

Tracing the trajectory of vocational education research on career adaptability: a bibliometric study

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ABSTRACT

Reports on the evaluation of the most relevant themes on career adaptability through bibliometric analysis using the keyword “career adaptability” as its input aims to get a comprehensive view of current issues and trends in career adaptability research. The VOSviewer software in collaboration with Microsoft Excel and Open Refine was adopted as tool to visualize the network of authors, countries of origins and keywords in publication data mined on June 19 2022. The analysis found a total of 728 scientific publication from 1981 to 2022. The results show that in the last 15 years the number of career adaptability publications has grown very significantly. The United States is a major country contributing of publications. Author analysis presents Nota L as the most prolific author, while Savickas L is a prominent author while Guan Y is the writer with the best writing network with 8 other writers on career adaptability. Academic Press Inc. dominates the publication with 22.94% of it is production. Keyword analysis shows that career adaptability studies in the last two decades have focused on the theme of career planning through the establishment of a career guidance framework that aims to create prosperity.

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1. INTRODUCTION

Career-related studies have increased in recent years along with the growing number of published articles focusing on its research fields. One of the areas that has been on the rise and been the highlights of the published articles in the career domain is career adaptability, especially for adolescents for whom develop their own sense of self as integral to the professional career route [1]. This concept defines individuals' ability to optimize all their potentials in order to maintain their professional working careers [2] that can help them to smoothly adapt to changes when coping with their career roles, to maintain their ability to balance their career roles, which will affect their important psychological resources for career development and achieve more meaning in life. It also constitutes a psychosocial construct including both readiness and resources for successfully facing vocational tasks, occupational transitions, and unexpected challenges that supports the success of adaptation and positive career transition [3], [4].

The rising number of the published articles on career adaptability indicates the increasing interest on its studies and reveals that there are many potential topics to research or investigates under this area. Instances among others are related to the imbalance between the economic and entrepreneurship rapid growth and individual professional career development [5], the impacts of institutional career flexibility policy that

demand references related to professional identities aligned with institutional policy, welfare quality, workplace culture, and bestowed talent despite formal education intervention as one academic strengthening [6], [7], and the consistent strength needed by working people to keep improving their academic quality in line with their professionals in order to strengthen their career and to keep updating on the development of working competency needs [8]. Due to the fact that career adaptability significantly affects the quality of one's professional work, it is crucial for students at the senior high school level to understand their educational background and future goals [9].

Another example of a relevant factor enriching the literature of career adaptability studies is the management of vocational schools to academically train students oriented to career professionally by making use of the strength of self-efficacy directly influenced students' career adaptability [10]–[12]. One's capacity for adaptation is the foundation for any professional career advancement. Vocational education organizations must carefully evaluate this relevance in order to enhance student career adaptability, since the degree of relevance between the workplace and vocational education is not as great as it might be [13]. To illustrate further, this management also describes the transition period from the school to the start of working period, a time when students prove their own individual capabilities [14]–[17], and the roles of skill trainings and vocational education resulting in many professional manpower with the ability to contribute to the business developments through technical studies, collaborative practices, systematic feedbacks from instructors, and supporting training materials aligned with the implementation [18], [19]. The other recent example as one contributing factor leading to the emergence of the career adaptability study is the transition problems from working offline to online due to COVID-19 pandemic situation that surely needs high degree of adaptability [20], [21] and therefore, a well-organized career plan is required as one scenario to attain welfare [22], [23]. The pandemic's activities have improved digital literacy, which benefits students' capacity to transition to new careers and lifestyles [24]. Growing awareness of teamwork as a critical 21st-century skill, students must possess when creating career adaptations-is another beneficial effect of the COVID epidemic [25].

All factors are slight instances of researchable topics drawing attention to the researchers on career adaptability. Furthermore, for the last four years, the number of empirical studies on career adaptability has rapidly increased, particularly in individual career and both with individual and collective company development orientations. Those research are highly related to the making and validation of career adapt-abilities scale (CAAS) [26], this form has been implemented globally since the last decade in more than 12 different countries [27]. Despite this, a comprehensive evaluation by involving the integration of empirical literature on career adaptability has not yet completed and this type of study seems to remain little. As a result of the iterative nature of knowledge, everyone must engage in investigative thinking in order to improve the quality of knowledge [28]. Thus, a study focusing on literature review on research that have been done until effective data are obtained by means of bibliometric study is required so that published information with respect to the historical development of literature can be learnt through the measurement and analysis by using statistical unit [29], [30].

Through an analysis on several aspects, including sources of publication on career adaptability studies in the form of journal articles, writers, countries, and the most cited keywords, this article reports on the results of bibliometric analysis on career adaptability model [4]. This analysis tests the relation between career construction and guidance and success measurement model [31], [32]. The main focus of analysis is concerned with collective career adaptability, composed of four dimensions of career adaptability (control, curiosity, concern, and confidence) [33]. These dimensions are different with respect to concept and experiment, yet, some studies suggest that the four dimensions are highly connected [34]. Based on this, the study aims to analyse data and recent advancement in career adaptability studies in general.

Research questions formulated as source of analysis are as follows: i) what are the descriptive characteristics of the publication under study with respect to year of publication, type of publication, the most sources of publication and its country origins?; ii) what is the greatest number of citations and the ranking of the article among those mentioned in this study?; and iii) how far along are the novel keywords and the study topic?.

2. RESEARCH METHOD

The study utilized bibliometric analysis, as a popular tool for measuring the impact of literature review [35]. Method in order to see the tendency and trend of career adaptability studies in general, aims to analyze data on scientific documents of career adaptability published in many different renowned publishing companies [29], enabling these types of data to be analyzed under the technique. The process followed four processes as shown in Figure 1.

By referring to the bibliometric research process as shown in Figure 1 [36], after the keywords for the topic career adaptability analysed are determined, document databases used as research material were decided for the next stage. By referring to digital evolution in the development of scientific document

databases, Elsevier's Scopus Database was utilized and chosen to be a data mining tool about careers adaptability in this research [37]–[40]. The determination of the main keywords on the topic and the chosen reliable tools becomes the basis for the next stage the collection of research materials on Elsevier's Scopus database. The data is in *.ris format, allowing another application to manage this type of data in line with the need for interpretation. The activity was conducted on June 19th 2022 with the results data shown are 728 scientific publications published from the period of 1981 to 2022 [38], [40]. The second stage of the bibliometric process is data cleaning, to ensure that the mining data can be used in the research. The data cleaning is carried out in order to minimize data bias, preventing from redundancy on both research data materials and garbage data that can obstruct analysis and research defining processes. The data cleaning process was done by using OpenRefine application, used for eliminate data residue [41]. Technical activity on this stage was in the form of alignment of some word spellings with similar meanings as well as organization of similar meanings of sentences in line with the research topic.



Figure 1. The research framework of the bibliometric analysis [40]

The third step is data analysis using VOSviewer application [42]. Further analysis, in this research, was done in order to see the data analysis relevant with the development of scientific writings and their publications from the networks of writers, publishers, and publishing countries and based on the analyses of keywords-based used and of novelty monitoring regarding career adaptability topics. Data were organized and evaluated by utilizing VOSviewer software and were later visualized in order to answer the research questions [43]. The analyses were used in order to see the relations of items in citing one another offering information on people, ideas, journals, and organizations that constitutes the given areas. Counting method option was chosen by selecting either full or fractional counting in order to determine the total frequency that becomes the statistical value of the ongoing research. The threshold choice was done in order to determine the data analysis threshold to be presented so that data grouping can support the result of research interpretation. Data visualization were presented in the network visualization choice in order to see the strength of relation among research units, while the overlay visualization was chosen to see the novelty of data so that research trends of the articles could be collected [44]. Co-authorship analysis was used to see the frequency of authorship in the choice of author analysis unit, organization, and country [40], [45]. Its enabled to analyse the relevance of articles based on the number of articles jointly written by several authors. Visualization describing the position of the authors including organizational affiliation with adjacent authors indicates that more and more collaborations between these authors generate joint scientific work. An analysis of the productivity of writers and publishers in publishing career adaptability can be carried out by displaying the 10 highest dominance of the processed data [46]. Co-occurrence analysis from VOSviewer was used to see the unit of analysis of the keywords frequency arising from a number of scientific documents obtained. Technically, the vosviewer application carried out the analysis process by looking at the frequency of the co-occurrence of keywords. The more occurrences of keywords in various scientific documents, the greater the visualization shown to be followed by analysis [47], [48]. Furthermore, in order to obtain satisfactory results for the needs of analysis, the data from the cleaning results in the second stage of this research must be re-confirmed, it is best to redo the data cleaning process as done in the second stage, so that biased data can really be avoided.

Citation analysis must be carried out in order to determine the relationship between times based on the frequency of joint citations so that the quality of the reference document can be seen through the impact on the document users. In this case, the more scientific documents are cited the better the quality of the scientific documents presented [42]. The research stage was continued with reporting by interpreting the data. Microsoft Excel were employed to support the data processing by filtering so that data could be presented in the forms of graphics and tables [46]. Furthermore, Tableau public was used to beautify the visualization of report data as well as to serve as an alternative in the interpreting process and presentation the results of data analysis [49].

3. RESULTS AND DISCUSSION

The purpose of this research is to use bibliometric analytic techniques to examine publications in relation to career adaptability. With reference to the research methodologies used, the following outcomes were attained, resulting in a bibliometric research study: descriptive features of the publications examined, a structure derived from productive and citation analysis, dissemination of study advancements, and keyword updates. The analysis' findings are discussed in relation to the research questions in the section that follows.

3.1. Descriptive characteristics of the publications under the study

The topics on “career adaptability” were processed by using bibliometric research, becoming the object of data mining that were used as documents for analyses in order to seek for the novelty from the topic under investigation with the articles identification on various databases provides different number. The data needed are scientific types of literature composing of research result activities, mainly articles resulted from data mining from Elsevier’s Scopus database.

3.1.1. Year of publication

Based on search results data in the SCOPUS database, 728 publications on “career adaptability” are found from the publication period of 1981 to 2022, mining of publications on “career adaptability” carried w`as carried out byfiltering based on year of publication as shown in Figure 2. From the beginning, the publication on this topic did not happen every year due to numerous reasons, among others are because of the motivation of researchers and writers, trends and research issues, hot topics in the world of research and publications and other matters related to idealism and the development of academic issues [50]. Since the beginning of the publication of scientific documents on career adaptability, publications in the first 25 years have experienced a very moderate movement. Even after the publication of the first article in 1981, further research publications took place in 1983 and continued 6 years later in 1986. The movement of publications on this theme is shown in Figure 3 over the considered time period.

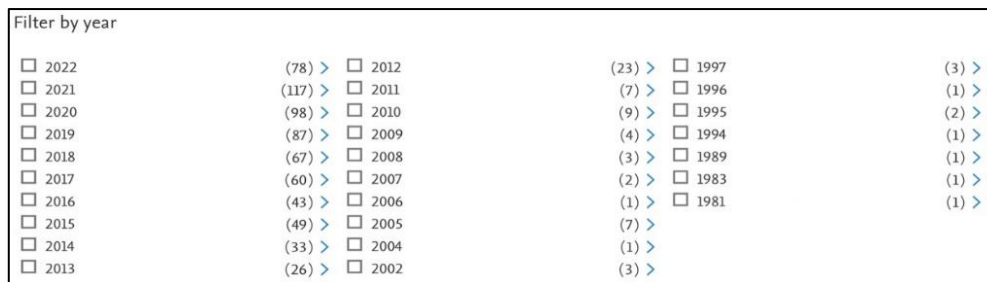


Figure 2. Data distribution filtered by year

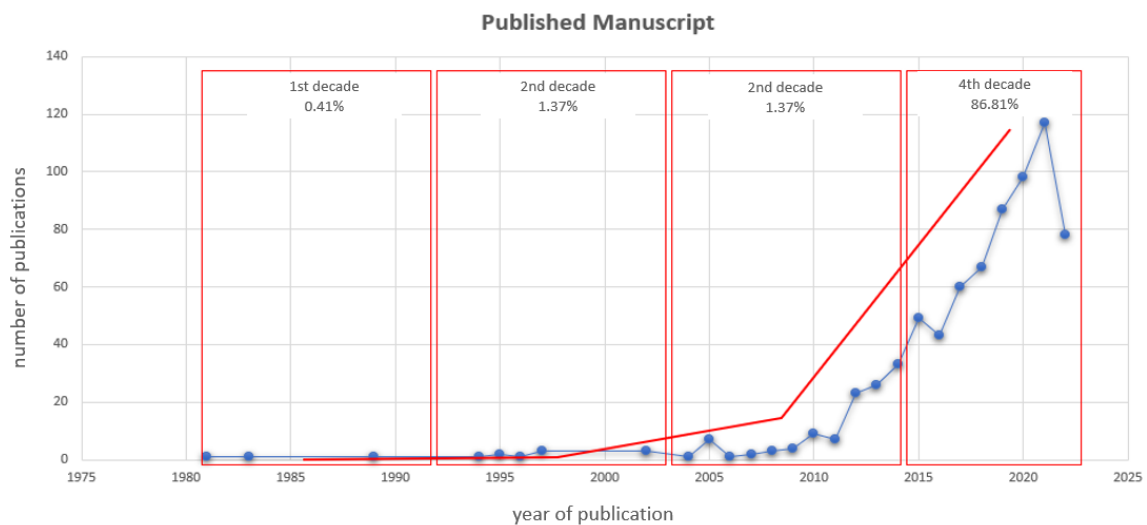


Figure 3. Distribution of qualitative publications on career adaptability

The result of the data analysis showed that in the initial decades of publication within the year range of 1981-1991, the growth of publications in relation to career adaptability was very slow with only 3 cumulative published documents (0.41%) being found. The data for this period demonstrated that little academic attention was given to the study of careers adaptability. The value indicates that topic on career adaptability is not yet an interesting subject to study, academics have just reached the stage of recognizing the issue of career adaptability research.

The circumstance happening in the first decade continued in the second decade ranging from 1992 to 2002 showing the discovery of a cumulative publication of 10 publications (1.37%). In this decade, academics began to have a depth investigation in the study of the topics on career and welfare and it shows that the research themes in the first two decades tended to relate to the development of analysis of career problems and their importance to improve welfare [51] meanwhile, at the end of the second decade, the discussion of careers shifted to conceptual issues regarding career development and adaptation patterns with the trend of discussion having entered on vocational career needs [52], [53].

In the third decade, 2003-2013, 83 publications (11.40%) were found. During this period, there was a tendency for academics to develop a study of the concept of career adaptability as indicated by the publication of annual scientific articles. This increase in frequency is related to the great sensitivity of academics in various countries in addressing the issue of career adaptability, leading to the growth of studies on career adaptability [54]. The development of career adaptability studies marking a trend of research and discussion in the third decade extends on several issues, including career measurement and assessment, career correlation with the urbanization context, career planning to predictions and strategies for its development, mainly in the vocational field which is more sensitive to issues of professional career development. Further, the observation focus on career adaptability research in the fourth decade is dominated by subjects in early career conditions, such as career conditions experienced by students of vocational schools and fresh graduates who are subject to career selection problems [3], [55]–[57]. Internal motivation, professional experience, and future prospects for well-being all have an impact on career planning [58].

A sharp leap in academic interest on this topic began to appear in the fourth decade, ranging from 2014-2022 producing 632 scientific publications (86.81%), illustrating that the peak is in 2021 with a total of 117 publications. The discussion of career adaptability in the third decade has advanced on various components of developmental career related issues, including the focus on the development of career concepts, soft skill development components to support hard skill mastery [59], various measurement techniques, assessment and validation of career development [60], mentoring strategies in learning career paths and career management [61].

3.1.2. Types of publications

The findings from the data mining results show that the 15 largest types of publications discussing career adaptability are dominated by article types (87.21%), followed by book chapters by 48%, Conference papers (proceedings) by 2.2%, and reviews by 1.93%. Further, the little number of studies were reported in the forms of editorial publications (0.41%), data papers and notes (0.28%), conference reviews and erratum (0.14%). Scientific documents on career adaptability published by a number of publishers are composed of different types, as shown in Figure 4. Data showed that the dominating type of publication is articles, indicating that discussion on career adaptability is highly resulted from scientific research result with ongoing discussion both among studies and among writers' focus of studies.

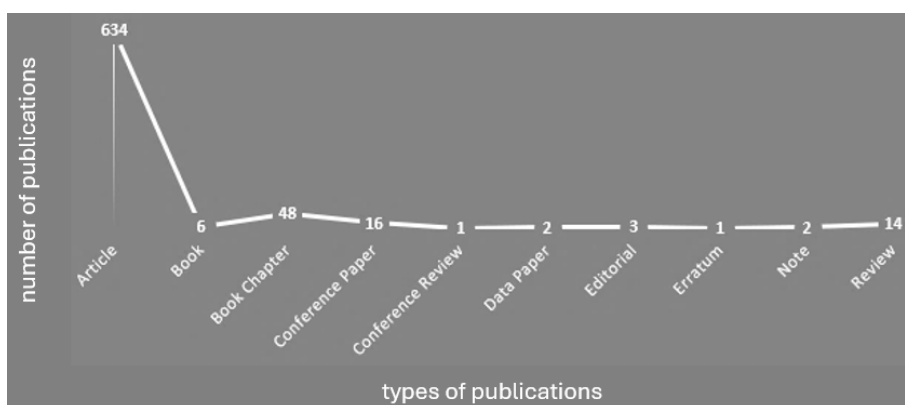


Figure 4. The top ten career adaptability scientific publications types

3.1.3. Resources with the highest number of publications

The record illustrates that until mid-2022, the top 15 publishers had published a total of 436 documents as follows; Academic Press Inc. (22.94%), SAGE Publications Inc. (20.87%), Routledge (8.49%), Emerald Group Holdings Ltd. (7.11%), Springer International Publishing (6.19%), Frontiers Media S.A.(5.73%), Wiley Blackwell (5.50%), John Wiley and Sons Inc. (4.13%), Springer Science and Business Media B.V. (3.44%), Elsevier Ltd (3.21%), MDPI (2.75%), SAGE Publications Ltd (2.75%), Nova Science Publishers, Inc. (2.52%), Taylor and Francis Ltd. (2.29%), and Springer (2.06%). The top 15 publishers publishing career adaptability research results in the SCOPUS database are shown in Figure 5.

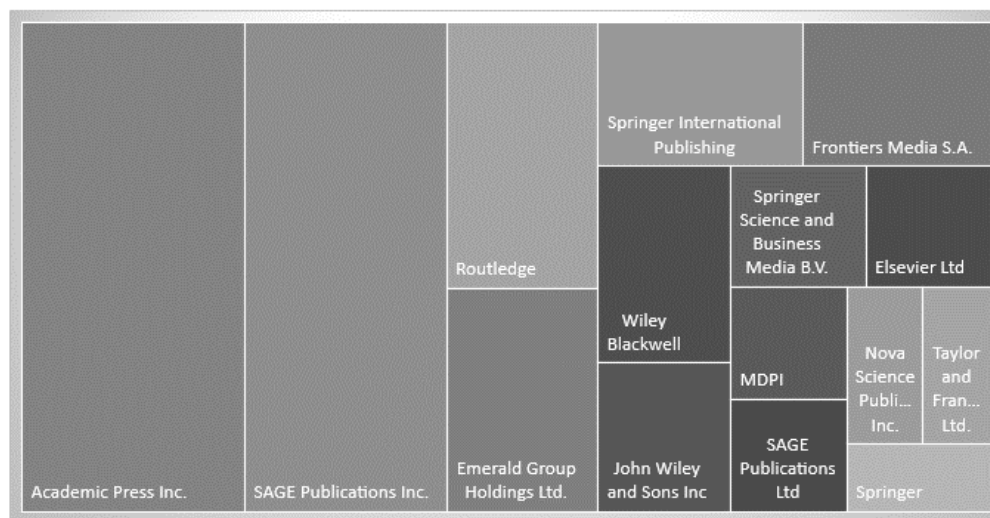


Figure 5. Top 15 publishers career adaptability

3.1.4. Countries of origins

The United States became a productive country with 178 works and a total of 6,122 have been cited, followed by other countries generating papers on career adaptability as shown in Table 1. Table 1 shows that the productivity of the United States is trailed by that of China with 106 scientific documents, placing that of Australia in the third with 67 documents, while Italy and South Africa are in the fourth position with 46 documents. With respect to prominence level of citation, there is a reverse condition in which after America, the second country with high citation level is Australia (2,241), followed by China with 1,696, Great Britain (1,422) and finally Switzerland (1,190).

Table 1. Productive and prominent country of career adaptability

Selected	Country	Documents	Citations	Total link strength
✓	United States	178	6122	95
✓	Australia	67	2241	55
✓	China	106	1696	89
✓	United Kingdom	44	1495	53
✓	Netherland	23	1422	24
✓	Switzerland	30	1190	11
✓	Germany	31	998	26
✓	Italy	46	830	13
✓	Canada	13	657	9
✓	South Africa	46	484	8
✓	Turkey	40	414	6
✓	Hong Kong	31	336	28
✓	Portugal	24	252	7
✓	Philippines	12	225	15
✓	Brazil	32	210	10
✓	South Korea	27	210	8
✓	Belgium	15	206	19
✓	Macau	14	197	15
✓	France	11	166	10
✓	Romania	6	161	4

Writers from different countries have conducted writing collaboration as can be seen in Figure 6 which displays that the United States is dominant country on the issue of career adaptability study, particularly towards the construction and validation of career development through the career adapt-abilities scale (CAAS) measuring attention, control, curiosity, and self-confidence as psychosocial resources for managing job transitions, developmental tasks, and work trauma. The well-regarded measurement components have made the form used in the United States identical to the form used internationally [27], [62]. In the period of 2017-2019, the research frequency shifted, with Australia, South Africa, Italy, Germany and Switzerland were in domination. It was tailed by Brazil, Turkey and China around 2019 that were in domination. Despite the domination, the most recent studies have been carried out by South Korea, Pakistan, Hong Kong, India, Malaysia and Taiwan. This explanation indicates that studies and investigation on career adaptability began in America and Europe, later these activities shifted to Australia and Africa, and additionally in countries on the Asian continent.

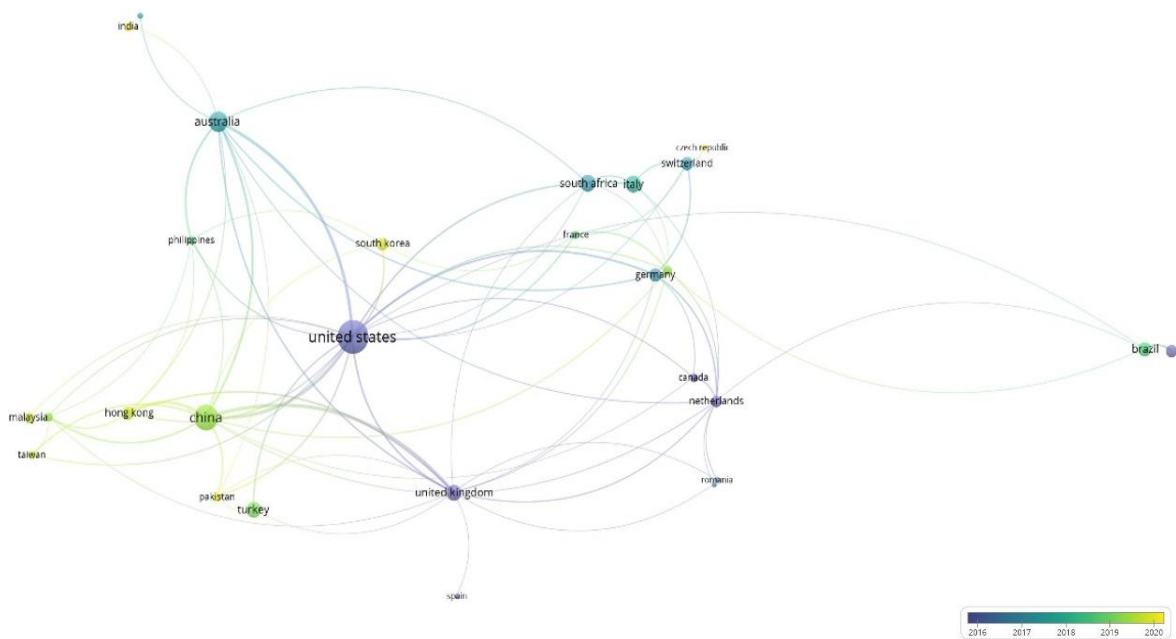


Figure 6. Visualization of the most productive inter-country network on career adaptability

3.2. Emerged structures based on productive and citation analysis

3.2.1. Publication citation ranking with respect to top contributors

With respect to top contributors for exploring lived experiences [63], Guan Y is listed as a career adaptability research writer with the largest network linking with eight other major writers. The six other authors in the link having the same cluster as Guan Y include Zhou x, She z, Wang y, Zhu f, Cai z, and Li y. Meanwhile, the other two authors, Wang l and Wang z, are in different clusters. Figure 7 demonstrates the Top 10 writers on career adaptability with a total of 158 documents, placing Nota L as the author of the most publications with 23 articles.

The figure also reveals information on the top 10 writers whose writings are widely cited, positioning Savickas as a prominent author on career adaptability, the author who has been cited the most with the number of citations reaching 1,819 out of a total of seven scientific documents that have been written. Savickas' works that have been widely cited are with regard to approaches and perspectives on adaptation in life that can intervene in maturity and career construction. His latest work in 2022 investigated the role of self-regulation in job search self-regulation (JSSR) for individuals that has little recognition within the theory of career construction, particularly in terms of the urgent problem of unemployment during the COVID-19 pandemic. Contrary to the theory, this role is considered to be socially and theoretically important for the extension of career adaptation models in job search since this scientific document highlights JSSR as an important adaptation response in careers for success in subsequent employment status [64]. Guan, as a writer with a large network, started research on career adaptability since 2013, discussing the implications of research on career construction as well as education and career counseling practices [65]. Guan's latest study on the topic was in 2022 discussing the success of job search self-efficacy (JSSE) during the transition period

after graduating from school to the start of working [66]. This situation indicates that trend on career adaptability research constitutes a study with a novelty value.

Top 10's Documents			Top 10's Citations		
Author	Documents	Citations	Author	Documents	Citations
Nota L.	23	568	Savickas M.L.	7	1819
Guan Y.	19	926	Porfeli E.J.	5	1370
Santili S.	16	382	Klehe U.-C.	12	939
Ginevra.C.	16	317	Guan Y	19	926
Rossier J.	16	674	Zacher H.	12	904
Duffy R.D.	15	603	Van Vianen A.E.M.	7	715
Maree J.G.	15	143	Rossier J.	16	674
Soresi S.	14	394	Hirschi A.	10	619
Klehe U.-C.	12	939	Duffy R.D.	15	603
Zacher H.	12	904	Nota L.	23	568

Figure 7. Top 10 authors on career adaptability studies

Academics enthusiasm to carry out studies on the development of career adaptability areas has made the trend of developing career adaptability strategies a hot issue to be studied together. In the future, the development of career adaptability strategy implementation can become a reference topic for further study in empirical research or bibliometric research. Data analysis based on author category revealed that there are 63 authors who meet the threshold 5 publications. The authors included in this filter have conducted research collaborated in scientific documents writing with other authors focusing on career development and adaptation studies as shown in Figure 8 on the visualization of the co-authorship network describes 4 clusters of authors as grouped from the productivity of 16 researchers. Proficiency in scientific writing and publication facilitates the sharing and dissemination of scholarly knowledge within the academic community. Promoting scientific publications and professional growth, linguistic and cultural preservation, professionalism in standard citations, cooperation promotion, editorial quality enhancement, and strategy training are all highlighted in the research. People who read widely and conduct extensive research will undoubtedly write well, which will boost the nation's productivity [67].

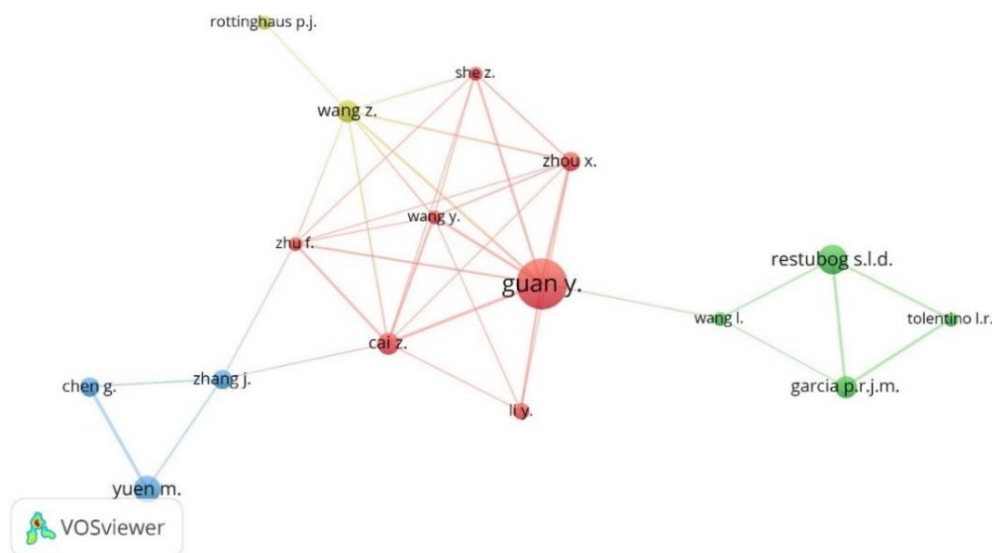


Figure 8. Visualization of career adaptability document writer network

3.3. Distribution of study developments and updates on keywords

Writings on various articles on career adaptability resulted in keyword analysis. This was taken from 728 publications documents to determine the latest trends in career adaptability topic discussion and to identify things that might become interesting topics for further study. The analysis resulted in 1,456

keywords with 94 (6.46%) meeting the threshold criteria of 5 shared keywords in the study document. The network distribution among keywords is visualized in Figure 9.

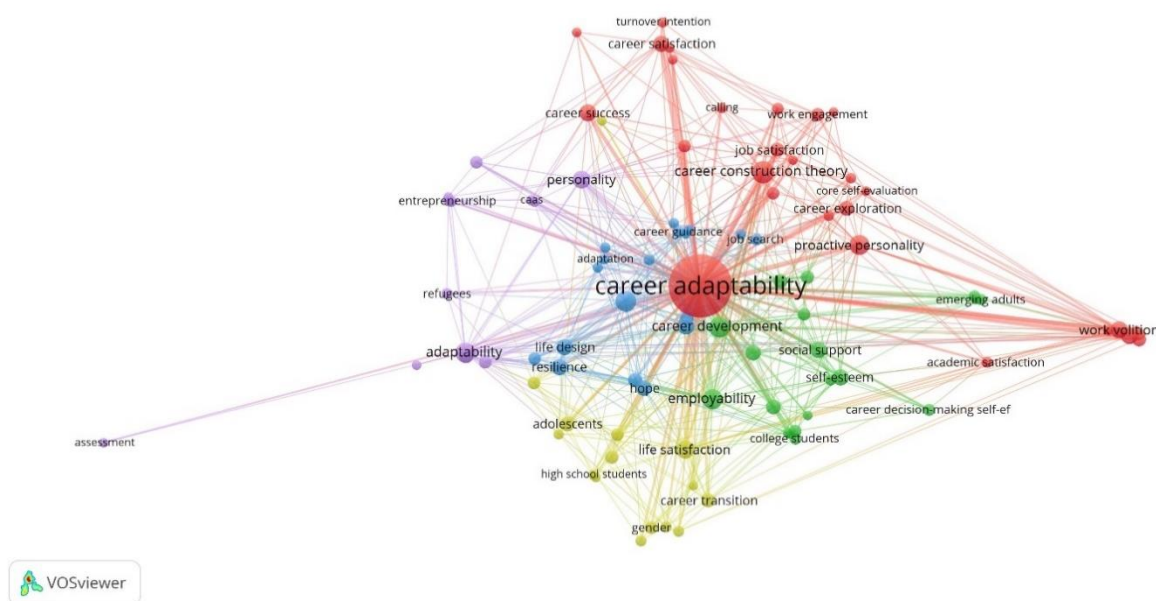


Figure 9. Visualization of keyword clusters for studies on career adaptability

The distribution of the obtained keywords are classified into 5 clusters, categorized into different colours among clusters. Node cluster 1 with keywords a total of 28 red items present “career adaptability” as a keyword. The number of appearance of the keywords is higher with 92 networks, 741 total link strengths, and 506 occurrences. The strength of keywords in this cluster continues on the terms ‘proactive personality’, ‘work volition’, ‘decent work’ and ‘career satisfaction’. It indicates that the keywords in cluster 1 focus on conceptual career discussions. The understanding of career conceptualization is significant and relevant with the components of career orientation and the ability to adapt to a person’s career [68]. Personal flexibility of an individual must be maintained through some aspects, including resilience, a good level of proactive personality, work motivation and good career expectations in order to attain career satisfaction from the work effort given. The core of this discussion is that individual work initiatives must be in line with career plans so that they become a career concept that must be built [69]–[71]. Node cluster 2 with 19 green item keywords shows that “career development” is the keyword appearing more with 30 links and 61 total link strengths and 32 occurrences. It continues with ‘employability’, ‘self-esteem’, ‘social support’ and ‘self-efficacy’ keywords, indicating that cluster 2 centers on soft skills discussion. When it comes to the process of career formation, soft skills ability and adaptation of an individual is dominant in the components of personal, social, and work readiness. In the personality component, self-esteem of an individual becomes a motivation to strengthen self-efficacy which will shape the character of work readiness so that the character of a good worker can be brought out [72], [73].

Node cluster 3 with 18 blue item keywords defines “career construction” as being the keyword with higher appearance of 38 links and 76 total link strength and 32 occurrences. The discussions with large link strength continue to ‘career counselling’, ‘career resilience’, ‘career decision making’ and ‘career assessment’, implying that the highlight of cluster 3 is on career application discussion. Career construction is instilled since students experience learning in school, particularly in vocational schools. Students are equipped with not only hard skills defining technical competencies as one investment for future careers but also career counselling and career assessment in order to strengthening career preparation. It aims to prepare the graduates to get ready for career implementation they will experience upon school completion. Someone with good career decisions will have a better level of confidence and success [74]–[77].

Node cluster 4 with 15 yellow items keywords outlines “life satisfaction” as being the keywords emerging more often with 25 links, 65 total link strength and 25 occurrences. The discussion is followed on ‘adolescents’, ‘career transition’, ‘university students’, and ‘high school students’, concluding that keywords in cluster 4 highlights discussion on career objects and goals. Career adaptations made by a good competent worker will align with his career construction and career adaptations, giving a positive influence on the

economic transition and welfare. [78]–[81]. Node cluster 5 with 13 yellow item keywords delineates “adaptability” as being the keyword with higher appearance of 31 links, 52 total link strength and 30 occurrences. Therefore, keywords in cluster 5 focus on career theoretical frameworks discussions that highlight adaptability in the context of work activities and career readiness. Someone who makes decisions related to career decisions must be able to follow the work environment he has chosen, so that he will grow and develop with a good career [82].

The visualization in Figure 10 explains the evolution of the focus on career adaptability research topic during the 2015-2022 period. The study begins with a discussion of the keyword “assessment”. The conditions were the same in 1981 as in 2015 in the concept of vocational maturity, describing the career attitudes of adult workers [83]. This study is connected with “adaptability” that later develops into other related studies, one of which is the study of “career development” as the basis for studies of “career” concerning the studies of career counselling, career adaptabilities scale, career construction theory [84].

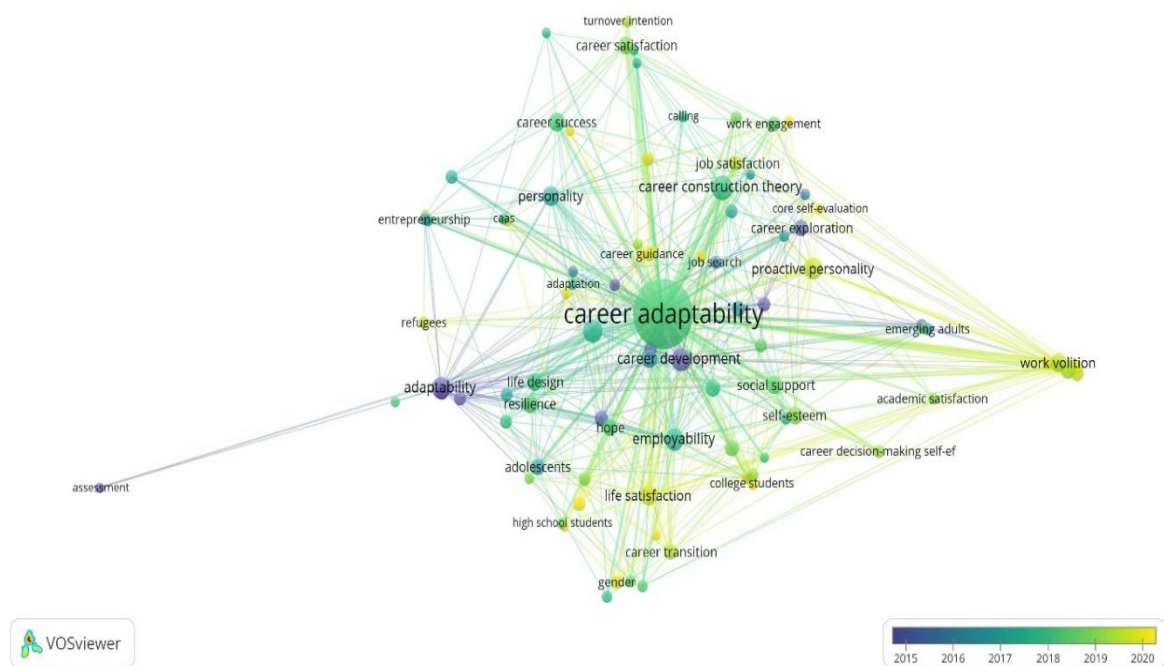


Figure 10. Overlay visualization of career adaptability keywords’

This study continues in the 2017-2019 period on the trend of “career adaptability” studies discussing widely on psychological career resources, career adaptability and resilience in relation to work engagement and organizational commitment as components for the strengthening of an individual career [82]. Furthermore, soft skills to strengthen vocational character are related to career assessment and adaptability [85]. The profile of career adaptability formed since group career counselling was carried out in high schools enabling students to have independent abilities in obtaining increased career opportunities [86]. The career adaptability paradigm and strategy constituting a combination of individual abilities in planning a career, managing career opportunities as well as supports in the development of a career, has become contributing factors of career adaptability in secondary schools (HS) and its effects creating self-focused on career adaptability and on the influence of psychological investments on aspects of life and work [87].

Further study trends are used as considerations to gain novelty from the topic of career adaptability that lie on several following issues: career construction, career transition, career engagement, career guidance, life satisfaction, college students, graduates, proactive personality, job crafting, and core self-evaluation as part of student career counseling. The latest trends in career adaptability studies on social issues are related to elementary work, economic constraints, marginalization, and psychology of work to COVID issues that affect career development and career decisions on self-efficacy related with students, gender, meta-analysis, core self-evaluation and work volition [88].

4. CONCLUSION

The trend resulted from this study is the continuous growth of career adaptability publications every year, mainly in the last 7 years. It shows that the theme on career adaptability is increasingly in demand of study and has become a writing idea for publications. The United States is currently dominating as the country with the most publications on the theme of career adaptability and a prominent country with a high level of citations for its publications. The domination of publications about career adaptability is mostly done by Academic Press Inc. (22.94%) with the types of published scientific documents are dominated by articles in journals. Research on career adaptability was originally carried out by Super, making the concept he built on career construction became the basis for developing research on careers in the following period. The concept of career adaptability investigated by Savickas has been widely followed by other authors with a total of 1,819 citations. This is different from Nota L, known as the most productive author with a total of 23 papers on career adaptability, indicating that the number citation of other writers is not too much.

Nota L.'s work as a productive author on career adaptability has been widely published in Academic Press in the Journal of Vocational Behaviour making this journal the most productive in discussing career adaptability related to vocational development issues. As a prominent author who works on career adaptability, Savickas M.L is the writer whose works have been widely cited in various publishers, including Willey Blackwell in the journal Career Dev Q, Journal Vocational Behaviour and Journal Career Assess. His most recent work in 2022 with Xu H was published by the American Psychological Association on J.Couns. Psychol. This shows that Savickas is very focused on career adaptability research theme with publications that are not only focused on certain journals or publishers. Based on the analysis of the most cited keywords by other authors, it has been identified that 'career adaptability' is the keyword most studied by career scientists, while recent research trends present the keyword 'work volition' as the newest term for actionable research. Work volition is a term for motivation and work initiatives for someone who wants career development. The researchers focused on career related issues, including career concepts, career adaptability components, career applications, career development goals and the establishment of a career guidance framework. The results of the research show that a number of models have been developed from the concept of career adaptability in achieving a level of well-being. A career strengthening and adaptability model for vocational school graduates must be prepared to support the mastery of hard skills that are equipped from school, aiming at the complement of their expectations of career success in the world of work, so that career stagnation does not take place.

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