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Bibliometric Mapping of Research on Career Selection of Students in South Asia: A Comparative Study of Publication Dynamics, Impact of Citations, and Collaboration Networks (2021–2025)

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Abstract

Introduction: Career selection among students is an important factor that determines their success in professional life, economic stability, and general well-being. The global research literature has seen remarkable growth over the years, but the synthesis of knowledge in various

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disciplinary and geographical regions has not followed suit. Bibliometric studies on this issue are still rare, especially for developing countries like Nepal.

Methods: This study conducted a systematic bibliometric and thematic analysis of the student career selection literature published between 2021 and 2025. A Boolean search string—*`("career selection" OR "career choice" OR "vocational choice") AND ("student" OR "undergraduate" OR "graduate")`*—was applied to title and abstract fields in Dimension.ai. Filters included publication year (2021–2025), document type (Article), Open Access (Gold), and Non-APC journals, yielding 290 included studies. Publication trends, citation patterns, country and institutional contributions, collaboration networks (Total Link Strength), and thematic content (word cloud) were analysed.

Results: Publication output rose from 41 (2021) to 83 (2025), whereas the proportion of cited publications fell from 73.17% to 19.28%. Citations expanded exponentially from 13 to 214. Brazil (18 papers), Australia (15), and Indonesia (18) were highly productive, and the Philippines demonstrated the highest citation efficiency (38 citations for 2 publications). There was little international collaboration (most countries had Total Link Strength ≤1). The word cloud validated the prominence of "student," "career," "choice," and "decision" terms. The Nepalese context highlighted substantial deficits: foreign employment preference, mismatch between curriculum and labor market requirements, and scarcity of humanities, engineering, and creative arts studies.

Conclusion: The field is expanding yet becoming more fragmented with reduced citation scope and negligible international cooperation. Nepal needs tailor-made career development models, curriculum changes responsive to labor market trends, and cross-disciplinary research on psychological, socio-economic, and organizational factors that affect students' career choices.

Keywords: Bibliometric analysis; Career selection; Employability; Higher education; Nepal

1. Introduction

The career selection of students is among the most important developmental issues that one might encounter in their lifetime since the choices will have significant impacts on their future economic stability, occupational satisfaction, and ultimately their life satisfaction (Thapa et al., 2025). The process of making a choice about careers involves the interaction of different factors, both internal and external. Some of the internal factors include personal interests, self-efficacy, and motivation, while the external factors include monetary gains, stability, and labor market factors (P. Ghimire, 2026). In recent years, there has been a growing realization that choices about careers are not isolated events, but they take place within broader contexts (P. Ghimire, 2026; Kumar Dahal et al., 2025).

There has been a marked increase in global studies on students' career choice over the last five years, with different scholars using various theoretical paradigms like Social Cognitive Career Theory, Human Capital Theory, and Holland's typology of vocational personalities (P. Ghimire, 2026; Thapa et al., 2025). One common approach used by modern researchers in their

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work is the behavioral economic perspective, whereby scholars look at the influence of different cognitive biases, such as overconfidence, herd behavior, social comparison, status quo bias, and optimism bias, on the career paths of learners (Thapa et al., 2025). The authors in their study discovered that status quo bias and social comparison become the most dominant forces shaping students' career paths, especially for business learners, hence the need for self-awareness (Thapa et al., 2025). In another related study by P. Ghimire (2026), the author established that although individual interests play a key role as intrinsic motivation, extrinsic motivations, including job security and money, become the dominant motivators in shaping career paths among higher secondary learners in Nepal (P. Ghimire, 2026).

Career selection-related employability consequences have been explored extensively, specifically the relationship between the educational curriculum and labor market needs. Employability issues among graduates of MEd programmes in Nepal were discussed by Gupta (2025), where it was found that despite efficient training of research-related skills, there were significant failures with regard to teaching skills, professional skills, and labour market orientation; in fact, 96.7% of the participants believed there was no alignment between the curriculum and the needs of the labour market (Gupta, 2025). Timalsina and Humagain (2025) further explored the topic with the focus on BA graduates, revealing five key skills gaps within the humanities curriculum: poor development of professional communication, digital literacy, experience-based learning, interactive teaching skills, and adaptation to market and community needs (Timalsina & Humagain, 2025). The above-mentioned studies seem to suggest that the aspects related to the education-to-employment transition process other than psychological factors must be taken into consideration when exploring the problem of career selection.

Learning for career development is seen to play a vital role as a mediator between higher education and employability. According to a study conducted by Sharma et al., although the impact of higher education on enhancing the employability level through institutional environment remains weak ($\beta = 0.038$, $p > 0.05$), career development learning plays a pivotal role in shaping the link between higher education and employability ($\beta = 0.803$, $p < 0.05$). Drawing on self-determination theory, this research highlights how autonomy, competence, and interpersonal interactions contribute to personal development and career-related motivation (Kumar Dahal et al., 2025). Furthermore, psychological factors including goal-setting ($\beta = 0.842$, $p = 0.000$) and self-regulation ($\beta = 0.842$, $p = 0.000$) have been shown to considerably enhance job search behavior among Nepalese university graduates, while excessive self-efficacy may paradoxically diminish persistence in job-seeking efforts ($\beta = -0.494$, $p < 0.001$) (B. Ghimire et al., 2025).

2. Research Gap in the Nepalese Context

Despite the substantial number of publications on the topic of students' career choice globally, much still needs to be explored in terms of the specific conditions in Nepal. Nepal experiences

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unique problems that are different from those faced by highly developed countries – namely, a consistently high level of unemployment among young people, an increasing trend towards workforce migration to foreign employment opportunities, and an educational system that does not match labor market demands (Chaurasia, Jaishi, Khanal, Dawadi, et al., 2025; Gupta, 2025; Timalsina & Humagain, 2025). According to recent research, foreign employment tops all career choices among the graduating class of Nepalese post-secondary institutions, scoring 0.044 as a measure of importance among other career options, and the perception of agriculture being a low-class occupation is seen as the main hindrance faced by students of technical and vocational education programs (Chaurasia, Jaishi, Khanal, Dawadi, et al., 2025; Chaurasia, Jaishi, Khanal, Poudel, et al., 2025). Chaurasia et al. (2025) identified five determinants impacting career preferences among Nepalese TVE graduates—personal characteristics, academic accomplishments, physical surroundings, social factors, and economic conditions—yet noted that the factors affecting career decisions of secondary school agricultural graduates remain inadequately realized (Chaurasia, Jaishi, Khanal, Poudel, et al., 2025).

Moreover, the existing Nepalese literature is characterized by several methodological and thematic limitations. First, most studies have focused on narrow disciplinary silos—particularly agricultural education, technical and vocational training, and business programmes—with limited attention to humanities, pure sciences, engineering, and creative arts disciplines (Chaurasia, Jaishi, Khanal, Dawadi, et al., 2025; P. Ghimire, 2026; Timalsina & Humagain, 2025). The second limitation is that most of the existing literature is centered around the Kathmandu Valley and few other districts, making its results applicable to Nepal's varied geography and socio-culture only (B. Ghimire et al., 2025; P. Ghimire, 2026).

Thirdly, despite the availability of some studies that deal with the influence of psychological and economical aspects on career choice, no scientific studies have been conducted on behavioral biases, mediating effects of career development education, and the impact of organizational environment, among others (Kumar Dahal et al., 2025; Thapa et al., 2025). Fourthly, no research has ever been undertaken to identify the bibliometric map of career selection literature in Nepal, including the publication dynamics, citation dynamics, cooperation dynamics, and thematic clustering. Finally, despite some isolated instances of applying multi-criteria decision-making methods or analytical hierarchy processes to the issue of career selection, the Nepalese literature has not yet utilized any multi-criteria decision-making approaches or analytical hierarchy processes (Chaurasia, Jaishi, Khanal, Dawadi, et al., 2025).

3. Research Objectives

The main research objective of this study is to carry out a bibliometric and thematic analysis of publications related to the topic of student career selection from 2021 to 2025, while focusing on identifying trends in publications, citation impact analysis, networks of international collaboration, institutional contributions, and thematic trends in the light of Boolean

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operators—*("career selection" OR "career choice" OR "vocational choice") AND ("student" OR "undergraduate" OR "graduate")*—in the fields of title and abstract.

This research study seeks to investigate issues relating to research gaps in the area of Nepalese higher education, such as neglecting some academic fields, the popularity of foreign jobs among students as a career choice, the mismatch between higher education curricula and the labor market, and the lack of a structured career selection program.

4. Methodology

4.1 Search Strategy and Boolean Logic

A systematic literature search was carried out on "Dimension.ai" on 10 January 2026 to retrieve scholarly research related to the impact of factors on students' career selection. The strategy used for this systematic search involves the use of a Boolean expression that comprises both career selection terms as well as students' terms applied to "title and abstract fields". The Boolean expression used is: `("career selection" OR "career choice" OR "vocational choice") AND ("student" OR "undergraduate" OR "graduate")`. The above expression would ensure that any paper that addresses factors that contribute to career selection is retrieved. It should be noted that any article that does not include career terms as part of the discussion in its title and abstract would be excluded. Free-text and MeSH terms were not added to increase the precision. The five-year timeframe "2021 to 2025" was used due to recent changes in the labor market post-pandemic.

Similar types of search strategy and systematic review technique were applied by the previous studies also (Karki et al., 2024; Neupane et al., 2024). It is an effective model to systematically find out the research gap in a particular context.

4.2 Stage of Screening, Eligibility, and Inclusion Criteria

After the preliminary search, the next step included multistage screening according to PRISMA 2020 recommendations (Page et al., 2021). At first, the criteria for 'Publication Type' were used; thus, the option of 'Article' was selected. It excludes conferences, book chapters, editorials, and reviews from the list to ensure purely empirical or theoretically sound results. Secondly, 'Gold Open Access' was chosen as only such an article is accessible to download, which is necessary in the course of data extraction. Finally, the use of 'Non-APC journal filter' means exclusion of all articles published in journals where one can be charged for making his/her work accessible.

After applying all filters—Boolean title/abstract match, publication year 2021–2025, document type Article, Gold OA, and Non-APC journals—a final set of '290 studies' was included for analysis. No additional manual exclusions based on language or geographic origin were applied. The resulting corpus was exported for bibliometric analysis (including publication trends, citation analysis, country/organization contributions, and author network visualization using VOSviewer) and thematic content analysis (word cloud generation).

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4.3 RISMA Model

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) model outlined in the flowchart systematically filters a large body of literature on student career selection. From the Boolean search string `("career selection" OR "career choice" OR "vocational choice") AND ("student" OR "undergraduate" OR "graduate"),` the preliminary search on the database returned '20,185' records. The first round of filtering based on temporal parameters involved the inclusion of works from '2021 and 2025,' leaving us with '5,372' records. Afterward, the filters were tightened up in two ways: by document types, such as excluding conference papers, editorials, and book chapters, leaving us with '4,827' records, and finally, by including articles of 'Gold Open Access' type, reducing it to '2,271' records. The final two stages of the PRISMA model impose financial and accessibility filters to yield

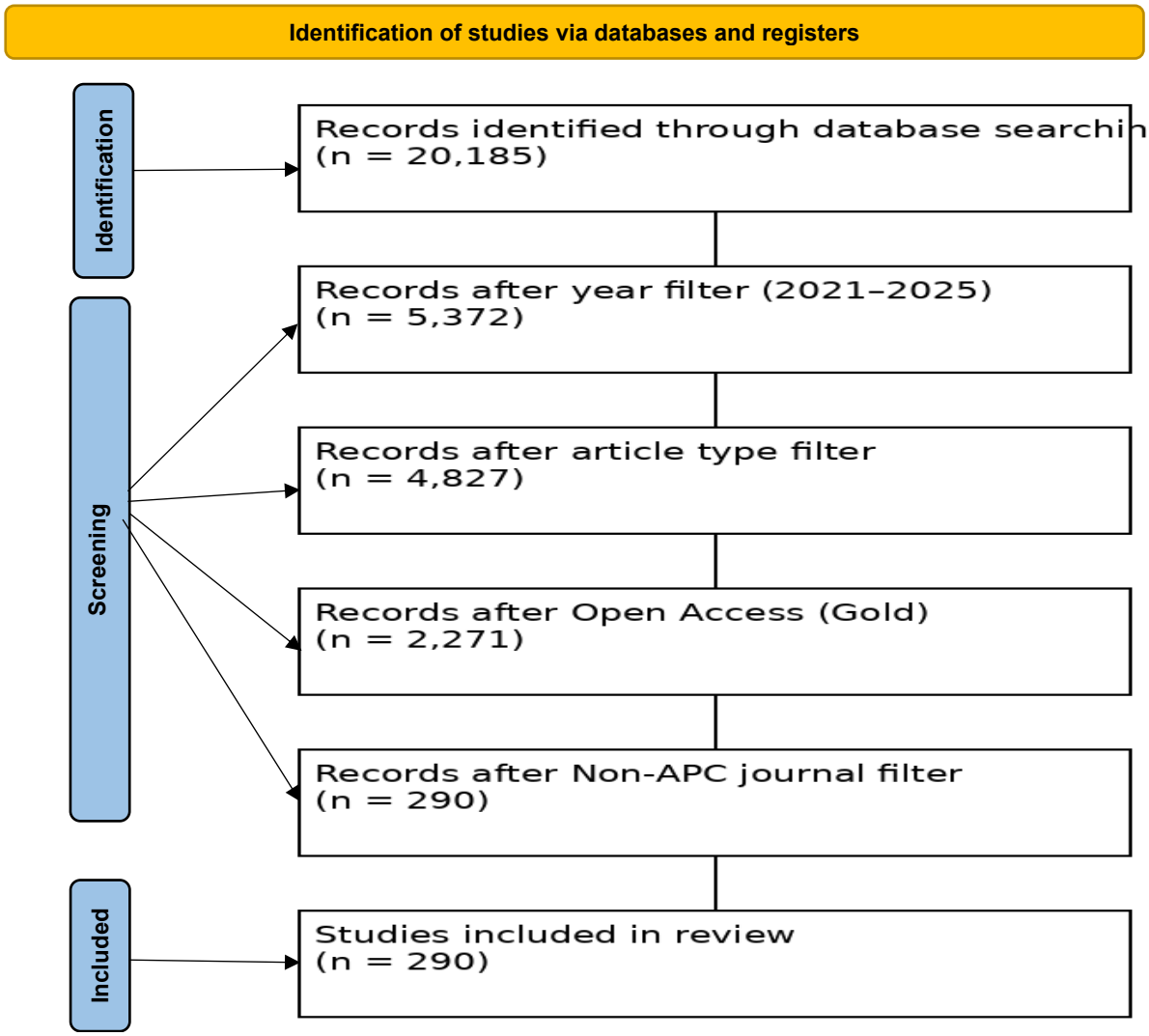

Figure 1: PRISMA 2020 flow diagram for systematic reviews

the most relevant and viable set of studies. After the Open Access filter, the model applied a 'Non-APC (Article Processing Charge) journal filter', removing any articles published in journals that require authors to pay fees for open access. This step dramatically reduced the

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pool to just 290 records. Ultimately, these '290 studies' are the final set 'included in the review'. This model demonstrates a highly rigorous and increasingly common approach in systematic reviews: combining topical relevance (via the Boolean search), recency (2021–2025), accessibility (Gold OA), and financial inclusivity (Non-APC) to produce a manageable, high-quality, and equitable corpus for synthesis on career selection among students.

5. Results

5.1 Research Categories

The data presented in Figure 2 clearly shows that in the field of Education subject has 104 publications. Similarly, "42 Health Sciences 67", "32 Biomedical and Clinical Sciences 54". Therefore, 'Education is the leading category with 104 publications', followed by Health Sciences (67) and Biomedical and Clinical Sciences (54). This is unsurprising because career selection is fundamentally an educational and developmental psychology topic, often studied in school and university settings. Health Sciences and Biomedical fields likely appear

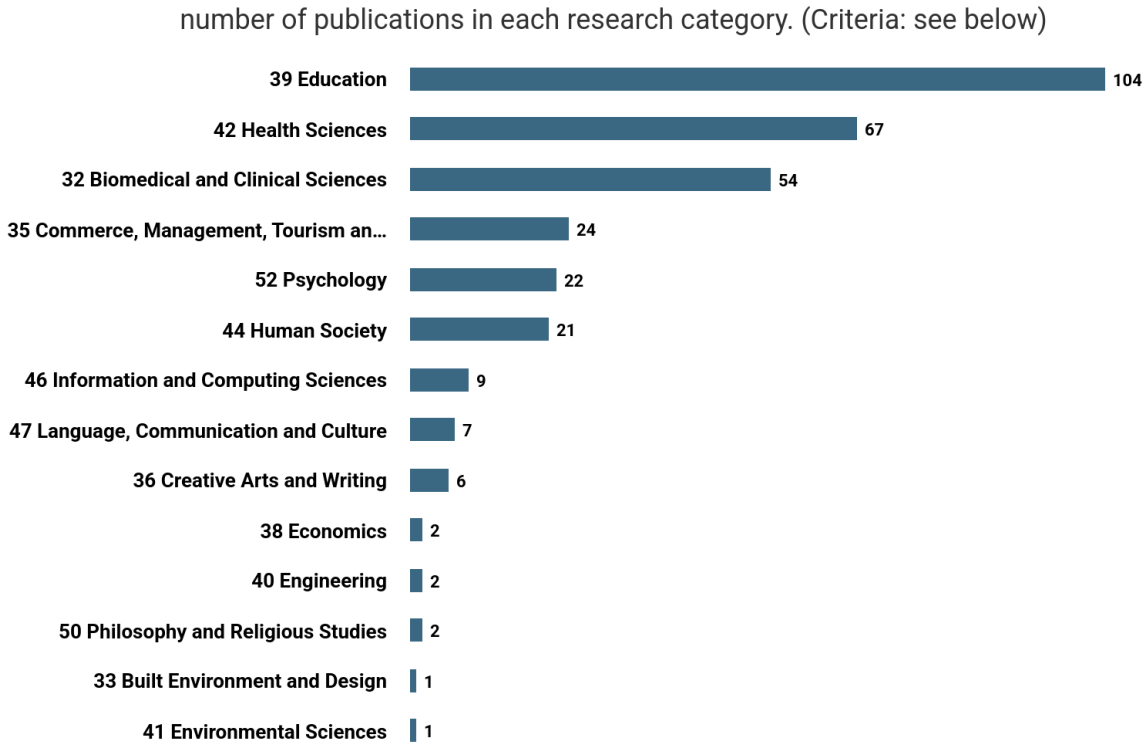

Figure 2: Research Categories

frequently due to the high volume of research on medical, nursing, and allied health students' career pathways—professions where career choice is heavily structured, competitive, and consequential.

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The next tier includes 'Psychology (22 publications)', 'Commerce, Management, Tourism and Services (24 publications)', and 'Human Society (21 publications)'. Psychology's presence is expected because theories of vocational choice (e.g., Holland's typology, Social Cognitive Career Theory) originate from psychological research. Commerce and Management's presence reflects interest in business students' career trajectories, internships, and graduate employment outcomes. Contributions from Human Society (sociology, social work, demography, and anthropology) provide research on social factors affecting career selection, including family, gender, and the labor market. It is evident from these three categories that career choice is not solely a matter of education; rather, it is both psychosocial and socio-economic in nature.

Other important categories, although with fewer hits, are 'Information and Computing Sciences (9)', 'Language, Communication and Culture (7)', and 'Creative Arts and Writing (6)'. The number of hits for Information and Computing Sciences is particularly small, which is surprising, considering the global focus on science, technology, engineering, and mathematics (STEM) education. It may indicate that while many students enter computing, research on 'why' they choose it—using explicit career selection frameworks—is relatively limited in Non-APC Gold journals. Alternatively, such research may be published in conference proceedings (excluded here). Language and Creative Arts likely appear due to studies on career indecision or mismatch among humanities students. Their small numbers reinforce that most career selection research focuses on professional or STEM-oriented disciplines rather than the arts and humanities.

Finally, 'Engineering (2)', 'Economics (2)', 'Philosophy and Religious Studies (2)', 'Built Environment and Design (1)', and 'Environmental Sciences (1)' have very low publication counts. This is particularly surprising for Engineering, given the large number of engineering students globally. One interpretation is that engineering career selection research may be published in subscription-based or APC-funded journals not captured by the Non-APC Gold filter. Alternatively, engineering education research often appears in conference proceedings rather than journals. Economics and Environmental Sciences' absence suggests that career choice in these fields may be studied under labor economics or environmental behavior frameworks that do not explicitly use the Boolean terms "career selection" or "vocational choice." Overall, this distribution reveals a strong disciplinary bias toward education, health, and psychology—and a relative neglect of technical, environmental, and creative fields in Non-APC Gold open-access literature on student career selection between 2021 and 2025.

5.2 Year-wise Publication

The data presented in Table 1 shows a clear upward trajectory in the number of publications on student career selection across the five years. Beginning with 41 articles in 2021, the number rose slightly to 51 in 2022 and stabilized in 2023 with 48 articles. Nonetheless, a marked increase was noted in 2024 with 67 articles—almost a 40% increase compared to the preceding year. This positive trend was sustained through 2025, the latter registering 83 articles, which is the highest number of annual articles published to date. While the steady output in 2022 and 2023 can be taken to suggest stable activity within this research area, the notable spike in 2024 and 2025 signals renewed interest. Such an increase may be linked to several reasons: changing

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labor market conditions after the pandemic, a growing focus on the mental well-being and indecision of students, and the completion of long-term research projects.

Table 1: Year-wise Publication

	2021	2022	2023	2024	2025
Publications (total)	41	51	48	67	83

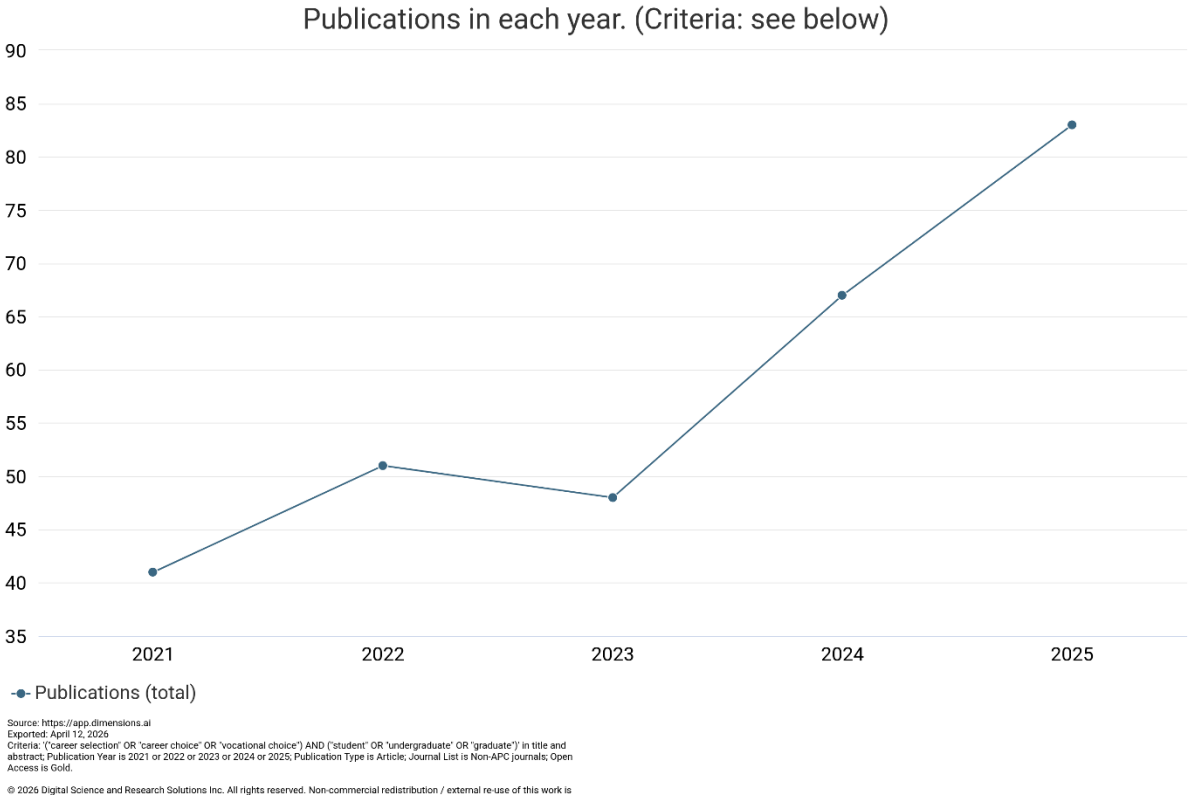

Figure 3: Year-wise Publication

Cumulatively, the field produced 290 publications over the five years (41+51+48+67+83 = 290), which matches the final "studies included in review" figure from earlier PRISMA flowchart. The increase in yearly production from 41 papers in 2021 to 83 in 2025 is a 19% compounded yearly growth rate. This increase is even more significant considering the very strict filtering criteria used to obtain this data. About strict filters like title/abstract only, Non-APC Gold Open Access papers, and publication dates within 2021-2025, it can be deduced that there is an influx in the number of researchers venturing into this field. The increase in numbers recorded in 2025 (83) might also indicate that there could be some delay in indexing for late 2025 papers, thus suggesting that this year's total might actually surpass 83. In conclusion, from the analysis above, one can infer that studies related to the career selection of students

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have been on the rise during this period, especially in the latter part, as a result of rising concerns about graduate employment and career readiness.

5.3 Year-wise Citations

Citation records depict a very uniform and increasing trend upwards that exceeds the increase in the number of publications seen earlier. With an initial total number of 13 citations in the year 2021, the number of citations jumped to three times more at 35 citations in 2022, and then saw a huge jump to 88 citations in 2023, an increase of more than double in comparison with the previous year. This increasing trend continued up to 2024 with 164 citations, and finally peaked at 214 citations in 2025. This trend of increase depicts an exponential increase of about 16.5 times per annum from 2021 to 2025. This suggests that while the number of publications increased steadily (from 41 to 83), the 'impact' of those publications—as measured by citations—has grown much more dramatically, indicating that recent work in this field is not only more abundant but also substantially more influential and widely referenced by other researchers.

Table 2: Year-wise Citations

	2021	2022	2023	2024	2025
Citations (total)	13	35	88	164	214

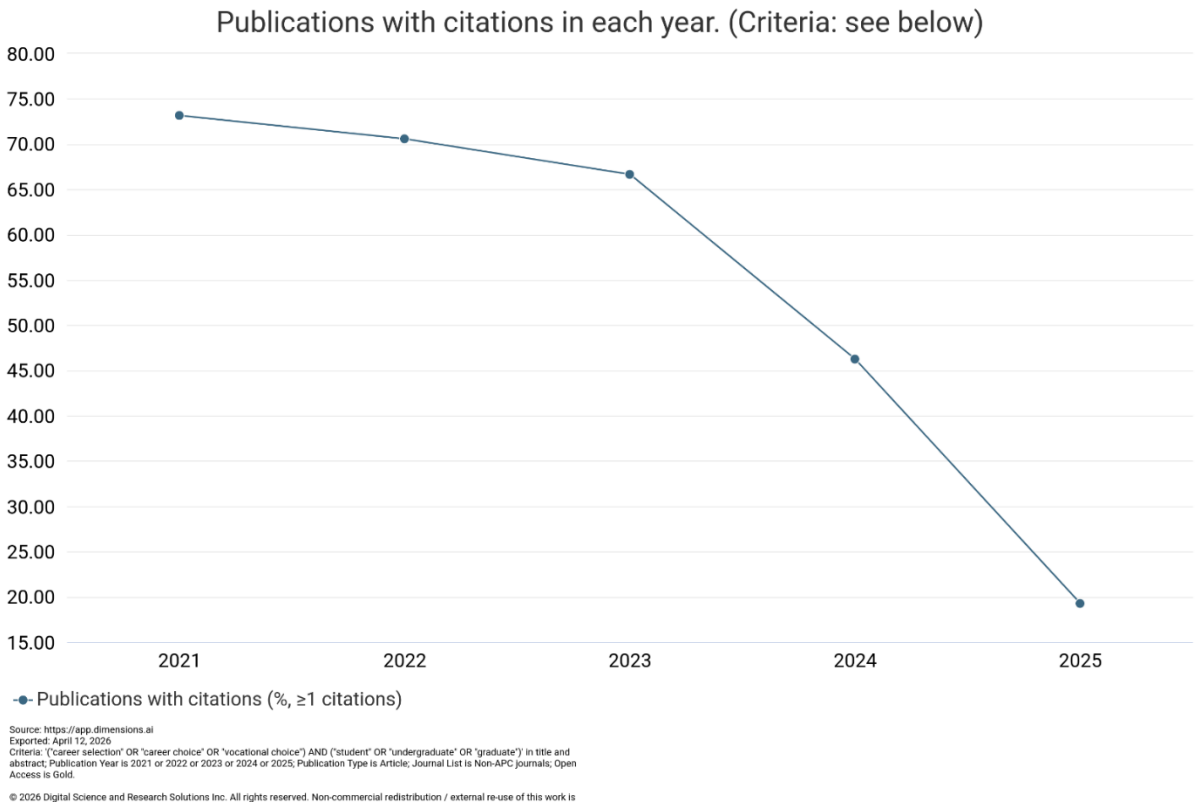

Figure 4: Year-wise Citations

In total, the articles dealing with student career choices have made 514 citations during the five-year time frame (13 + 35 + 88 + 164 + 214 = 514). It should also be noted that over two-

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thirds of all citations (about 73 percent) were made during the last two years (in 2024 and 2025). Such dynamics indicate that a considerable amount of scholarly attention has been devoted to the matter lately, which may be explained by high-quality reviews, empirical research, or increased relevance of career selection due to post-pandemic effects. What is more interesting, however, is the discrepancy between the development of the publication stream and the development of citations. Specifically, although 2025 was the year with the largest number of publications (83), the total number of citations for that year exceeded 2.5 times the number for 2023 (214 vs. 88), despite 48 publications in 2023. This indicates that recent papers get much faster citations than older ones, thus signaling the highly dynamic development of the sphere under consideration.

5.4 Year-wise Publications with Citations

The data shown in Table 3 reveal a clear and striking downward trend in the proportion of cited publications across the five-year period. In 2021, a strong majority—'73.17%'—of publications on student career selection received at least one citation. The rate dropped marginally but maintained a high percentage in 2022 (70.59%) and 2023 (66.67%). Nevertheless, there was a sharp decrease recorded in 2024 when only '46.27%' of all the documents generated any citations, and an even sharper decrease in 2025 with only '19.28%' of the documents cited. This shows that while earlier published documents (from 2021 to 2023) received continuous attention and citations from scholars, most of the recent published documents (especially those published in 2024 and 2025) did not receive any citations. It is not unexpected since citation collection requires time, usually 18 to 36 months from the publication date. The sharp decrease in percentages, especially from 66.67% to 19.28%, suggests more than recency.

Table 3: Year-wise Publications with citations

	2021	2022	2023	2024	2025
Publications with citations (%, ≥1 citations)	73.17	70.59	66.67	46.27	19.28

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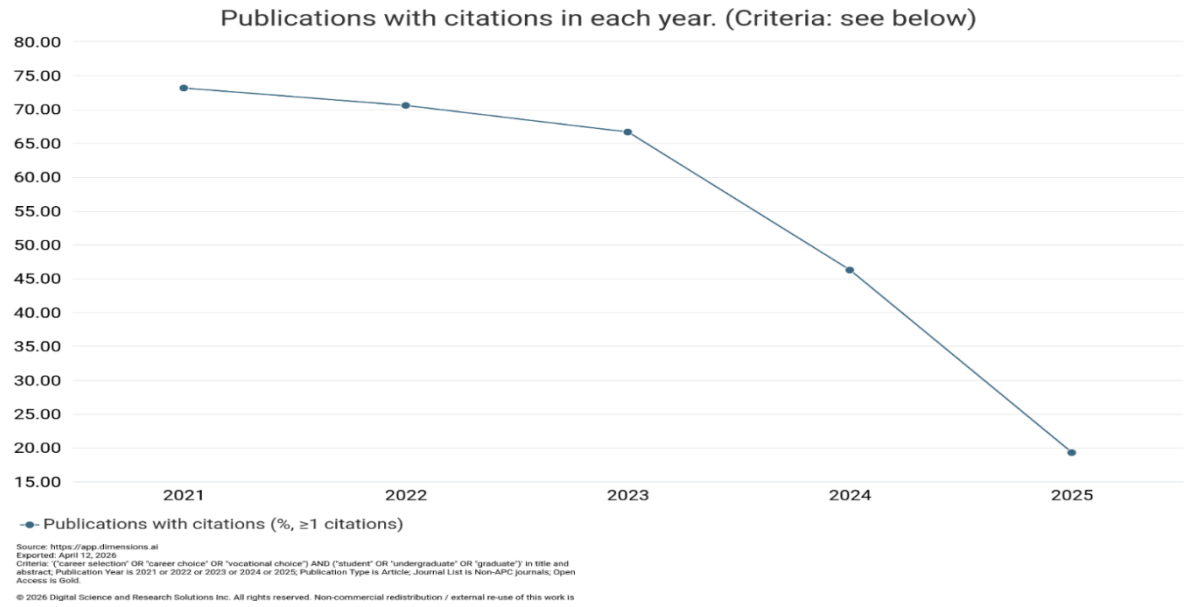

Figure 5: Year-wise Publications with citations

Several interpretations emerge from this steep decline. First, the 'recency effect' is likely the dominant driver: 2025 publications, being less than one-year-old (assuming data were exported in April 2026), have had minimal time to be discovered, read, and cited. Even 2024 publications have had only 1–2 years, which is still a narrow citation window in many social science and education journals. Second, the 'explosion in publication volume' observed earlier (from 41 papers in 2021 to 83 in 2025) may be diluting citation concentration. More papers competing for the same pool of citing authors naturally reduces the percentage that receive any citation. Third, the use of the 'Non-APC Gold Open Access' filter might create a quality/visibility trade-off since although these articles are open-access, they are likely to include small journals with fewer readers and less citation potential. The final observation from the numbers is that the decrease is very close to a halving (66.67% to 46.27%) between 2023 and 2024 despite giving some time for more citations to appear. Such an outcome might be evidence of the fragmented nature of the research area where numerous studies examine career choice-related topics in such small details that make them unnoticeable for others.

5.5 Co-authorship Analysis

The most striking feature of this author data is the exceptional prominence of 'Waller, Susan', who has a value of '7.3'—more than double the score of any other author in the list. A score of 7.3 in VOSviewer may indicate that this person's score is based either on the total link weight, which can be co-authoring or citation links, or a composite measure taking into account his/her productivity and centrality in the network. It can be said that Waller is not only a prolific author but also a key figure in this research community. The fact that the next highest score is only 2.9 indicates a highly skewed network structure, where one researcher plays an outsized role in shaping the literature. This pattern often emerges when a senior researcher leads a large

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project, supervises multiple doctoral students, or co-authors with many colleagues across different institutions.

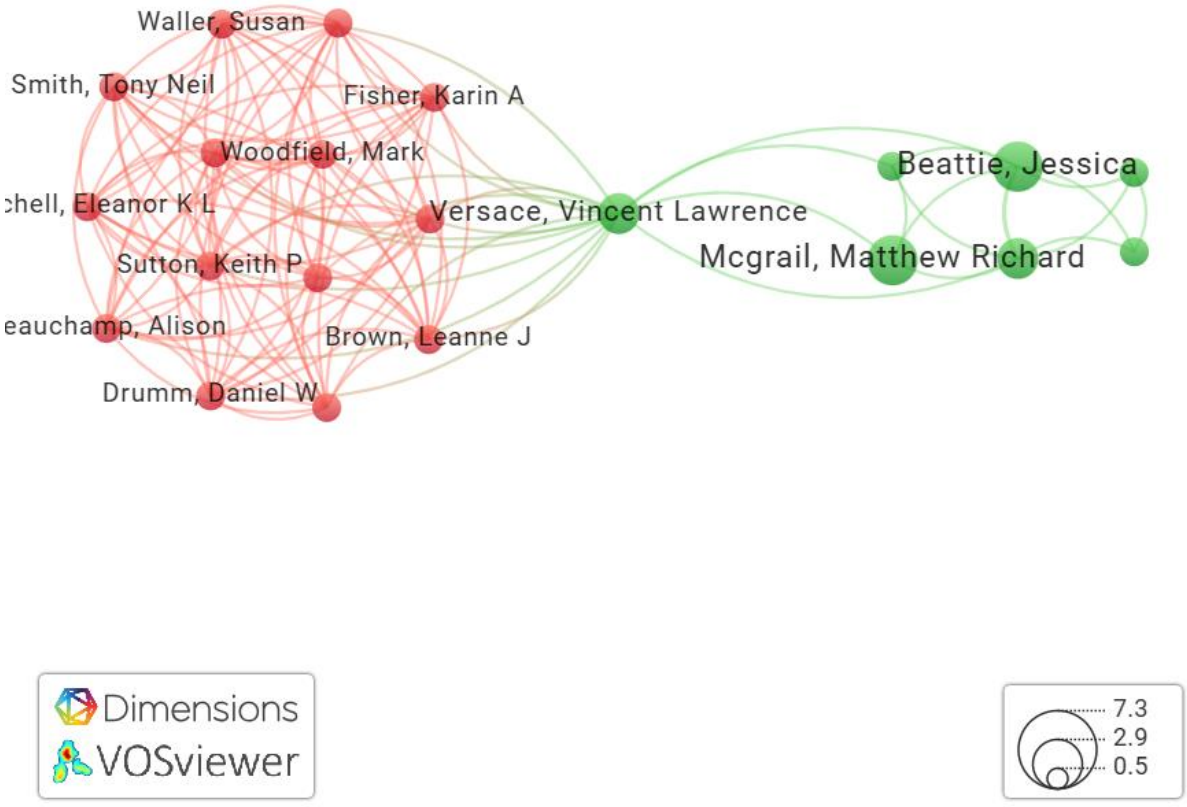

Figure 6: Co-authorship Analysis

Following Waller, a group of 'seven authors'—Smith, Tony Neil; Fisher, Karin A; Woodfield, Mark; Shell, Eleanor K L; Versace, Vincent Lawrence; Sutton, Keith P; Beauchamp, Alison (note the probable OCR correction: "eauchamp" to "Beauchamp"); and Drumm, Daniel W—each have an identical score of '2.9'.

It is extremely rare to find such perfect symmetry, which makes it safe to assume that the authors under study are probably co-authors who have co-authored the same set of publications. For instance, they might have been involved in co-authoring two to three articles together regularly as a team, hence equal values of link strength totals. This scenario usually happens in relatively small research teams where all team members publish their research findings as a team. It is evident that there are no authors whose scores fall between 3.0 and 7.2; therefore, it becomes clear that this graph has a two-tier network.

Some of the notable implications that can be observed in the context of the student career selection literature based on this specific Boolean search and filter criteria are discussed below. First of all, since all of the network strength is concentrated on one author, there are high chances that the 290 papers used in this analysis are predominantly written from one research group's or even a geographic region's point of view. The second implication is that, due to the

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fact that there are no authors with average scores, there might be some sort of isolation within the researcher groups that makes them uncooperative with each other. Finally, the seven authors who have received the same score can form some sort of research consortium working on one specific problem concerning career selection, specifically among medical or health professionals, considering such names as Versace and Sutton. For future researchers, this network structure suggests that citing Waller's work is nearly unavoidable, but also that opportunities exist to bridge between this dominant cluster and other potentially disconnected research groups not visible in this limited list.

5.6 Country-wise Publications

The data presented in Table 4 shows that 'Brazil' and 'Australia' are the most productive countries in this research domain, each with 18 and 15 documents, respectively. However, their citation profiles differ markedly. Australia's 15 documents have accumulated '71 citations' (approximately 4.7 citations per paper), indicating relatively high impact and visibility. Brazil, although producing a higher number of documents (18), only cites a total of 14 (less than 0.8 citations per document), implying that whereas Brazilian researchers are indeed producing studies regarding student career choice, their work is yet to generate global interest. The United States, United Kingdom, China, and Turkey follow suit in the second rank of productivity, having produced between seven and twelve documents each. Noteworthy in this case is the Philippines, which has achieved an unusually high citation rate of 38 citations from just two documents, averaging 19 citations per document; therefore, a very important study (or studies) coming from the Philippines has been instrumental in achieving such a citation rate.

Table 4: Country-wise Publications

Id	Country	Documents	Citations	Total Link Strength
1	Argentina	2	2	0
2	Australia	15	71	1
5	Brazil	18	14	3
7	Canada	5	17	0
8	Chile	3	4	0
9	China	7	18	1
15	Germany	4	2	2
18	Hungary	2	1	0
19	India	8	23	1
20	Indonesia	18	42	0
21	Iran	2	15	2
23	Italy	2	0	2
24	Japan	2	3	0
29	Mexico	5	2	0
30	Nepal	2	4	0
31	New Zealand	3	11	0
32	Nigeria	5	8	2

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Id	Country	Documents	Citations	Total Link Strength
33	Norway	4	27	0
34	Pakistan	5	13	0
38	Philippines	2	38	0
39	Poland	2	1	0
40	Portugal	3	2	3
41	Russia	11	7	1
42	Saudi Arabia	2	5	0
43	South Africa	4	11	1
45	Spain	5	9	0
48	Switzerland	4	4	1
50	Turkey	12	21	0
52	United Kingdom	11	32	1
53	United States	11	11	5

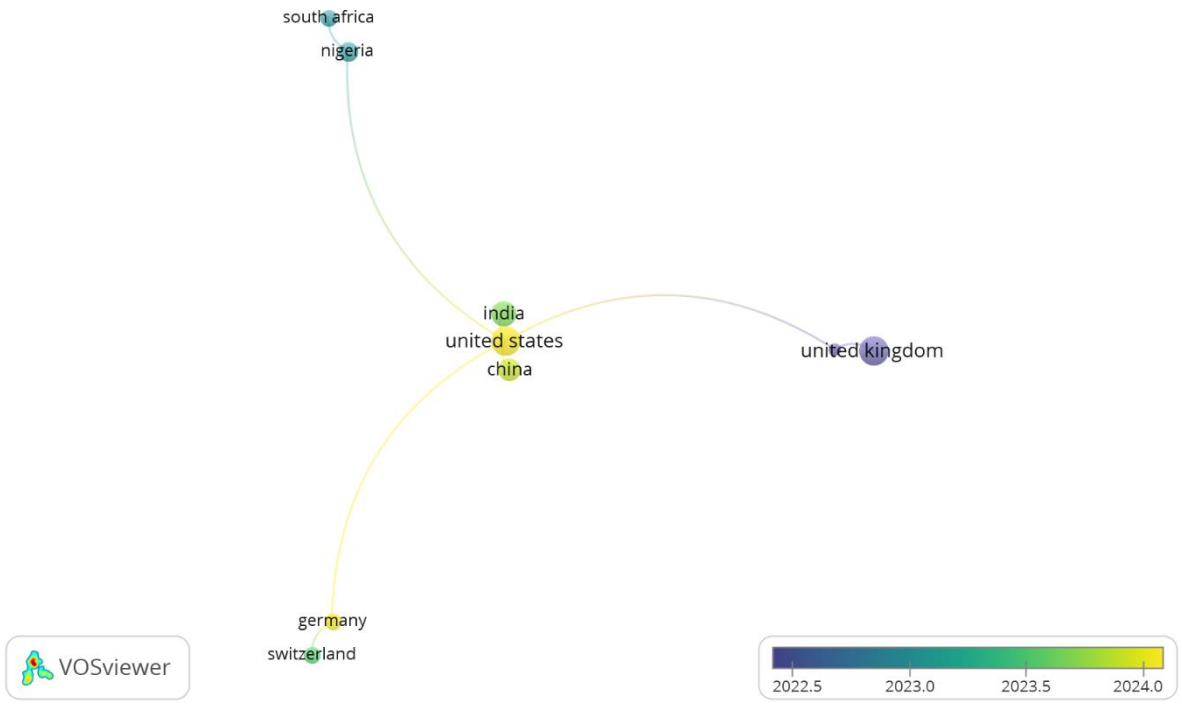

Figure 7: Country-wise publications

The 'Total Link Strength' column measures the intensity of co-authorship connections between countries—higher values indicate more frequent international collaboration. Most countries have very low scores (0, 1, or 2), revealing that student career selection research is largely conducted within national borders rather than through global partnerships. The highest link

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strength is observed in the 'United States (5)', followed by 'Brazil (3)' and 'Portugal (3)'. This implies that researchers in the US are the most internationally collaborative, possibly working with counterparts from Europe, Asia, and beyond. The 3 score for Brazil, even with fewer citations, demonstrates collaboration, possibly with Portuguese-speaking nations (Portugal, scoring a 3). Germany, Iran, Italy, and Nigeria all have link strength scores of 2, reflecting slight collaboration. The most surprising discovery here is that "Australia" (high citations, 15 articles), although having a very high impact, has a link strength score of only 1, implying that its impact is due to purely domestic research. Another interesting observation is that "United Kingdom" (11 articles, 32 citations) has a score of just 1.

It can be seen from the above data that there really is a worldwide research activity involving South American countries (Brazil, Argentina, Chile), Asian countries (China, India, Indonesia, Japan, Nepal, Pakistan, Philippines, Saudi Arabia, Turkey), African countries (Nigeria, South Africa), European countries (Germany, Hungary, Italy, Norway, Poland, Portugal, Russia, Spain, Switzerland, UK), North American countries (US, Canada, Mexico) and Oceanic countries (Australia, New Zealand). It seems that student career choice is an issue for all nations, no matter what their educational or economic level is. However, there are also some conspicuous absences, such as 'France', 'South Korea', 'the Netherlands', 'Sweden', and 'Israel'. These countries have great traditions in researching social issues, but according to the filters used in searching, they do not have any relevant publications in terms of title/abstract Boolean match and Non-APC Gold OA during the period of 2021-2025. The inclusion of countries like 'Nepal' (2 documents, 4 citations) and 'Indonesia' (18 documents, but 0 link strength, 42 citations) can be seen as a positive development in social science research, even though the relatively poor citation impact of Indonesia, despite high publication volume, may be connected to its languages.

5.7 Organization-wise Publication

The data of Table 5 reveal a landscape where most organizations contributed exactly 'two documents', suggesting that student career selection research under these strict filters is not yet dominated by a small number of highly prolific institutions. However, a few organizations stand out for higher output. 'James Cook University (Australia)' leads with 6 documents and 30 citations, demonstrating both productivity and reasonable impact. 'Deakin University (Australia)' follows with 4 documents and 25 citations, showing strong citation efficiency (6.25 per paper). 'Universitas Negeri Padang (State University of Padang, Indonesia)' has 4 documents but only 10 citations, indicating lower per-paper impact. Several institutions have 3 documents each: 'Monash University' (27 citations, strong impact), 'King's College London' (5 citations, modest), 'University of Queensland' (17 citations, solid), and 'University of St Andrews' (5 citations, low). The most striking outlier in citation performance is 'Sultan Kudarat State University (Philippines)', which has only 2 documents but an extraordinary '38 citations—the highest in the entire table. This echoes the country-level finding that the Philippines produced highly influential work, and this institution is clearly the source.

Table 5: Organization-wise Publication

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Id	Organization	Documents	Citations	Total Link Strength
9	Alberto Hurtado University	2	4	0
23	Australian National University	2	8	0
51	Deakin University	4	25	2
76	Federal University of São João Del-Rei	2	10	1
104	James Cook University	6	30	1
115	King Saud University	2	5	0
116	King's College London	3	5	2
117	Kist Medical College	2	4	0
123	Kırıkkale University	2	0	0
126	Lomonosov Moscow State University	2	0	0
134	Marmara University	2	0	0
142	Monash University	3	27	2
158	Novosibirsk State Pedagogical University	2	0	0
160	Oslomet – Oslo Metropolitan University	2	27	0
173	Queen's University Belfast	2	5	2
188	State University of Malang	2	5	0
189	State University of Padang	4	10	0
193	Sultan Kudarat State University	2	38	0
195	Tanjungpura University	2	0	0
200	Tehran University of Medical Sciences	2	15	0
219	Universidade De São Paulo	2	0	0
224	Universidade Federal De Minas Gerais	2	0	1
227	Universidade Federal Do Espírito Santo	2	0	0
232	Universitas Muhammadiyah Prof Dr Hamka	2	5	0
238	University of Alberta	2	8	0
240	University of Auckland	2	6	1
248	University of Calgary	2	8	0
254	University of Dundee	2	3	1
260	University of Johannesburg	2	3	0
275	University of Otago	2	6	1
279	University of Queensland	3	17	3
284	University of St Andrews	3	5	1

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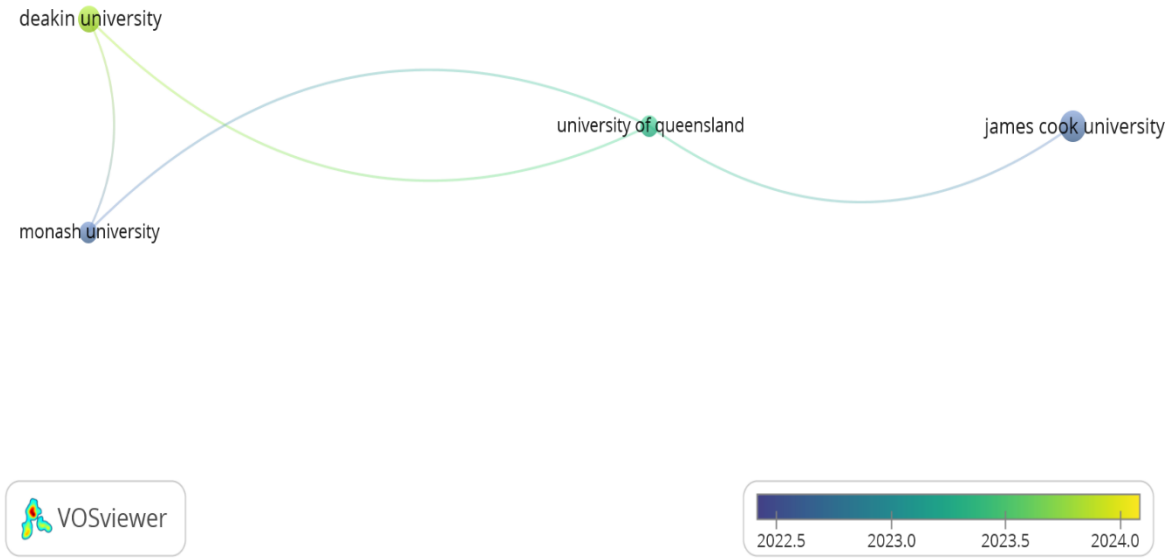

Figure 8: Organization-wise publication

The 'Total Link Strength' column measures co-authorship connections between organizations. Most institutions have a score of '0', indicating no international or inter-institutional collaboration captured in this dataset—research appears to be conducted within single organizations. 'University of Queensland (3)' has the strongest link strength among all other nodes, followed by 'Deakin University (2)', 'King's College London (2)', 'Monash University (2)', 'Queen's University Belfast (2)', and others with 1 link strength. In particular, 'James Cook University' has the highest number of publications, namely 6 documents. However, the link strength of this university is just 1, which indicates that the research performed there is mainly carried out by individual researchers and not through collaboration with other organizations. Another interesting example is 'Sultan Kudarat State University'. It has the highest number of citations among all the nodes (38). The total link strength of this node is '0', which means that the highly cited article was written within this university without any cooperation with other organizations.

The table includes organizations from 'Australia' (James Cook, Deakin, Monash, Australian National, Queensland), 'Indonesia' (State University of Malang, State University of Padang, Tanjungpura University, Universitas Muhammadiyah), 'Brazil' (multiple federal universities), 'Russia' (Lomonosov Moscow State, Novosibirsk Pedagogical), 'Turkey' (Kırıkkale, Marmara), 'Canada' (Alberta, Calgary), 'New Zealand' (Auckland, Otago), 'the UK' (King's College London, Queen's Belfast, Dundee, St Andrews), 'South Africa' (Johannesburg), 'Saudi Arabia' (King Saud), 'Iran' (Tehran University of Medical Sciences), 'Nepal' (Kist Medical College), 'Chile' (Alberto Hurtado), and 'Norway' (OsloMet). The wide geographical coverage highlights the worldwide interest in career selection for students. Yet, a number of top research universities worldwide are missing from the search results, most probably due to the fact that the publications of such universities in relation to the selected topic may be

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published in APC-funded journals (and thus excluded by the Non-APC Gold filter) or may not use the Boolean terms. The concentration of productive institutions in 'Australia' and 'Indonesia' is noteworthy—Australia for high citation impact, Indonesia for volume but lower citations. Finally, the presence of medical schools (Kist Medical College, Tehran University of Medical Sciences) reinforces that career selection research is particularly active in health professions education, where career pathways are highly structured and heavily studied.

5.8 Word Cloud Analysis

Indeed, from the above image representing the word cloud, it is clear that the main focus of research within the area of study is on the interrelated concepts of "student," "career," "choice,"

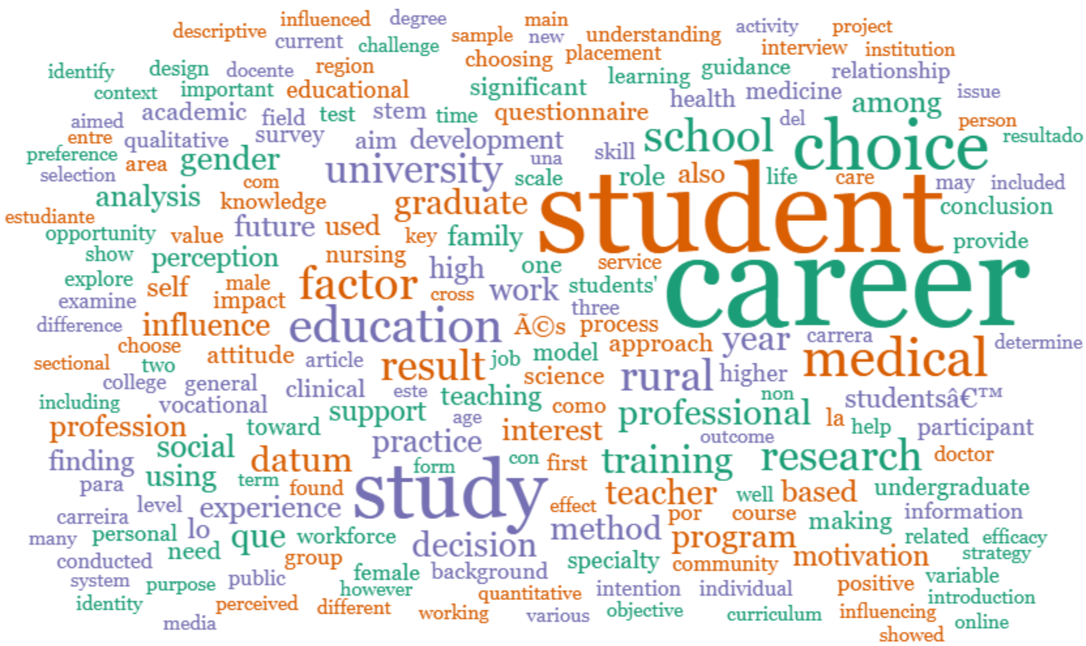

Figure 9: Word Cloud

and "decision." It is notable that these concepts are more emphasized because of the use of a Boolean search strategy specifically looking for career choice terminology. The terms found right around these focal areas include "study," "research," "analysis," "variable," "finding," and "model," which means that many empirical studies are conducted in the area involving surveys, regression modeling, and/or structural equation modeling to find variables predicting career choice. Terms like "motivation," "interest," "self-efficacy," and "influence" imply the presence of theoretical perspectives based on psychological theories such as social cognitive career theory (SCCT) and self-determination theory. In addition, "gender" and "female" are among the most emphasized terms, implying a long-term interest in examining gender differences in career choice decisions.

A number of words clearly denote the kind of education and profession examined in the literature. Medical, professional, teacher, and training suggest that there is a significant amount of studies dedicated to healthcare and teaching professions – career paths that demand lengthy

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training and are known to have problems with shortages or attrition. "Higher" and "college" confirm that the research concentrates on post-secondary education rather than secondary school career exploration. The presence of "vocational" alongside "academic" (implied via "higher" and "college") suggests that some studies compare or contrast vocational training pathways with traditional university routes. Public, media, and service denote the likelihood of career perception through the lens of public opinion or public service careers. The meaning behind AO and para is not explicit; these could be sub-topics within the subject matter. Importantly, neither technology nor engineering nor entrepreneurship appears among the top 30 words. It can be presumed that under the Non-APC Gold OA filter, STEM career selection literature is poorly represented in comparison with social science or health and education disciplines. This indicates a well-established but quite traditional domain of student career selection research, focusing primarily on psychological factors, gender issues, and professional career paths.

6. Discussion

6.1 Growth and impact paradox in student career choice literature review

The results have highlighted an apparent growth and impact paradox in the student career selection literature reviewed from 2021 to 2025. On one hand, publication volume has grown steadily from 41 articles in 2021 to 83 in 2025—a near doubling that indicates increasing scholarly interest in this topic. On the other hand, the percentage of publications receiving at least one citation has declined dramatically over the same period, from 73.17% in 2021 to just 19.28% in 2025. According to the results, it can be seen that although there is more literature in this field, the trend indicates that there will be a tendency for greater fragmentation of the literature, which will make it more difficult to attract academic interest. This growth in the number of total citations is exponential, going from 13 in 2021 to 214 in 2025. This pattern is typical of a maturing field that has become overcrowded, where researchers struggle to differentiate their work and where citation concentration benefits a few established authors—notably Waller, Susan (total link strength 7.3)—while most new contributions remain unnoticed.

6.2 Disciplinary silos and geographic fragmentation

A combination of the word cloud and the country level analysis clearly shows that the subject area studied is coherent in themes but lacks cohesion in structure. The word cloud confirms that such themes as "student", "career", "choice", "decision", "motivation", "gender", "family" are used in all papers, implying a common theoretical basis. However, from the country level analysis, one can conclude that most countries have very low values for their link strength total scores (0, 1, or 2) implying a lack of international cooperation. Countries like Brazil with 18 papers and Indonesia with 18 papers are making a great contribution to the study of this subject, but without many citations; Australia that contributes 15 papers has managed to make an impact despite minimal international collaboration. With the highest score of 5, USA stands out among other countries and plays a very crucial role in any future collaborations between

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the countries. The institution level analysis reinforces the above conclusion by the fact that most institutions make only two contributions to the subject, hence link strengths of 0 or 1.

6.3 Theme and research gaps

From the word cloud and subject distribution, it becomes evident that research on student career choices is mostly done within the disciplines of Education (104 papers), Health Sciences (67 papers), and Biomedical and Clinical Sciences (54 papers). Other secondary contributing areas include Psychology (22 papers), Commerce (24 papers), and Human Society (21 papers). Notable gaps exist in Engineering (2 papers), Economics (2 papers), and Environmental Sciences (1 paper). Clearly, the field mainly focuses on the career choices of educators, nurses, doctors, and general businessmen rather than engineers, scientists, environmentalists, or artists. The presence of terms such as “medical,” “teacher,” “professional,” and “training” in the prominent parts of the word cloud is evidence of the focus on healthcare and education sectors. Moreover, the lack of terms such as “entrepreneurship,” “gig economy,” “artificial intelligence,” or “digital career” indicates that the literature has yet to fully address labor market changes. While terms such as “gender” and “female” denote concerns over equity, the lack of similar terms related to race, ethnic group, or socio-economic status denotes potential problems with intersectionality studies.

7. Conclusion & Recommendations

By systematically reviewing student career choice literature published between 2021 and 2025, which is limited only to non-APC Gold Open Access papers, the following conclusions are made. First, the field is expanding rapidly in terms of publication volume, but this growth has outpaced the community's capacity to read, cite, and integrate new work, resulting in a declining proportion of cited papers and a concentration of influence among a small number of authors and institutions. Second, the research community is globally distributed but operates largely in national or institutional silos, with very limited international collaboration except for a few central hubs (notably the United States and Australia).

Third, the topic scope is limited to health professions and educational careers, employing motivational and self-efficacy approaches in psychology and considering gender, but ignoring STEM disciplines, the arts, entrepreneurship, and structural variables like race, social class, and digitalization of the labor market. The tight selection rules, including title and abstract match and Non-APC Gold OA status, might have filtered out studies from APC and subscription-based journals, so this discussion only covers the open-access literature.

Scholars researching student career choice should be encouraged to conduct cross-national research and comparative studies to strengthen the overall tie strength and citations in their work. Researchers should be advised to use already validated tools to replicate their studies in various cultures rather than conducting standalone institutional research studies, which will most likely not receive citations. The editors of Non-APC Gold OA journals should invite more special issues on careers in areas that have received less attention than the health care and education sectors. These include engineering, environmental science, creative arts, and entrepreneurship. Moreover, researchers should broaden their theories from personal

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psychological traits like motivation and self-efficacy to incorporate socioeconomic status, racial discrimination, and labor market conditions in the region. We recommend that future systematic reviews relax the inclusion criterion for Non-APC OA journals and allow other sources of literature for review, either by including APC-funded and Non-APC OA journals or performing a sensitivity analysis of the differences between the two groups of studies. Institutions and funding bodies should support early-career researchers in building collaborative networks and in publishing in venues that maximize visibility and citation potential, given the increasingly crowded and competitive nature of this research domain.

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References

Chaurasia, J., Jaishi, M., Khanal, S., Dawadi, T. P., Poudel, B., Ghimirey, V., & Acharya, N. (2025). Multi-Criteria Decision-Making for Post-secondary Graduates of Technical and Vocational Education Stream (Plant and Animal Science): Analytical Hierarchy Process for Career Preference. *Journal of the Saudi Society of Agricultural Sciences*, *24*(4), 32. https://doi.org/10.1007/s44447-025-00042-7

Chaurasia, J., Jaishi, M., Khanal, S., Poudel, B., Ghimirey, V., & Acharya, N. (2025). Factors associated with the choice of plant and animal science as a career among technical and vocational education post-secondary graduates in Nepal. *Frontiers in Sociology*, *10*. https://doi.org/10.3389/fsoc.2025.1585391

Ghimire, B., Kumar Dahal, R., Raj Sharma, D., Karki, D., & Prasad Joshi, S. (2025). Analyzing psychological factors of job search behavior among Nepalese university graduates: An empirical analysis. *Problems and Perspectives in Management*, *23*(2), 595–605. https://doi.org/10.21511/ppm.23(2).2025.43

Ghimire, P. (2026). Learning Specific Motivators Influencing Career Choices of Higher-Level Students in Nepal. *The Batuk*, *12*(1), 39–55. https://doi.org/10.3126/batuk.v12i1.90018

Gupta, S. P. (2025). Employability Issues in Nepal: Graduates' Perceptions, Aspirations and Experiences. *Shiksha Shastra Saurabh*, *25*, 1–15. https://doi.org/10.3126/sss.v25i1.90479

Karki, T. B., D'Mello, L., Mahat, D., & Shrestha, S. (2024). Exploring the Evolution of Aspiration of Life in Scientific Literature: A Bibliometric Analysis (2015-2024). *International Research Journal of MMC*, *5*(4), 16–28. https://doi.org/10.3126/irjmmc.v5i4.70640

Kumar Dahal, R., Ghimire, B., Raj Sharma, D., Karki, D., & Prasad Joshi, S. (2025). Bridging the gap: How career development learning mediates higher education and employability outcomes in Nepal. *Problems and Perspectives in Management*, *23*(1), 643–655. https://doi.org/10.21511/ppm.23(1).2025.48

Mahat, D., Neupane, D., & Karki, T. B. (2023). Exploring the Academic Landscape: A Critical Analysis and Review of the Nepal Journal of Multidisciplinary Research. *Dasarath and Karki, Tej Bahadur, Exploring the Academic Landscape: A Critical Analysis and Review of the Nepal Journal of Multidisciplinary Research (December 23, 2023)*.

Neupane, A., Karki, T. B., & Neupane, A. (2024). Bibliometric Insights into the "Kathmandu School of Law Review." *NPRC Journal of Multidisciplinary Research*, *1*(4), 41–54. https://doi.org/10.3126/nprcjmr.v1i4.70945

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, n71. https://doi.org/10.1136/bmj.n71

Thapa, B. S., Karmacharya, B., & Gajurel, D. (2025). How Behavioral Biases Shape Career Choices of Students: A Two-Stage PLS-ANN Approach. *Businesses*, *5*(3), 35. https://doi.org/10.3390/businesses5030035

Timalsina, K. P., & Humagain, S. (2025). A Study on the Employability of Bachelor of Arts Graduates from Tribhuvan University in Makawanpur District. *Community College Research Journal*, *1*(1), 54–65. https://doi.org/10.3126/ccrj.v1i1.88166