



Exploring Protean Career Orientation: Career Strategies for Generation Z in the 21st Century

Muh. Nur Alamsyah^{1*}, Adi Atmoko², Nur Hidayah³, Yang Peng⁴

¹ Guidance and Counseling, State University of Malang, Indonesia

Email: muhnuralamsyah.edu@gmail.com

² Guidance and Counseling, State University of Malang, Indonesia

Email: adi.atmoko.fip@um.ac.id

³ Guidance and Counseling, State University of Malang, Indonesia

Email: nur.hidayah.fip@um.ac.id

⁴ Thrive Mental Wellbeing, United Kingdom

Email: penny_yang0603@outlook.com

Article info

Article history:

Received: 05-02-2025

Revised: 27-02-2025

Accepted: 26-03-2025

Publish: 30-03-2025

DOI:

doi.org/10.31960/ijolec.V7i2.2956

Abstract. This study aims to explore the role of protean career orientation in developing Generation Z's 21st century career adaptability in an educational context. Protean career orientation is defined as an individual-centered career approach, where an individual actively manages his or her career path based on personal values, flexibility and lifelong learning. Generation Z faces challenges in a dynamic learning environment, such as technological developments, labor market changes and increasing skill demands. Therefore, understanding how a protean career orientation can help them adapt is crucial. This study uses the Systematic Literature Review (SLR) method to identify and analyze related literature. The results show that protean career orientation contributes significantly to career adaptability, which includes four main dimensions: concern (awareness of career future), control (control over career decision-making), curiosity (curiosity in exploring career opportunities), and confidence in facing career challenges. Individuals with protean career orientation tend to have higher readiness in managing the changes and uncertainties of the world of work. Therefore, the implementation of protean career orientation-based strategies in education can help Generation Z develop career adaptability, so that they are better prepared for the transition from education to the increasingly complex and dynamic world of work

Keywords:

Protean career orientation;
Career adaptability;
Generation Z;
PRISMA.

Corresponden author:

Muh. Nur Alamsyah

Address: Jl. Cakrawala No.5, Sumbersari,
Kec. Lowokwaru, Kota Malang, Jawa Timur

Email: muhnuralamsyah.edu@gmail.com



Open access article under CC BY-NC-4.0 license. @2025 by author

INTRODUCTION

Facing dynamic changes in the 21st century era, the career world of the last few decades has undergone a significant transformation in response to technological advances, globalization, and social change has created a new paradigm in work (Zulfa et al., 2022). This transformation creates new challenges and opportunities, especially for generation Z who feel and live in this era (Meilinda et al., 2020). Generation Z (Gen Z), born between the mid-1990s and early 2010s, is known as the first “digital native” generation to grow up in a digital and technological environment, and is often referred to as “Gen Zers,” “post-Millennials,” or “iGen” (Benítez-Márquez et al., 2022). Individuals today are faced with a more complex and dynamic range of career choices compared to previous generations (Biemann et al., 2012). The process of globalization is changing the employment landscape, creating new jobs and altering the skill requirements expected by the job market. They not only need to understand labor market trends but also need to be ready to adapt to these changes (Alimuddin et al., 2023).

Generation Z has unique characteristics that set them apart from previous generations. They are known to be more open to change, more independent, and more goal-oriented. A number of recent studies have examined the characteristics of Generation Z individuals and their values. Črešnar & Nedelko (2020) mentioned that Generation Z exhibits values that are more geared towards self-enhancement and hedonism, which includes the quest for power, achievement, and personal pleasure. Generation Z has the potential to be good leaders, but there needs to be an effort to direct their values to be more aligned with the demands and values required in the modern work environment, especially in the context of Industry 4.0. Maloni et al., (2019) stated that Generation Z has a stronger focus on career stability and skills development. Generation Z has career characteristics that are influenced by intrinsic (attitude, motivation) and extrinsic (environment, family) factors. They desire work-life balance, stability and growth opportunities, and tend to be confident and independent (Barhate & Dirani, 2022). However, they also face job uncertainties, such

as unemployment and continuous learning demands (Magano et al., 2020), so adaptability is key to career success..

The career development of Generation Z in Indonesia has unique characteristics, with a preference for collaborative work environments and good social relationships. Based on research conducted by Hanifah & Wardono (2020) the five main factors that influence their work values include intrinsic (challenge and motivation), extrinsic (growth and reward), altruistic (social contribution), status (capacity and achievement), and social (good working relationships). They value a positive work environment and growth opportunities over material benefits. In addition, they prioritize job security, financial motivation, and still want face-to-face interaction despite being familiar with technology. In addition, research by Dwidienawati & Gandasari (2018) Gen Z in Indonesia prioritizes job security, financial motivation, and interpersonal relationships. They are looking for a career that is stable, supports social needs, and involves direct interaction and social care.

Generation Z's career characteristics that emphasize independence, flexibility, and meaning-making align with a protean career orientation, which focuses on individual control over career development (Hall, 2004). In the face of workplace uncertainty, this orientation enhances adaptability, self-efficacy and resilience (Ge et al., 2024; Karimi, 2024; Pranoto & Kuncoro, 2020). Socially, individuals are encouraged to build professional networks, while environmentally, they are better prepared for the dynamics of the job market (Kim et al., 2023; Waters et al., 2015). Thus, protean career orientation is an effective strategy to improve career readiness and success. Protean career orientation is a relevant concept in understanding how individuals can adapt to changes in the world of work. The concept was first introduced by Douglas T. Hall in 1976 and refers to the ability of individuals to manage their own careers with flexibility and independence. Individuals with a protean career orientation tend to have a positive attitude towards change, are able to identify opportunities, and are willing to take risks in their careers (Hall, 1996).

Protean career orientation is defined as an approach in which individuals take full

control of their own career management, rather than relying on organizations or other people. The concept emphasizes two main aspects: self-direction and values-driven. Self-direction means that individuals actively determine their own career direction, while values-driven means that career decisions are based on what the individual considers important and meaningful. By having a strong protean career orientation, a person feels they have freedom and responsibility for their career future, and makes choices based on personal values that are believed to provide satisfaction and meaning in their work (Waters et al., 2015). This is in line with the results of research by Volmer & Spurk (2011) showing that protean career orientation encourages progressive development and self-fulfillment through a values-driven attitude and self-directed career management. This attitude is positively correlated with career success and requires individuals to not only control their careers, but also develop career adaptability in order to adjust to the dynamics of the world of work.

Career adaptability is an individual's ability to adjust to changes and challenges in the work environment. In the 21st century, where changes in the world of work are rapid and often unexpected, career adaptability is key to achieving success (Savickas, 2005). The ability to adapt to changes in the work environment, develop relevant skills, and have a deep understanding of oneself are determining factors in achieving career success. The factors that influence career adaptability include two important parts, namely from the individual and environmental aspects. Individuals include gender, age level, and personality traits (Hirschi, 2009). The environment includes family, social support, socio-economic status, parenting style, school, and peers (Chen et al., 2020).

The relationship between protean career orientation and career adaptability is strong, with individuals with a protean career orientation tending to be more flexible and responsive to change. They have a desire to continuously learn and develop new skills, which enables them to remain relevant in a dynamic job market. As stated by Briscoe & Hall (2006) that protean career orientation is positively related to career adaptability, where individuals who have this orientation are better able to adapt to changes in the work

environment. In addition, the independence in decision-making possessed by individuals with a protean career orientation allows them to make better decisions in the face of change, thus increasing their adaptability. The results of Chui et al., (2022) study showed that protean career orientation contributes to increased career adaptability which is crucial in dealing with uncertainty in today's job market. This research emphasizes the importance of developing a protean career orientation among Gen Z to improve their readiness to face future career challenges.

Although research on protean careers has increased, there are still significant knowledge gaps in understanding how protean career orientations can be effectively applied to enhance career adaptability, especially among generation Z. According to Nilawati et al., (2023), research that systematically measures the concept of protean careers is still quite scarce, and Mujib & Purusa (2022) emphasized that exploring the relationship between protean career orientation and work attitudes is still a relatively new area. Thus, this study offers novelty by analyzing how protean career orientation can be a strategy in developing career adaptability and exploring the mechanisms that enable individuals to be better prepared for the dynamics and uncertainties of the world of work.

From the above, it can be concluded that protean career orientation has a significant influence in developing individual career adaptability, especially among Generation Z who face challenges and rapid changes in the world of work. The characteristics of independence, flexibility and learning orientation possessed by individuals with protean career orientation enable them to be better prepared to deal with uncertainty and change. This research aims to provide new insights into how Generation Z can build career adaptability through protean career orientation. By understanding the factors that influence protean career orientation in generation Z, this research is expected to contribute to the development of theory and practice in the field of guidance and counseling, especially the career field. The research question (RQ) in this study includes: How can Generation Z develop career adaptability through protean career orientation?; Why is career adaptability important for Generation Z in the 21st

century?; and What are the effective career guidance and counseling strategies based on protean career orientation? These questions stem from the dynamics of an increasingly flexible and uncertain world of work, requiring individuals, especially Generation Z, to have career adaptability skills in order to be able to deal with change.

METHOD

To identify protean career orientations that are influential and have a role in developing career adaptability, a systematic literature review was conducted. In selecting articles, researchers used the three phases of the Preferred Reporting Items for Systematic Reviews and Meta Analysis (PRISMA) flow chart, namely identification of the records, screening for possibility and eligibility, and inclusion of the studies (Page et al., 2021).

The literature search was conducted by the first author by accessing six electronic databases relevant to the topics of protean career orientation and career adaptability, namely Scopus, SpringerLink, Taylor & Francis Online, Cambridge Journals, and IEEE. Additional searches were also conducted through Google Scholar. The search strategy used four main keywords, namely: 1) protean career orientation, 2) protean career, 3) protean career attitude, and 4) career adaptability. To broaden the scope of the results, some synonyms and related terms were also used to ensure that relevant research was not missed. This approach aims to obtain a comprehensive and representative literature in examining the relationship between protean career orientation and career adaptability.

Article selection was based on the following inclusion criteria: 1) Published in peer-reviewed journals; 2) Written in multiple languages, mainly English and Indonesian; 3) Published between 2015 and 2025 and relevant to protean career orientation and career

adaptability; 4) Articles using quantitative, qualitative, or mixed-method approaches with valid and reliable methods; 5) Studies involving Generation Z, students, college students, or young workers as the main respondents; 6) Mentioning protean careers that affect career adaptability according to Savickas' theory, which contains 4 dimensions of career adaptability, namely: concern, control, curiosity, and confidence. The exclusion criteria for this study included: 1) Studies with unclear research design, invalid data, or inadequate analysis; 2) Career adaptability that was not in an educational context; 3) Studies that did not focus on students, Generation Z, or adolescents; 4) Articles without empirical data; 5) Non-peer-reviewed publications; 6) Duplicated articles from studies already included in the review.

The methodological quality of the articles selected in this review was evaluated based on several important aspects to ensure that the analyzed studies have high credibility and relevance. One of the main factors considered was the validity of the instruments used, where only studies that used tested instruments and had gone through an empirical validation process were included. This aims to ensure that the data collected truly reflects the concepts under study, such as protean career orientation and career adaptability. In addition, adequate sample size was also a selection criterion to improve the generalizability of the research findings. Studies with small samples or unrepresentative of the target population, such as students, adolescents or Generation Z, were excluded from the review. The research methodology used in the articles was also an important consideration, including a clear research design, appropriate analysis techniques, and transparency in reporting results.

The selection of articles using the PRISMA method can be seen as follows:

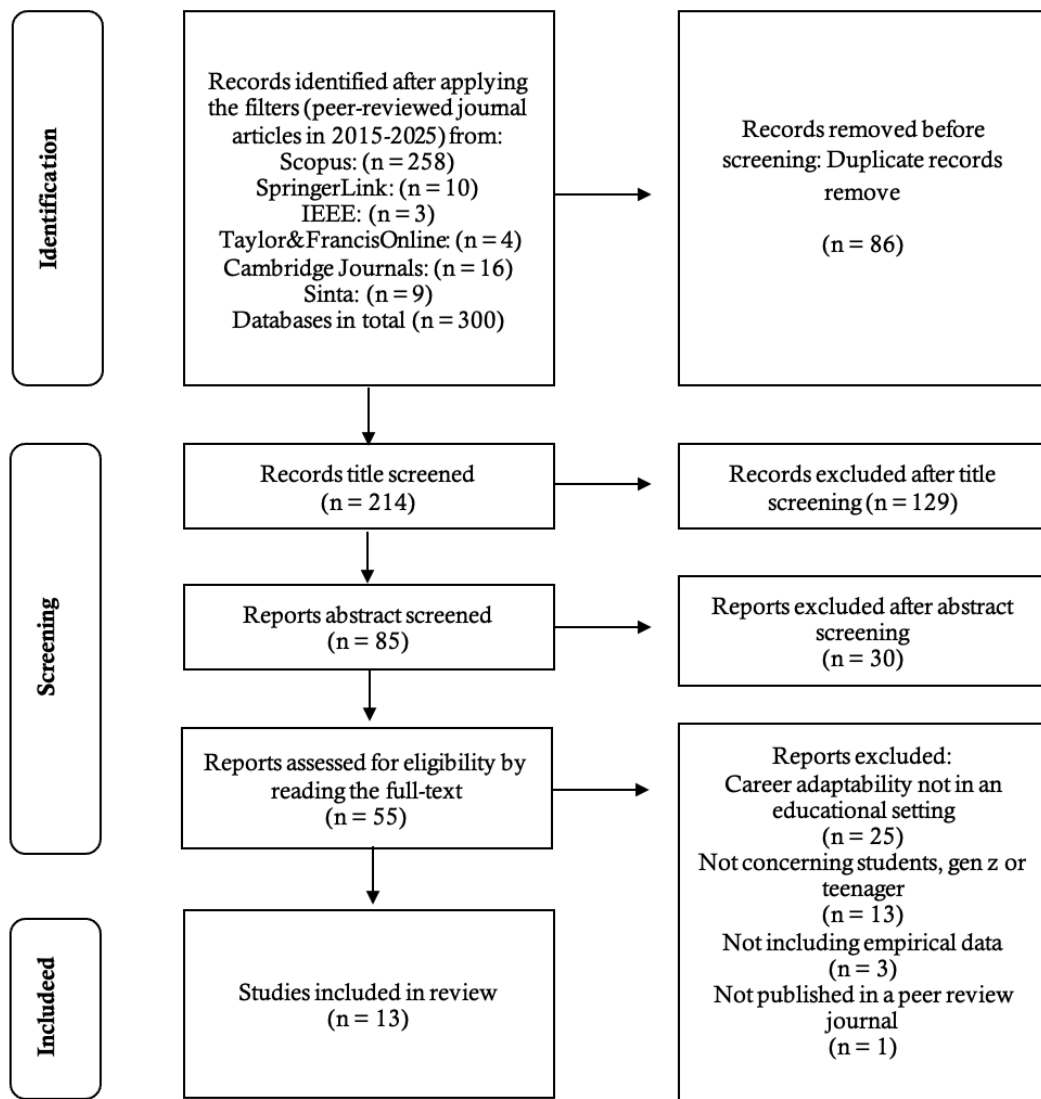


Figure 1. Research flowchart based on PRISMA

The database search yielded a total of 300 publications. We removed 86 articles because they were duplicates (the same publication was identified by more than one database). Of these duplicates, 56 were detected through the Zotero software program, and the other 30 were identified manually by checking the titles of all retrieved articles. This software program was only used to detect possible duplicates, not to remove them. All duplicates were removed manually. After removing duplicates, 214 relevant articles were screened for eligibility based on the inclusion and exclusion criteria mentioned above. The selection process was conducted in three stages, as illustrated in the Research flowchart

based on PRISMA in Figure 1.

RESULTS AND DISCUSSION

In an effort to understand the relationship between protean career orientation (X) and the development of career adaptability (Y), this study used a Systematic Literature Review (SLR) approach to identify and analyze relevant studies. The research matrix developed serves as a tool to summarize key findings from the existing literature, as well as to identify patterns, gaps, and contributions that can be drawn from previous research. The following is the research matrix in table 1.

Table 1. Research Result Matrix

No	Author and Year	Title Research	Results
1	(Nasir, 2025)	The Effect of Protean Career Orientation on Career Decisions Mediated by Career Adaptability and Self-Efficacy	Research shows that protean career orientation has a positive effect on career adaptability.
2	(Ge et al., 2024)	Pursuing a sustainable career: how strengths-based leadership develops career adaptability and compensates for protean career orientation	Research shows that individuals with high protean career orientation often have better levels of career adaptability. They are better able to adjust to the demands of the job market and manage their skills independently.
3	(Karimi, 2024)	How protean career orientation affects career decidedness: The mediating role of career adaptability and career decision self-efficacy	Research shows that protean career orientation is positively related to career adaptability. Individuals with high protean career orientation have better career adaptability, as this orientation provides psychological resources that help them face career challenges.
4	(Kim et al., 2023)	Protean career processes in young adults: Relationships with perceived future employability, educational performance, and commitment	There is a relationship between protean career orientation and career adaptability. This study states that career adaptability is positively related to protean career orientation.
5	(Choi, Jhi-eun, 2023)	The mediating effect of career preparation behavior in the relationship between college students' professional career attitude and career adaptability.	There is a statistically positive correlation between protean career attitudes, career preparation behaviors, and career adaptability.
6	(Du et al., 2022)	The effect of core self-evaluations on career adaptability: The mediating role of protean career attitudes and the moderating role of meritocratic beliefs	Protean career attitudes mediate the relationship between core self-evaluations and career adaptability.
7	(Chui et al., 2022b)	Linking Protean Career Orientation with Career Optimism: Career Adaptability and Career Decision Self-Efficacy as Mediators	This study examines the relationship between protean career orientation and career adaptability. It explores whether protean career orientation is related to positive expectations of future career outcomes. Protean career orientation was positively related to career optimism and career adaptability.
8	(Kaur & Kaur, 2021)	Career adaptability and job outcomes: a moderated mediation model of proactivity and job content plateau in educational sector	Career adaptability positively affects work outcomes.

9	(Haeggli & Hirschi, 2020)	Career adaptability and career success in the context of a broader career resources framework	Results show that career adaptability is strongly associated with other types of career resources, but career adaptability and other career resources each explain unique variance in different aspects of career success.
10	(Stauffer et al., 2019)	French-Language Translation and Validation of the Protean and Boundaryless Career Attitudes Scales: Relationships to Proactive Personality, Career Adaptability, and Career Satisfaction	The relationship between protean career orientation and career adaptability, suggests that individuals with protean career orientation may exhibit higher levels of career adaptability.
11	(Akkermans et al., 2018)	The Best of Both Worlds: The Role of Career Adaptability and Career Competencies in Students' Well-Being and Performance	This study shows that career adaptability and career competence are positively related to students' life satisfaction.
12	(Fawehinmi & Yahya, 2018)	Investigating the Linkage Between Proactive Personality and Social Support on Career Adaptability Amidst Undergraduate Students	The results showed that there is a positive and significant relationship between proactive personality and career adaptability.
13	(Haber & Bertone, 2015)	Protean Career Model	The protean career model emphasizes individual adaptability and flexibility in career choices. This model highlights the shift from traditional career progression within organizations to a series of work experiences throughout life.

Protean career orientation, which is characterized by individuals' flexibility and initiative in managing their careers, has been shown to have a significant influence on career adaptability. Individuals with this orientation tend to be more responsive to changes in the work environment, which enables them to adjust to the changing demands of the market. Protean career orientation not only enhances individuals' ability to adapt, but also strengthens their confidence in facing career challenges. This creates a positive cycle where more adaptive individuals can explore new opportunities and develop relevant skills, thereby increasing their competitiveness in the job market.

Protean career orientation plays an important role in developing career adaptability, which consists of four main dimensions (Chui et al., 2022a; Ge et al., 2024;

Karimi, 2024): concern, control, curiosity, and confidence. First, concern for the future of one's career is strengthened by a protean orientation as individuals with this approach tend to be more proactive in planning their career steps, being aware of industry changes, and preparing long-term strategies. Second, control over one's career is enhanced through self-direction which is at the core of a protean orientation, allowing individuals to make decisions independently without relying too much on the organization. Thirdly, curiosity towards new opportunities in the career is enhanced as individuals with a protean orientation are more open to exploring different career paths, seeking new experiences and continuously improving their skills. Finally, confidence in facing career challenges is also strengthened as a protean orientation helps individuals feel more prepared in the face

of change and believe in their ability to manage their careers with flexibility and resilience. Thus, a protean career orientation not only enhances individuals' readiness to deal with the uncertainty of the world of work but also strengthens every aspect of career adaptability that is crucial to achieving long-term success.

From the analysis conducted, it can be concluded that protean career attitudes play an important role in developing career adaptability. Approaches that focus on self-development, adaptation skills, career plan flexibility, and individual independence have been shown to be effective in helping individuals deal with changes and challenges in the dynamic world of work.

Discussion

RQ1: How can Generation Z develop career adaptability through a protean career orientation?

Protean career is a concept that refers to an individual's approach to managing and developing their career, where individuals take full responsibility for their career journey with a focus on achieving personal satisfaction and success. In this context, Generation Z can build career adaptability through a protean career orientation by developing a proactive attitude in the face of changes in the work environment. According to Chui et al., (2022), protean career orientation emphasizes the importance of adaptability, flexibility, and lifelong learning, which is particularly relevant in an era where change is the only constant. By adopting this approach, generation Z can be better equipped to adjust to, respond to and grow from the changes that occur in the world of work.

A protean career orientation encourages individuals to take control of their career path based on personal values and an internalized definition of success. In the context of developing career adaptability, this approach provides great potential for Generation Z to face uncertainty with courage, innovate and make career decisions independently (Du et al., 2022). Aspects of career adaptability developed through protean orientation include career concerns, career control, career curiosity and career confidence. Savickas & Porfeli (2012) explain that by increasing awareness and proactivity towards the future,

generation Z can feel more in control of their career journey. As such, a protean career orientation serves as a strong foundation for building the career adaptability needed to face the challenges at hand.

One important aspect of a protean career orientation is freedom and autonomy in career decision-making. Generation Z, known as a more independent and goal-oriented generation, can take advantage of this freedom to explore different career options that match their interests and values. Baruch (2014) emphasizes that readiness to change and adapt, as well as continuous learning, are key elements in a protean career orientation. By developing these attitudes, generation Z can not only adapt to changes that occur, but can also create new opportunities in their careers.

RQ2: Why is career adaptability important for Generation Z in the 21st century?

Students' career adaptability is crucial in responding to the changing dynamics of the job market, especially in the 21st century characterized by volatile economic conditions and rapid technological advancements. Generation Z, born and raised in the digital age, faces unique challenges, including rapid changes in technology, globalization, and shifting economic structures. In this context, the ability to adapt becomes key for individuals to not only survive, but also thrive in their careers. According to Wetstone & Rice (2023), enhancing students' career adaptability involves developing four key dimensions: career concerns, career control, career curiosity, and career confidence. These dimensions help students manage career transitions and deal with challenges that arise in the world of work.

Career adaptability is an important ability that enables individuals to respond to change and uncertainty with flexibility, innovation and the ability to manage stress (Haenggli & Hirschi, 2020). In education, students who develop adaptability early on are better prepared for the dynamic world of work, able to recognize opportunities, and adapt to evolving career demands. Guidance and counseling teacher/school counselors play an important role in helping students understand and develop these skills through appropriate

guidance, ensuring they can make realistic and successful career decisions in the future.

Thus, the development of career adaptability for generation Z in the 21st century is not only important, but also urgent. Through proper guidance and support from counseling teachers, students can be prepared to face the challenges of the ever-changing world of work. By developing adaptability, Generation Z will be better equipped to succeed in their careers, contribute positively to society, and achieve satisfaction in their career journey.

RQ3: What are some effective career guidance and counseling strategies based on protean career orientation?

Career guidance strategies based on protean career orientation in developing career adaptability refer to an approach that emphasizes the importance of individual autonomy and strengthening values in undergoing their career journey. Kiswanto (2018) explains that various interventions can be applied to build protean career attitudes. Among these interventions, some involve guidance and counseling approaches through self-directed learning, career management skills, and motivational interviewing.

First, Self-Directed Learning (SDL) is the process by which individuals take initiative in their learning, either independently or with the help of others. SDL involves steps such as diagnosing learning needs, formulating goals, identifying resources, selecting learning strategies, and evaluating results. This definition, proposed by Knowles, emphasizes individual responsibility in learning and is particularly relevant in medical education, where the development of lifelong learning skills is a key goal. Theories underlying SDL include cognitivism, which emphasizes information processing and memory, and humanism, which focuses on individual growth and exploration of emotions. SDL allows students to learn according to their own style and pace, and enhances their ability to contextualize learning. Thus, SDL not only helps students achieve academic goals, but also prepares them for future challenges as lifelong learners (Badyal et al., 2020).

Second, Career Management Skills (CMS) is a set of skills that enable individuals to effectively manage and develop their

careers. CMS includes the ability to understand oneself, explore career opportunities, and make informed decisions regarding career paths. In the context of higher education, the development of CMS is important due to the dynamic and complex job market, where graduates need to have transferable skills and the ability to adapt to changes in the world of work. Several models and theories underlie the development of CMS, such as the DOTS model which includes Decision Learning, Opportunity Awareness, Transition Learning, and Self-awareness. In addition, CMS also involves meta-skills that enable individuals to learn how to learn and apply skills in different contexts. The holistic approach in CMS emphasizes the importance of personal and social skills, such as communication and teamwork, which are indispensable for enhancing graduates' employability in a competitive job market (Evans, 2007).

Third, Motivational Interviewing (MI) is a counseling approach that aims to increase an individual's motivation for change by overcoming ambivalence. MI emphasizes collaboration between the counsellor and the client, where the counsellor serves to explore the client's internal motivation and respects their autonomy in making decisions. The MI process includes establishing a therapeutic relationship, client assessment, developing a mismatch between current behavior and desired goals, as well as confronting resistance and increasing client self-efficacy. In the context of protean careers, which emphasize the responsibility of individuals in managing and developing their own careers, MI is particularly relevant. Protean careers require individuals to adapt to rapidly changing work environments, and MI helps clients overcome the ambivalence they may face in the process of career change. By promoting autonomy and self-efficacy, MI supports individuals in making better and more informed career decisions, as well as developing positive attitudes towards career transitions that are necessary in the dynamic world of work (Stoltz & Young, 2013).

From the above, it can be concluded that interventions such as Self-Directed Learning (SDL), Career Management Skills (CMS), and Motivational Interviewing (MI), can be applied to build protean career attitudes. SDL encourages individuals to take initiative in

their learning, while CMS provides the necessary skills to effectively manage and develop a career. On the other hand, MI helps to increase individuals' motivation to make changes by respecting their autonomy. With this approach, individuals are expected to adapt to changes in the dynamic world of work.

CONCLUSION AND SUGGESTIONS

Career adaptability is a critical competency for Gen Z in the 21st century, enabling them to respond and adjust to the ever-changing dynamics of the job market due to technological advancements and globalization. By developing four key dimensions of adaptability: career awareness, career control, career curiosity and career confidence. Gen Z can be better prepared to face challenges and take advantage of opportunities that exist in the world of work. The role of guidance and counseling teachers is crucial in supporting the development of these skills, through appropriate guidance and provision of necessary resources. By bridging this knowledge gap, future research can provide new insights into the individual, organizational and contextual factors that influence the acceptance and development of protean career attitudes. In addition, it is important to evaluate the impact of protean career attitudes on various career outcomes, such as job satisfaction, performance and individual well-being. By understanding the complexity of protean careers and how Generation Z can optimize their potential in the dynamic world of work, we can formulate more effective strategies to support their career development. This research is expected to make a significant contribution in understanding how Generation Z can build career adaptability through protean career orientation, so that they can face challenges and take advantage of opportunities that exist in the world of work. For future researchers, it is recommended that they develop more specific and structured career guidance and counseling service models rooted in protean career principles. This includes integrating approaches that increase self-awareness, develop adaptability skills such as caring, control, curiosity and trust, and teach strategies to build and utilize professional networks. In addition, it is important to design

programs that allow students to reflect on their personal values and career aspirations, thereby facilitating more meaningful and responsible career decision-making. By focusing on protean career orientation, guidance and counseling services can provide more effective support for students in developing their career adaptability.

REFERENCES

- Akkermans, J., Paradniké, K., Van Der Heijden, B. I. J. M., & De Vos, A. (2018). The Best of Both Worlds: The Role of Career Adaptability and Career Competencies in Students' Well-Being and Performance. *Frontiers in Psychology*, *9*, 1678. <https://doi.org/10.3389/fpsyg.2018.01678>
- Alimuddin, A., Juntak, J. N. S., Jusnita, R. A. E., Murniawaty, I., & Wono, H. Y. (2023). Teknologi Dalam Pendidikan: Membantu Siswa Beradaptasi Dengan Revolusi Industri 4.0. *Journal on Education*, *05*(04), 36–38.
- Badyal, D., Lata, H., Sharma, M., & Jain, A. (2020). Triple Cs of self-directed learning: Concept, conduct, and curriculum placement. *CHRISMED Journal of Health and Research*, *7*(4), 235. https://doi.org/10.4103/cjhr.cjhr_13_21
- Barhate, B., & Dirani, K. M. (2022). Career aspirations of generation Z: A systematic literature review. *European Journal of Training and Development*, *46*(1/2), 139–157. <https://doi.org/10.1108/EJTD-07-2020-0124>
- Baruch, Y. (2014). The development and validation of a measure for protean career orientation. *The International Journal of Human Resource Management*, *25*(19), 2702–2723. <https://doi.org/10.1080/09585192.2014.896389>
- Benítez-Márquez, M. D., Sánchez-Teba, E. M., Bermúdez-González, G., & Núñez-Rydman, E. S. (2022). Generation Z Within the Workforce and in the Workplace: A Bibliometric Analysis. *Frontiers in Psychology*, *12*, 736820. <https://doi.org/10.3389/fpsyg.2021.736820>

- Biemann, T., Zacher, H., & Feldman, D. C. (2012). Career patterns: A twenty-year panel study. *Journal of Vocational Behavior*, *81*(2), 159–170.
- Briscoe, J., & Hall, D. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior*, *69*, 4–18. <https://doi.org/10.1016/J.JVB.2005.09.002>
- Chen, H., Fang, T., Liu, F., Pang, L., Wen, Y., Chen, S., & Gu, X. (2020). Career adaptability research: A literature review with scientific knowledge mapping in web of science. *International Journal of Environmental Research and Public Health*, *17*(16), 1–21. <https://doi.org/10.3390/ijerph17165986>
- Choi, Jhi-eun. (2023). The mediating effect of career preparation behavior in the relationship between college students' professional career attitude and career adaptability. *Learner-Centered Curriculum Education Society*, *23*(2), 145–157.
- Chui, H., Li, H., & Ngo, H. (2022a). Linking Protean Career Orientation with Career Optimism: Career Adaptability and Career Decision Self-Efficacy as Mediators. *Journal of Career Development*, *49*(1), 161–173. <https://doi.org/10.1177/0894845320912526>
- Chui, H., Li, H., & Ngo, H. (2022b). Linking Protean Career Orientation with Career Optimism: Career Adaptability and Career Decision Self-Efficacy as Mediators. *Journal of Career Development*, *49*(1), 161–173. <https://doi.org/10.1177/0894845320912526>
- Črešnar, R., & Nedelko, Z. (2020). Understanding Future Leaders: How Are Personal Values of Generations Y and Z Tailored to Leadership in Industry 4.0? *Sustainability*, *12*(11), 4417. <https://doi.org/10.3390/su12114417>
- Du, B., Yu, X., Luo, N., & Liu, X. (2022). The effect of core self-evaluations on career adaptability: The mediating role of protean career attitudes and the moderating role of meritocratic beliefs. *Frontiers in Psychology*, *13*, 1000615. <https://doi.org/10.3389/fpsyg.2022.1000615>
- Dwidienawati, D., & Gandasari, D. (2018). Understanding Indonesia's Generation Z. *International Journal of Engineering & Technology*, *7*(3), 245–252.
- Evans, C. (2007). Developing career management skills within the HE curriculum: A review and evaluation of different approaches. *The International Journal of Management Education*, *6*(3), 45–55. <https://doi.org/10.3794/ijme.63.152>
- Fawehinmi, O. O., & Yahya, K. K. (2018). Investigating the Linkage Between Proactive Personality and Social Support on Career Adaptability Amidst Undergraduate Students. *Journal of Business and Social Review in Emerging Economies*, *4*(1), 81–92. <https://doi.org/10.26710/jbsee.v4i1.370>
- Ge, X., Zhang, Q., Xiong, R., Yu, H., Liu, S., Song, S., & Liu, X. (2024). Pursuing a sustainable career: How strengths-based leadership develops career adaptability and compensates for protean career orientation. *Career Development International*, *29*(6), 732–746. <https://doi.org/10.1108/CDI-01-2024-0044>
- Haber, A., & Bertone, A. (2015). Protean Career Model. In S. K. Whitbourne (Ed.), *The Encyclopedia of Adulthood and Aging* (1st ed., pp. 1–4). Wiley. <https://doi.org/10.1002/9781118521373.wbeaa025>
- Haenggli, M., & Hirschi, A. (2020). Career adaptability and career success in the context of a broader career resources framework. *Journal of Vocational Behavior*, *119*, 103414. <https://doi.org/10.1016/j.jvb.2020.103414>
- Hall, D. (1996). Protean Careers of the 21st Century. *Academy of Management Perspectives*, *10*, 8–16. <https://doi.org/10.5465/AME.1996.3145315>
- Hall, D. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior*, *65*, 1–13. <https://doi.org/10.1016/J.JVB.2003.10.006>

- Hanifah, H., & Wardono, P. (2020). Identifikasi Faktor Pembentuk Perilaku Pencari Kerja Generasi Z di Indonesia. *Jurnal Aplikasi Bisnis dan Manajemen*. <https://doi.org/10.17358/jabm.6.3.628>
- Hirschi, A. (2009). Career adaptability development in adolescence: Multiple predictors and effect on sense of power and life satisfaction. *Journal of Vocational Behavior*, 74(2), 145–155. <https://doi.org/10.1016/j.jvb.2009.01.002>
- Karimi, S. (2024). How protean career orientation affects career decidedness: The mediating role of career adaptability and career decision self-efficacy. In *International Journal for Educational and Vocational Guidance*. <https://doi.org/10.1007/s10775-024-09702-6>
- Kaur, H., & Kaur, R. (2021). Career adaptability and job outcomes: A moderated mediation model of proactivity and job content plateau in educational sector. *Higher Education, Skills and Work-Based Learning*, 11(4), 929–945. <https://doi.org/10.1108/HESWBL-07-2020-0150>
- Kim, S., Creed, P. A., Hood, M., & Bath, D. (2023). Protean career processes in young adults: Relationships with perceived future employability, educational performance, and commitment. *International Journal for Educational and Vocational Guidance*. <https://doi.org/10.1007/s10775-023-09584-0>
- Kiswanto, A. (2018). *Karier Protean Bagi Pendidikan Karier*.
- Magano, J., Silva, C., Figueiredo, C., Vitória, A., Nogueira, T., & Pimenta Dinis, M. A. (2020). Generation Z: Fitting Project Management Soft Skills Competencies—A Mixed-Method Approach. *Education Sciences*, 10(7), 187. <https://doi.org/10.3390/educsci10070187>
- Maloni, M., Hiatt, M. S., & Campbell, S. (2019). Understanding the work values of Gen Z business students. *The International Journal of Management Education*, 17(3), 100320. <https://doi.org/10.1016/j.ijme.2019.10.0320>
- Meilinda, N., Malinda, F., & Aisyah, S. M. (2020). Literasi Digital Pada Remaja Digital (Sosialisasi Pemanfaatan Media Sosial Bagi Pelajar Sekolah Menengah Atas). *Jurnal Abdimas Mandiri*, 4(1), 62–69.
- Mujib, M., & Purusa, N. A. (2022). Pengujian Faktor-Faktor yang Mempengaruhi Orientasi Karir Protean pada Mahasiswa. *Business and Economics Conference in Utilization of Modern Technology*, 1–14.
- Nasir, M. (2025). Pengaruh Orientasi Karir Protean terhadap Keputusan Karir yang Dimediasi oleh Kemampuan Adaptasi Karir dan Efikasi Diri. *Indonesian Research Journal on Education*, 5(1), 1022–1026. <https://doi.org/10.31004/irje.v5i1.2142>
- Nilawati, L., Silalahi, E. E., & Sulistyaningsih, E. (2023). Pengukuran Dimensi Karier Protean dan Boundaryless: Kombinasi atau Implikasi. *Prosiding Working Papers Series In Management*, 15(1), 265–279. <https://doi.org/10.25170/wpm.v15i1.4688>
- 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>
- Pranoto, W. A., & Kuncoro, J. (2020). Indonesian Values dan Adaptabilitas Karir (Career Adaptability) pada Siswa SMK NU Ungaran. *Seminar Nasional "Membangun Resiliensi Era Tatanan Baru (New Normal) Melalui Penguatan Nilai-Nilai Islam, Keluarga dan Sosial*, 2.
- Savickas, M. (2005). *The Theory and Practice of Career Construction*. <https://www.semanticscholar.org/paper/f645238c6b9414d21c0211efab4ca4ae4a15b220>

- Savickas, M., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, *80*, 661–673. <https://doi.org/10.1016/J.JVB.2012.01.011>
- Stauffer, S. D., Abessolo, M., Zecca, G., & Rossier, J. (2019). French-Language Translation and Validation of the Protean and Boundaryless Career Attitudes Scales: Relationships to Proactive Personality, Career Adaptability, and Career Satisfaction. *Journal of Career Assessment*, *27*(2), 337–357. <https://doi.org/10.1177/1069072717748962>
- Stoltz, K. B., & Young, T. L. (2013). Applications of Motivational Interviewing in Career Counseling: Facilitating Career Transition. *Journal of Career Development*, *40*(4), 329–346. <https://doi.org/10.1177/0894845312455508>
- Volmer, J., & Spurk, D. (2011). Protean and Boundaryless Career Attitudes: Relationships With Subjective and Objective Career Success. *Zeitschrift Fur Arbeitsmarktforschung*, *43*(3), 207–218. <https://doi.org/10.1007/s12651-010-0037-3>
- Waters, L., Hall, D. T., Wang, L., & Briscoe, J. P. (2015). Protean career orientation: A review of existing and emerging research. In R. J. Burke, K. M. Page, & C. Cooper (Eds.), *Flourishing in Life, Work and Careers*. Edward Elgar Publishing. <https://doi.org/10.4337/9781783474103.00022>
- Wetstone, H., & Rice, K. G. (2023). Enhancing Career Adaptability Among University Students: An Intervention Study. *Journal of Career Development*, *50*(6), 1279–1292. <https://doi.org/10.1177/08948453231187910>
- Zulfa, D. A., Cahyono Putro, S., & Putranto, H. (2022). Hubungan Aktualisasi Diri dan Kemampuan Komunikasi dengan Adaptabilitas Karier Abad 21 Siswa SMK di Kota Malang. *Pedagogi: Jurnal Ilmu Pendidikan*, *22*(1), 67–74.