann, D. G. (2017). College and career readiness and the every student succeeds act. *Educational Administration Quarterly*, 53(5), 809–838. <https://doi.org/10.1177/0013161X17714845>
- Maulana, A. (2023). Analysis of validity, reliability and feasibility of student confidence assessment instruments. *Schola*, 1(1), 1–12.
- McMahon, M., Patton, W., & Tatham, P. (2010). *Managing life, learning and work in the 21st century: Issues informing the design of an Australian blueprint for career development* (Issue January 2012). Miles Morgan Australia.
- Nurrohmah, I., Sensuse, D. I., & Santoso, H. B. (2017). The expert-judgement validation and finalization of proposed interaction design process maturity instrument: Case study: E-commerce in Indonesia. *Proceedings of the 2nd International Conference on Informatics and Computing, ICIC 2017, 2018-Janua*, 1–6. <https://doi.org/10.1109/IAC.2017.8280647>
- Oliveira, Í. M., & Araújo, A. M. (2022). Career exploration as a foundation for career developmental learning and academic success in childhood. *British Journal of Guidance and Counselling*, 50(3), 351–370. <https://doi.org/10.1080/03069885.2021.1887814>

- Pesch, K. M., Larson, L. M., & Seipel, M. T. (2018). Career Certainty and Major Satisfaction: The Roles of Information-Seeking and Occupational Knowledge. *Journal of Career Assessment*, 26(4), 583–598. <https://doi.org/10.1177/1069072717723093>
- Puspitasari, W. D., & Febrinita, F. (2021). Pengujian Validasi Isi (Content Validity) Angket Persepsi Mahasiswa terhadap Pembelajaran Daring Matakuliah Matematika Komputasi. *Journal Focus Action of Research Mathematic (Factor M)*, 4(1), 77–90. https://doi.org/10.30762/factor_m.v4i1.3254
- Rahmani, Z., & Hastjarjo, T. D. (2022). Internet-based i-karier literacy to increase parental support in adolescents' career decision-making [Literasi i-karier berbasis internet untuk meningkatkan dukungan orang tua dalam pengambilan keputusan karir remaja]. *ANIMA Indonesian Psychological Journal*, 37(1), 105–144. <https://doi.org/10.24123/aipj.v37i1.4272>
- Santilli, S., Marcionetti, J., Rochat, S., Rossier, J., & Nota, L. (2017). Career Adaptability, Hope, Optimism, and Life Satisfaction in Italian and Swiss Adolescents. *Journal of Career Development*, 44(1), 62–76. <https://doi.org/10.1177/0894845316633793>
- Santoso, A. M., & Widiana, H. S. (2022). Penyusunan skala learning agility dengan aiken's v dan uji reliabilitas. *JURKAM: Jurnal Konseling Andi Matappa*, 6(1), 14–22. <http://dx.doi.org/10.31100/jurkam.v6i1.1699>
- Valentine, K. S. (2022). *Career literacy : Developing , validating , and establishing the reliability of the career literacy continuum scale* [Old Dominion University,]. <https://doi.org/10.25777/wkhq-a327>
- Valentine, K. S., & Kosloski, M. F. (2021). Developing the key constructs of career literacy: A delphi study. *Journal of Research in Technical Careers*, 5(1), 1. <https://doi.org/10.9741/2578-2118.1095>
- Wang, D., Liu, X., & Deng, H. (2022). The perspectives of social cognitive career theory approach in current times. *Frontiers in Psychology*, 13, 1–6. <https://doi.org/10.3389/fpsyg.2022.1023994>