Facilitating Self-Directed Learning and Career Decision Making through a Career Chart

P. Selva Pranambika*
Research Scholar, Bharathiar University, Coimbatore.

Vimala A
Professor and Head, Bharathiar University, Coimbatore.

Abstract

This study explores the development and evaluation of a printed career chart designed for students in Tamil Nadu, India, focusing on self-directed learning (SDL). It highlights unique challenges faced by students in rural areas, particularly their limited access to technology and resources. The career chart, available in both English and Tamil, addresses this gap by providing a comprehensive overview of courses offered in government colleges across various disciplines. Chart development was through a mixed-methods approach. Content gathering involved utilizing secondary data from government sources, while focus groups with career guidance experts ensured clarity and comprehensiveness. Student feedback from a pilot test (n=250) from grades 6-12 further informed the development of separate cohorts within the chart for different academic disciplines. The findings emphasize the need for improved and accessible career guidance resources, particularly for students from socio-economically disadvantaged backgrounds. The evaluation of the chart revealed promising results, with 88% of students having viewed it. However, 20% of students required initial guidance for effective use. Based on these findings, recommendations are proposed to create a more robust career guidance system. These include developing a multifaceted approach with workshops and online tools, providing targeted support for middle school students, and refining the chart to include richer information about specific career paths. By implementing these recommendations, schools can empower students to make informed decisions about their future careers through self-directed learning.

Key Words: self-directed learning, career chart, digital divide, mixed-methods approach, Rural students.

Introduction

The transition from secondary education to the workforce can be a challenging one for young adults (Blokker et al., 2023). While some students have a clear idea of their desired career path, many others lack access to comprehensive career information, leading to a potential mismatch between their aspirations and eventual job realities (Cervantes et al., 2020). Traditionally, career information resembled a static map, offering details on courses, professions, and market trends. These resources were often impersonal and limited. Printed career resources, such as guides and brochures, available in the market, were outdated and unable to keep pace with evolving career trends. (Sultana et al., 2012). The constraints of limited internet access, as underscored by

Correspondence concerning this article may be addressed to P. Selva Pranambika. Email: praveenaramakrishnan9@gmail.com

The constraints of limited internet access, as underscored by Afzal et al. (2023) on the digital divide, significantly curtailed students' ability to explore diverse career options. Consequently, many students were often directed towards traditional professions such as medicine, engineering, law, teaching, or government jobs. School counsellors, limited by available resources, might have unknowingly steered students in these directions. Societal expectations, particularly for students in rural areas with limited options, often mirrored this focus (McNamee & Ganss, 2023). Career fairs offered some interaction with professionals, providing a glimpse into various fields (Lauer et al., 2017). Newspapers and magazines provided insights into job openings and industry trends, while family influences also played a role, with students sometimes steered towards "safe" careers based on family experiences (Fouad et al., 2015) or societal expectations (Powell, 2009). As evident from this section, traditional sources of career information, constrained by limited access and societal expectations, often directed students towards conventional professions, while newer avenues like career fairs and online resources aimed to broaden horizons and empower informed decision-making.

Challenges and Gaps: The Global Landscape

The critical role of accessible and accurate career information in aligning skills with labour market demands has been underscored in literature (Alexander, 2023; Bimrose, 2021; Kumar & Arulmani, 2014; OECD, 2004). These publications further highlight the pervasive challenges of uneven access, inconsistent information quality, and fragmented delivery systems in career guidance. These issues hinder informed decision-making, particularly among young people. While libraries, online databases, mentorships, and apprenticeships offer some support, they do not comprehensively address the need for in-depth career information. Studies from India (e.g., Chakrabarty, 2019), South Africa (World Bank, 2019), and Europe

(European Commission, 2017) confirm this global deficiency, highlighting the struggle individuals face in exploring career options and setting realistic expectations. Overcoming these challenges requires a concerted effort to develop and implement robust career information systems worldwide. To bridge this gap, career information needs to be readily available within learning environments, empowering students to utilize self-directed learning (SDL) skills effectively. This can involve integrating career exploration tools and resources directly into curriculum materials, online platforms, or student support services. By providing readily available high-quality career information in contexts where students actively engage in learning (e.g., schools), we can equip them to navigate the complex landscape of career exploration with confidence.

Bridging the Gap: Self-Directed Learning and Career Exploration

Self-Directed Learning (SDL) is a learner-centered approach where individuals take primary responsibility for their learning. Unlike traditional instruction, SDL emphasizes autonomy, motivation, and goal-setting (Brandt, 2019; Morris, 2020; Towle & Cottrell, 1996). Learners actively identify their learning needs, select resources, and assess their progress. This approach fosters critical thinking, problem-solving, and metacognition, empowering individuals to become lifelong learners. The digital age has significantly influenced SDL, providing an abundance of online resources and interactive tools that promote self-exploration (Yang, 2018). However, this digital landscape also presents challenges. Information overload can be overwhelming, requiring strong critical thinking skills to discern valuable information. Moreover, the digital divide exacerbates existing educational disparities, limiting access to these resources for marginalized communities (Warschauer, 2004) To fully harness the potential of SDL, addressing these challenges and ensuring equitable access to digital resources is essential. By cultivating strong SDL skills, individuals are

better equipped to navigate the complexities of career exploration. This learner-centered approach aligns with the need for independent learning and decision-making in today's dynamic job market.

The Crucial Role of Career Information and Self-Directed Learning

Effective career guidance is essential for students to make informed decisions about their future. Research consistently highlights the importance of providing accurate and accessible career information, particularly for those in rural areas (Jemini-Gashi et al., 2023). By offering comprehensive information on various educational pathways, financial aid options, and career opportunities, we empower students to overcome challenges and make informed choices. (Jemini-Gashi et al., 2023), Moreover, fostering self-directed learning is crucial for students to take ownership of their career paths. When equipped with the right information and resources, students can explore their interests, set goals, and develop the skills needed to achieve their aspirations. The combination of timely career information and a focus on self-directed learning can significantly enhance student outcomes and reduce dropout rates. The importance of providing career information in students' mother tongue is underscored by research highlighting the positive impact of mother tongue education on learning outcomes (UNESCO, 2022). By ensuring that career guidance materials are accessible in students' native languages, we can enhance comprehension and engagement, ultimately leading to better decision-making. By investing in robust career guidance systems that prioritize accessibility, accuracy, and self-directed learning, we can equip students with the tools they need to succeed in education and beyond.

Bridging the Career Guidance Gap in Tamil Nadu's Rural Schools

Tamil Nadu boasts a robust network of government schools, with a significant proportion, approximately 68% (or 2,083 out of 3,054) of secondary schools, situated in rural areas. Recognizing the disproportionate impact of limited career guidance on these students, the Bharathiar University's Department of Extension and Career Guidance initiated a comprehensive project. It was decided that to empower students with the necessary tools for self-directed learning, a detailed Career Chart will be developed, encompassing various academic streams, courses, and entrance exams. The aim was for this resource to provide students with the information needed to explore their career options independently and make informed decisions. At the same time, recognizing the language challenges faced by students in rural areas, it was decided that a bilingual Career Chart will be created, offering information in both English and Tamil in order to ensure accessibility and promote inclusivity, allowing students to explore career paths in their preferred language. It was further decided that the Career Chart will undergo thorough evaluation to ensure its accuracy, relevance, and usability. By providing accessible and informative career guidance, this project aimed to equip students in rural Tamil Nadu with the tools they needed to make informed educational and career decisions, ultimately contributing to their overall success and well-being. The present study documents the process of development and evaluation of this printed career chart.

Methodology

Study 1: Development of the Career Chart

This study aimed to develop a comprehensive career chart that outlines various educational courses for school students. The research employed a mixed-methods approach, encompassing both quantitative and qualitative methodologies to ensure a robust and user-friendly product. The initial phase involved extensive secondary research to gather foundational data. The researchers reviewed existing literature and resources,

including course descriptions from a variety of academic streams such as Arts, Science, Engineering, Paramedical, Law, Polytechnic, Agriculture, Veterinary, and Fishery. This included detailed information on entrance exams and course offerings specifically from government institutions. The objective was to compile a comprehensive overview of available educational pathways across multiple disciplines. To enhance the usability and relevance of the career chart, qualitative methods were employed in the second phase. A focus group discussion was conducted with ten students from the career guidance department. This group provided critical insights into the chart's content, allowing the researchers to validate the identified courses and explore effective ways to structure the information visually (Morgan, 1996). In conjunction with the focus group, an expert committee meeting was held to further refine the career chart. This committee, consisting of the department head, professors, a social worker, and other trained professionals, reviewed the initial draft and offered feedback on aspects such as clarity, engagement, and comprehensiveness (Creswell & Creswell, 2023). The input from both the student focus group and the expert panel facilitated a triangulated approach to data validation, ensuring the chart was aligned with expert recommendations while also meeting the needs of its intended users.

Following data collection, a thematic analysis was conducted on the qualitative feedback obtained from both the focus group and the expert committee. This analysis enabled the researchers to identify key elements essential for inclusion in the career chart and to refine the initial draft for clarity and effectiveness. The iterative process of gathering insights and revising the chart ensured that the final product was both informative and user-friendly for the target student population. Through this structured methodology, the research team successfully developed a comprehensive career chart that serves as a valuable resource for students navigating their educational pathways.

Study 2: Validation and Evaluation of the Career Chart

To validate the revised career chart and gather feedback from a wider student demographic, a pilot test was conducted in the Coimbatore region. The research team utilized a stratified sampling method to ensure a representative sample. A quantitative survey was administered to a total of 250 students, comprising 200 from government schools and 50 from private schools, spanning grades 6 through 12. This substantial sample size was intended to capture a diverse range of student perspectives, enhancing the reliability of the findings. The survey was designed to elicit feedback on various aspects of the career chart, including its clarity, usability, and relevance to the students' educational and career aspirations. Following data collection, the responses were analysed using percentage analysis, allowing the research team to pinpoint specific areas for improvement. Based on the feedback received, the researchers made minor adjustments to the chart, which could lead to the development of tailored versions suited to different academic disciplines. This adaptability ensures that the career chart remains relevant to the varied interests and needs of students across different fields.

The final version of the career chart is provided in Appendix 1.

Findings and Discussion

The evaluation of the career chart yielded several significant insights regarding student demographics and the effectiveness of the chart itself, providing a foundation for further analysis and interpretation. Survey results indicated that 63.5% of students attended government or government-aided schools, while 36.5% were enrolled in private institutions. Participants were primarily from two educational phases: middle school (grades 6-10) accounted for 40% of respondents, while secondary school (grades 11-12) comprised 60%.

A notable finding involved the professions of students' parents. Over two-thirds (67.7%) of students reported that their fathers worked in unpredictable daily wage jobs, and more than half (54.8%) indicated that their mothers were in similar positions. This aligns with national data from the International Labour Organization, which states that 62% of India's workforce is engaged in casual wage labor (ILO, 2018). These economic circumstances underscore the pressing need for targeted career guidance interventions, particularly for students from resource-constrained backgrounds, as highlighted by Simangunsong et al. (2023).

The evaluation also uncovered a critical gap in existing career guidance programs for middle school students, with a staggering 91% of students in grades 6-10 reporting no prior experience with career guidance. This finding is consistent with research by Prakash, et al. (2019) who emphasize the necessity of accessible career guidance during pivotal decision-making stages. Conversely, 58% of students in grades 11-12 reported benefiting from the "Naan Mudhalvan" (Me First) program, a comprehensive youth development initiative launched on March 1, 2022, aimed at providing career guidance and skill development. However, these students expressed a desire for more frequent support, ideally on a weekly or monthly basis. This suggests a disconnect between the one-time program format and the ongoing needs of students, resonating with the findings of Sharapova et al. (2023). In evaluating the effectiveness of the career chart, 88% of students reported having seen the chart, indicating high visibility within the target population. Of those surveyed, 68% found the chart valuable for self-reflection and career exploration, aligning with the principles of self-directed learning emphasized by Briska and Vija Dislere (2018). However, 20% of students indicated that they required initial guidance to effectively interpret the chart's information. This highlights the importance of additional support mechanisms, such as workshops or trained personnel, to enhance the overall utility of the resource.

Moreover, 12% of students expressed a desire for a more detailed chart that included richer information about specific career paths. This feedback presents an opportunity for future iterations of the chart to incorporate in-depth data about different careers, including salary expectations and job outlooks, as advocated by Mutanga et al. (2023). Overall, the findings underscore the critical need for comprehensive and accessible career guidance resources, particularly for middle school students, and highlight the potential of the career chart to serve as a valuable tool for informed decision-making in students' educational and career pathways. By analyzing these findings within the context of existing research, we can better understand the implications for future career guidance initiatives and their effectiveness in addressing students' needs.

Recommendations

Based on the findings of this study, several targeted recommendations are proposed to enhance the effectiveness of career guidance for students:

- It is essential to implement comprehensive career charts in all schools across India, particularly focusing on government and government-aided institutions where access to resources is often limited. This strategy addresses the challenges posed by internet connectivity and geographical disparities, ensuring that all students have access to foundational career information. By making these charts readily available, schools can empower students to explore various educational and vocational pathways, facilitating informed decision-making.

- To increase the utility of the career chart, it is crucial to include more granular details about specific career paths. This should encompass information such as salary expectations, projected job outlooks, and essential

skills required for various professions. By enriching the chart with this data, students can better understand the realities of different career options, enabling them to set realistic goals and prepare accordingly.

- To address the 20% of students who expressed a need for initial guidance in interpreting the career chart, schools should organize regular workshops and guidance sessions. These sessions could be led by career counsellors or trained professionals who can assist students in navigating the information presented in the chart. This support will ensure that all students can maximize the benefits of the career chart and feel more confident in their career exploration process.

- Establishing a feedback mechanism where students can share their experiences and suggestions regarding the career chart will be vital for its ongoing refinement. This could involve periodic surveys or focus group discussions that engage students directly, allowing them to voice their needs and preferences. Incorporating this feedback will ensure that the chart evolves in line with student requirements and remains relevant to changing job market dynamics.

- Considering the diverse academic interests of students, developing tailored versions of the career chart for different fields (such as STEM, Arts, and Vocational Training) would enhance its effectiveness. This specialization would allow students to access information that is more closely aligned with their aspirations and educational pathways, further promoting informed decision-making.

- Brown and Ryan Krane (2000) identified five essential elements for effective career counselling, one of which is the exploration of occupational information during sessions. While career charts serve as valuable learning tools, their impact is likely to get enhanced when discussed in person. Thus, it's crucial to incorporate them into face-to-face counselling sessions.

Conclusion

This study underscores the importance of implementing targeted career guidance interventions to foster a supportive environment for student career exploration, particularly among middle school students who currently face significant informational gaps. The development of a comprehensive career chart has demonstrated its efficacy as a valuable resource, empowering students to make informed decisions about their future paths. By overcoming the limitations of traditional career guidance methods and employing a mixed-methods approach, the chart has not only facilitated self-directed learning but has also highlighted the necessity for continued enhancement and support. To maximize the chart's impact, it is crucial that educational institutions adopt the recommendations outlined in this study. These include ensuring widespread availability of the chart, enriching it with detailed career path information, organizing regular guidance sessions, and establishing feedback mechanisms for ongoing refinement. By doing so, schools can cater to the diverse needs of students and promote informed decision-making across all backgrounds. Future research should focus on evaluating the long-term effects of the career chart on student outcomes and exploring innovative strategies to further enhance its effectiveness. This ongoing inquiry will be essential in adapting the career guidance framework to meet the evolving demands of the job market and the aspirations of students. Ultimately, by prioritizing comprehensive career guidance, we can contribute to the development of a more informed and prepared future workforce, equipping students with the tools they need to navigate their educational and professional journeys successfully.

About the authors

P. Selva Pranambika, is a Research Scholar at the Department of Extension and Career Guidance, Bharathiar University, Tamil Nadu, India

Vimala A, is Professor and Head, Department of Extension and Career Guidance, Bharathiar University, Coimbatore, Tamil Nadu-

References

Afzal, A., Khan, S., Daud, S., Ahmad, Z., & Butt, A. (2023). Addressing the digital divide: Access and use of technology in education. Journal of Social Sciences Review, 3(2), 883–895. https://doi.org/10.54183/jssr.v3i2.326

Alexander, R. (2023). Why LMI? Questioning the role of labour market information in career guidance. Journal of the National Institute for Career Education and Counselling, 50(1), 5-15.

Bimrose, J. (2021). Labour market information for career development: Pivotal or Peripheral? In P. J. Robertson, T. Hooley, & P. McCash (Eds.), The Oxford Handbook of Career Development (pp. 282–296). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190069704.013.21

Blokker, R., Akkermans, J., Marciniak, J., Jansen, P. G. W., & Khapova, S. N. (2023). Organizing school-to-work transition research from a sustainable career perspective: A review and research agenda. Work, Aging and Retirement. https://doi.org/10.1093/workar/waad012

Brandt, W. C. (2020). Measuring student success skills: A review of the literature on self-direction. Dover, NH: National Center for the Improvement of Educational Assessment.

Briska, L., & Vija Dislere. (2018). Guidance Model for Promoting Self-Directed Career Decision-Making by Secondary School Students. Rural Environment. Education. Personality. https://doi.org/10.22616/reep.2018.042

Brown, S. D., & Ryan Krane, N. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counselling. In S. D. Brown, & R. W. Lent (Eds.), Handbook of Counselling Psychology (pp. 740–766) (3rd ed.). New York: Wiley

Cervantes, C., Cooper, R., Dolado, J., Dustmann, C., Gomes, P., Kircher, P., Liu, H., Monge-Naranjo, A., Ogaki, M., & Paccagnella, M. (2020). Nber working paper series labor market implications of education mismatch Comments and suggestions from. https://www.nber.org/system/files/working_papers/w28169/w28169.pdf

Chakrabarty, R. (2019, February 4). 93% Indian students aware of just seven career options: What are parents doing wrong? India Today; India Today. https://www.indiatoday.in/education-today/news/story/93-indian-students-aware-of-just-seven-career-options-what-are-parents-doing-wrong-1446205-2019-02-04?onetap=true

Fouad, N. A., Kim, S., Ghosh, A., Chang, W., & Figueiredo, C. (2015). Family Influence on Career Decision Making. Journal of Career Assessment, 24(1), 197–212. https://doi.org/10.1177/1069072714565782

Simangunsong, H., Stewart, B. A., & Debortoli, D. (2023). The Impact of Economic Inequality on Social Disparities: A Quantitative Analysis. Journal Sosial Sains Terapan Dan Riset (Sosateris), 11(2), 159–167. https://doi.org/10.35335/mdjzzw52

Kumar, S., & Arulmani, G. (2014). Understanding the labor market: Implications for career counselling. In G. Arulmani, A. J. Bakshi, F. T. L. Leong, & A. G. Watts (Eds.), Handbook of Career Development (pp. 225–239). Springer New York. https://doi.org/10.1007/978-1- 4614-9460-7_12

Gashi, L., Bërxulli, D., Konjufca, J., & Cakolli, L. (2023). Effectiveness of career guidance workshops on the career self-efficacy, outcome expectations, and career goals of adolescents: an intervention study. International Journal of Adolescence and Youth, 28(1). https://doi.org/10.1080/02673843.2023.2281421

McNamee, T. C., & Ganss, K. M. (2023). Rural students in higher education: From college preparation and enrolment to experiences and persistence. Peabody Journal of Education, 98(4), 380–395. https://doi.org/10.1080/0161956x.2023.2238508

Morgan, D. L. (1996). Focus groups. Annual Review of Sociology, 22(1), 129–152. https://doi.org/10.1146/annurev.soc.22.1.129

Morris, T. H. (2018). Adaptivity through self-directed learning to meet the challenges of our ever-changing world. Adult Learning, 30(2), 56–66. https://doi.org/10.1177/1045159518814486

Mutanga, M. B., Piyose, P. X. & Ndovela, S. (2023). Factors affecting career preferences and pathways: Insights from IT students. Journal of Information Systems and Informatics, 5(3), 1111–1122. https://doi.org/10.51519/journalisi.v5i3.556

Sharapova, N. Zholdasbekova, S., Arzymbetova, S. Zaimoglu, O., & Bozshatayeva, G. (2023). Efficacy of school-based career guidance interventions: A review of recent research. Journal of Education and E-Learning Research, 10(2), 215–222. https://doi.org/10.20448/jeelr.v10i2.4554

OECD. (2004). Career Guidance and Public Policy: Bridging the Gap. In OECD iLibrary. Organisation for Economic Co-operation and Development. https://www.oecd-library.org/education/career-guidance-and-public-policy_9789264105669-en

Powell, K. (2009). The Role of Concept of Self and Societal Expectations in Academic and Career Achievement. Journal of Adult Education, 38(2). https://files.eric.ed.gov/fulltext/EJ891079.pdf

Sultana, R. G. (2012). Learning career management skills in Europe: a critical review. Journal of Education and Work, 25(2), 225–248. https://doi.org/10.1080/13639080.2010.547846

UNESCO. (2022, February 18). Why mother language-based education is essential. Www.unesco.org. https://www.unesco.org/en/articles/why-mother-language-based-education-essential

Warschauer, M. (2004). Of Digital Divides and Social Multipliers: Combining Language and Technology for Human Development. https://education.uci.edu/uploads/7/2/7/6/72769947/multipliers_1.pdf

Appendix 1
Career Chart