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## EXPLORING THE RELATIONSHIP BETWEEN SUSTAINABLE EDUCATION, TEACHER CAREER STAGES AND TEACHER CAREER MANAGEMENT

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### ABSTRACT

This research examines how sustainable education correlates with teacher career stages and career management. This quantitative research applies SEM Smart PLS and Path analysis to analyse the data. The data are collected from a 5-Likert scale questionnaire comprising five elements of sustainable education, five elements of teacher career stages and seven elements of career management. All these elements are first validated before being distributed online through Google Forms. There are 320 public elementary school teachers involved as participants voluntarily in this study. The results of data analysis reveal that sustainable education is significantly and positively associated with both teacher career stages and career management. These findings give crucial insights to stakeholders of the institutions on how important teacher career stages and career management are in the development of teacher professionalism, which in turn affects the quality of sustainable education.

**Keywords:** Job satisfaction, teacher career advancement, teacher career policy, teacher professional development, teacher portfolio.



## INTRODUCTION

Good quality teachers are essential assets for positive institutional outcomes (Mammadov & Çimen, 2019; Grönqvist et al., 2022). Therefore, organization should fully support teachers not only by giving them opportunities to join any training to improve the quality of their teaching, but also by taking their career development seriously into account. As Arumsari et al. (2024) argued, teachers who are satisfied with their career positions gravitate toward their institutions and are more encouraged to reach the institution's goals. In the same vein, Grönqvist et al. (2022) also found that career teacher promotions from schools reduced teacher turnover both in general terms and in the case of leaving the profession. Additionally, the study of Anog and Peteros (2024) revealed that teacher retention is significantly related to job satisfaction. To respond to these, Setiawati et al. (2023) opined that appropriate teacher career management is needed to achieve the expected teacher's professional performance.

Zamir (2018) said that 'career' is everything related to work experience for someone. Meanwhile, Aydin (2018) gave a more comprehensive definition of 'career' as the concept in which one's gradually sustained progress in any business scope in every part of their working life, achieving skills and experience. Referring to these two definitions, a teacher's career can be seen as a step-by-step process of a teacher's work-related experiences and skills. Like other professions, teachers also pass several stages along the journey of their careers. Since teachers have different skills, professional knowledge, behaviours, competencies, attitudes and emotions, one teacher may spend less or more time or even skip one stage, even though they have similar characteristics of mental development as other teachers (as cited in Yağan et al., 2022). There are 3 to 8 stages of a teacher's career proposed by scholars, depending on teachers' professional interests, development, needs, and time to spend in each stage.

Fessler and Christensen (1992) classified teacher career stages into 8, namely: pre-service, induction, competency building, enthusiasm and growth, career frustration, career stability, career wind-down, and career exit. A year later, Huberman (1993) proposed seven stages of a teacher's career: career entry, stabilization, experimentation and diversification, reassessment, serenity and rational distance, conservation, and disengagement. Steffy et al. (1999) suggested six stages of a teacher's career, including novice, apprentice, professional, expert, distinguished, and emeritus. Leithwood (1992) offered a 5-stage model of teacher career as follows: career launched, stabilized, challenged and concerned, professional plateau, and retirement preparation. Career stages of teachers outlined by the Philippine Professional Standards for Teachers (PPST) cover: beginner, proficient, highly proficient, and distinguished. Whereas, Christensen et al. (1983) advised three stages of teacher career, notably: the early years, the middle years, and the later years.

According to Zamir (2018), career management should be carried out well in order to build mutual interdependence between the individual and the organization. In the teaching profession, career management is a continuous process of developing teacher professionalism (Steffy et al., 1999), which affects teachers' identity, performance, job satisfaction (Susanto, 2020) and welfare (Smith, 2023). Teaching career management can benefit not only in meeting the schools' needs but also offering more recognition and opportunities for teachers to develop, hence this would avoid career-burnout and retain skilled and competent human resources of the schools (Schleiche, 2011). Career management is the indicator of teachers' capacity and capability in terms of knowledge, skills, and attitudes needed to provide optimal services for quality education (Darling-Hammond, 2020). Career management requires teachers who have a dynamic personality in arranging the steps of their careers with high commitment (Boyd & Tibke, 2012). Teachers need to provide time to do their career management (Hargreaves & Fullan, 2012).

There are several factors which determine teacher career management, namely: having the ability to fight and overcome stressful situations and stay away from high stress (Gu & Day, 2007); having high motivation to manage career and goals (Klassen & Chiu, 2010); having the ability to foster relationships with others, able to adapt to new things and achieve opportunities (Aulia & Haerani, 2023). Teachers' success in career management requires administrative abilities and experience at each level of their career (Avidov-Ungar & Tsybulsky, 2019). According to



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Hong et al. (2017), teacher career management is influenced by their commitment as individuals. Career management should be supported by the needs and levels of awareness, intellectual and conceptual abilities, independent attitude and ability to manage career activities (Kozhushkova et al., 2021).

Nowadays, teacher career advancement and its contribution to sustainable education are gaining traction among academics and professionals. As Wamsler (2020) said, sustainable education needs superior capacity of professional teachers through career policies, the improvement of qualifications and competencies, performance assessments, and collaborative supervision of professional ethics between the government, teachers, and educational institutions. Sustainable education needs to be implemented for sustainable development, which ensures teachers' commitment to realise the right of all citizens to quality education through effective implementation and professional freedom of teachers and educational institutions. Sustainable education equips individuals with the skills and knowledge needed to address global sustainability challenges.

Hitchcock and Willard (2012) emphasised that sustainable education is not only an academic achievement but also a practical necessity for modern professionals. Therefore, professional capital needs to be explored and constructed so that it contributes from the beginning of a teacher's career, sustainably and professionally and supports educational process and outcomes (Lewis et al., 2023). As Eurydice (2015), cited in Petrusheva & Popeska (2015, p. 546) argued that "providing a high quality of professional development secures teachers with appropriate competencies to achieve work efficiency." Besides, "the characteristics and skills of teachers are one of the main sources of variation in students' academic performance" (López-Martín et al., 2022, p. 494).

According to Pauw et al. (2015), the implementation of effective sustainable education on sustainable development is carried out through policy strategies that encourage students' awareness of sustainability with a holistic approach and pluralism in the classroom, as well as assessments in the context of self-evaluation of teachers and educational institutions to monitor and develop existing potential into sustainable performance. The success of teachers is highly determined by their good practices in a sustainable manner by paying attention to the needs of professional careers and the demands of the community and educational institutions (Horokhivska, 2022). The role of sustainable education in fostering a learning-oriented organisational culture is narrated by Senge (1990), who argued that learning organisations promote continuous improvement and innovation by encouraging knowledge sharing and learning. In this context, sustainable education catalyses the development of adaptable and innovative human resources who can navigate the complexities of sustainable practices. Referring to the description given by the scholars above, it can be said that sustainable education needs professional teachers; to develop their professionalism, teachers are required to manage their careers and reach a certain level of career position.

There are numerous prior studies which discuss the importance of sustainable education and its impact on organisational practices and human resource development. However, how sustainable education correlates with teacher career stages and career management has not been widely explored yet; hence, this gap is filled in this study. Thus, the objectives of this research are: (a) to find out whether or not there is a relationship between teacher career stages and career management, (b) to measure the relationship between sustainable education and teacher career stages, and 3) to examine the relationship between sustainable education and career management. The researchers believe that this research will give valuable insights to teachers and stakeholders of educational institutions to understand how teacher career stages and management affect teacher professional development.

### RESEARCH METHOD

This study employed a quantitative method using the Structural Equation Model (SEM) with Smart PLS as the research approach to examine the relationships among variables, i.e., teacher career stages, career management, and sustainable education. To get the data, a structured survey was conducted to gather teachers' perceptions of career stages, career management and sustainable education practices. The statistical analysis was used to measure the hypothesized relationships, facilitating the testing of direct and indirect effects of both career stages and career



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management toward sustainable education.

## **Research Participants**

There were 320 public elementary school teachers who participated voluntarily in this study. These teachers were selected through convenience sampling from 28 schools located in three districts of West Jakarta, Indonesia. There was no specific requirement needed to involve these teachers as respondents. For the sake of homogeneity in terms of career escalation policy, all the teachers were chosen from public schools. In Indonesia, all public schools' policies, including teacher career paths, are governed by the Ministry of Education, while in private schools, teacher career stages follow the policy determined by the stakeholders of the institutions.

In the questionnaire's introduction, the researchers informed the participants of the purposes of this research, with them not required to give their demographic information. It was also written that all responses from the participants were confidentially recorded. Additionally, it was stated that by responding to the questionnaire, the participants contributed to the development of educational research, particularly in terms of teacher career management and sustainable education.

## **Data Collection**

In collecting the data, a 5-point Likert scale questionnaire was used as the instrument, with the options of: always (5), often (4), rarely (3), sometimes (2), and never (1). This questionnaire consisted of 19 positive statements composing five elements of career stages, i.e., pre-service, induction, developed, progress, established (Fessler & Chrisatensen, 1992); seven elements of career management, covering: administrative capabilities, individual commitment, needs and awareness level, intellectual and conceptual abilities, independent attitude, career activities management abilities, and e-portfolio; and 5 elements of sustainable education, namely career policy, qualification improvement, competency improvement, performance assessment, and collaborative supervision of professional ethics between the government, teachers and educational institutions (Hitchcock & Willard, 2012; Lewis, et al., 2023; Pauw, et al., 2015; Wamsler, 2020).

To get the validity and reliability of every statement as the indicator of each variable, two experts in educational management and teacher competence development were involved in the process of ensuring face validity. Adopting the indicators of career position, career management, and sustainable education proposed by the scholars, several statements represented that some other elements were dropped. This decision was taken to meet the appropriateness of Indonesian teacher profiles and the education policy applied in Indonesia. The questionnaire was created in a Google Form and distributed online to all respondents after the whole statements were confirmed to be valid and reliable.

## **Data Analysis**

The data were analysed by using Partial Least Squares based Structural Equation Model (PLS-SEM). It was chosen due to its ability to assess complex relationships between observed and latent variables, making it suitable for exploratory analysis and the confirmation of the results. The validity and reliability of the data were assessed through factor loading, Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). Factoring is considered acceptable if it is above 0.60, ensuring an adequate representation of the construction. Cronbach's Alpha and CR values should be above 0.70 to indicate good internal consistency, while AVE values should be above 0.50 to confirm the convergent validity. The three variables, sustainable education, teacher career position and career management, were evaluated by using path coefficients, t-statistics, and p-values to test the hypotheses. The significance of the pathway was assessed at a level of 0.05 with a t-statistic greater than 1.96 to indicate a significant relationship.

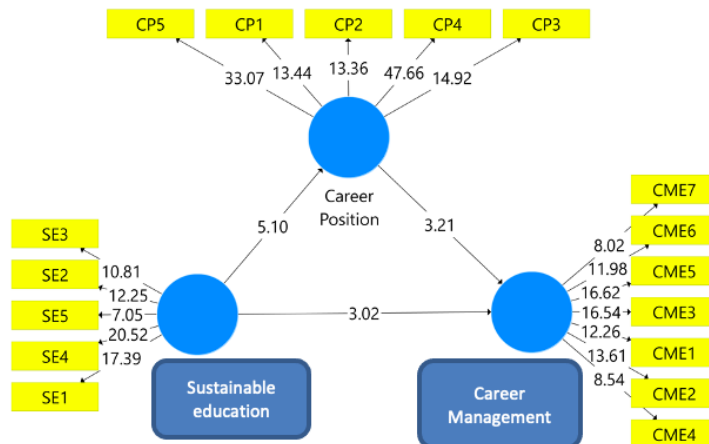
## **RESEARCH RESULTS AND DISCUSSION**

The analysis of the data resulted in the answers to three research objectives as aforementioned above. The



following Figure 1 displays the results:

**Figure 1.** *The Relationship Between Sustainable Education and Career Management, Mediated by Career Position*



The indicators of each variable are as follows:

- X : Sustainable education
- X1 : Career policy
- X2 : Qualification enhancement
- X3 : Competency improvement
- X4 : Performance appraisal
- X5 : Professional ethics supervision
  
- Y1 : Career stages
- Y1.1 : Pre-service
- Y1.2 : Induction
- Y1.3 : Developed
- Y1.4 : Progress
- Y1.5 : Established
  
- Y2 : Career management
- Y2.1 : Administrative capabilities
- Y2.2 : Individual commitment
- Y2.3 : Needs and awareness levels
- Y2.4 : Intellectual and conceptual abilities
- Y2.5 : Independent attitude
- Y2.6 : Career activities management abilities
- Y2.7 : E-portfolio

The following Table 1 presents path coefficients of the three variables:



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**Table 1.** Path-coefficients. Mean, STDEV, t-values, p-values.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t- Statistics (O/STDEV)	p- Values
Career Stages >> Career Management	0.353	0.357	0.110	3.213	<b>0.001</b>
Sustainable Education >> Career Stages	0.529	0.538	0.104	5.096	<b>0.000</b>
Sustainable Education >> Career Management	0.316	0.329	0.105	3.019	<b>0.003</b>

The results of the hypothesis test, based on the given pathway coefficient, reveal the relationship between sustainable education, career stages, and career management. The main metrics used for hypothesis testing include original sample (O), sample average (M), standard deviation (STDEV), statistics-t (O/STDEV), and p-value, helping to determine the significance of this relationship.

### ***The Relationship Between Career Stages and Career Management***

Hypothesis: The more optimal career stages is, the more effective career management will be.

Path coefficient from career stages to career management is 0.353, with a t-statistic of 3.213 and a p-value of 0.001. These numbers indicate a statistically significant positive relationship between career position and career management. A p-value of less than 0.05 confirms the importance of the relationship and suggests that career stage improvement is associated with increased career management. A positive relationship between career stages and career management should focus on defining and communicating career paths clearly. By providing employees with clear opportunities for advancement and a transparent understanding of potential career paths, organizations can encourage proactive career management behaviour. Managers of the institutions should implement structured career development programs such as mentorship, training, and other professional development workshops to support teachers in advancing their careers.

Teacher careers are complex; hence, they need to be planned, carried out gradually and procedurally. The goal of teacher career management development is to facilitate teachers to have career planning and take concrete actions to meet the needs of learning and develop professionally. Besides, teacher career development should be based on their abilities and commitments and also organizational policies as inherent supports (Susanto & Rachbini, 2024).

Smylie and Conyers (1991), as cited by Asaf et al. (2008), affirmed that career stages show parallel episodes which reflect teachers' abilities development: a) from deficit to competent; b) from replication to reflection; c) from learning individually to learning together. To support teachers, career management is needed as the main ingredient to be developed by the institutions; hence, teachers' professional attitudes will be fostered, and the intended goals of the quality of education will be achieved optimally (Setiawati et al., 2023).

### ***Sustainable Education and Career Stages***

Hypothesis: The more effective sustainable education is, the more optimal career stages will be.

The coefficient of the pathway from sustainable education to career position is 0.529, with a t-statistic of 5.096 and a p-value of 0.000. This relationship is not only statistically significant but also indicates a strong positive association, as evidenced by the p-value below 0.01. These findings suggest that a higher level of sustainable education is strongly associated with improved career stages, underscoring the role of sustainable education in advancing teacher career stages. These findings align with the opinion of Tolstikova et al. (2021), who asserted that sustainable





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education is part of systematic educational processes which acquire teacher professional development. Thus, effective, sustainable education opens opportunities for teachers to keep preparing and developing their professions at every stage of their careers.

Hays and Reinders (2020) argued that teachers' professional development and learning will become a basic principle to reach the expected transformation in society if education is taken as a powerful vehicle for change. This idea shows that through sustainable education, teachers will become more professional, hence this will give a positive contribution to the improvement of quality education as a whole. Becoming one of the focal points of 17 goals established by the United Nations in Sustainable Development Goals (SDGs), sustainable education is acknowledged as a potent driver to reduce poverty, attain justice, and reimpose a balanced relationship with the world (van der Klink, 2023).

In this study, the researchers adapted and modified eight teacher career stages as proposed by Fessler and Christensen (1992), in which five were used, i.e., pre-service, induction, competency building, enthusiasm and growth, and career stability. However, the latest three terms of Fessler's were substituted by the term 'developed' to refer to 'competency building', 'progress' to address 'enthusiasm and growth', and 'established' to define 'career stability'. Nguyen (2023) said that in order to be competent, teachers should be professionally 'developed' by working with and learning from others, taking an organized course, doing collaborative and independent research, and other field-related academic activities. By this explanation, the researchers used 'developed' to refer to 'competency building' to address the same intention. In terms of 'enthusiastic and growth', Fessler and Christensen (1992) said that at this stage, teachers love their profession, are eager to go to school and interact with students and also continually find new ways to improve their teaching. This explanation shows how teachers enjoy their jobs and always put in effort to progress. Thus, to refer to this stage, the researchers used the term 'progress' to address 'enthusiasm and growth'. 'Career stability', as explained by Fessler and Christensen (1992), is the stage where teachers are fulfilled and satisfied with their teaching, but they are not devoted to growing further. This period shows how teachers are already 'established' in their profession. At this point, this study used the term 'established' instead of 'career stability' to give equal meaning.

First, Pre-service is the period where individuals are at the beginning of preparation for a specific professional career (Lynn, 2001). By this definition, pre-service teachers are those who study in a specific major of teacher training education in college or a higher institution to embrace the teacher profession. Lynn (2001) also added that teachers who change their roles in teaching, such as from teaching high school English to teaching third grade, will be back to their pre-service career path. In this research, pre-service refers to primary school teachers who switched from teaching the upper grade (4, 5, or 6) to the lower one (1, 2, or 3), and vice versa. These teachers are experiencing different roles due to different students' characteristics, emotional states, needs, and competence in those two grade levels. Second, induction is a transitional position from pre-service teachers to professional development (Geeraerts et al., 2016; Jokinen et al., 2012). 'Induction' was explained by Korhonen (2017) as "becoming and learning to be a teacher" (p. 156). In this research, induction referred to novice teachers, namely those who were experienced in teaching for less than 2 years. Gamborg et al. (2018) explained that 'induction' indicates teachers' first year in the classroom, in which this period becomes the most critical and stressful since they have to construct their teaching strategies.

Third, Adu-Yeboah and Ayinselya (2022) explained that in the stage of 'competency building', teachers are encouraged to be competent in terms of knowledge and teaching skills by inventing new opportunities and strategies. They seek new ideas and actively participate in developing their professionalism. Fessler and Christensen (1992) said that those who are successful at this stage will move forward to the next stage, i.e., enthusiasm and growth. However, those who fail will go to the frustration stage and exit the career earlier. Fourth, in the stage of 'enthusiasm and growth', teachers strive to progress as professionals constantly to improve their teaching (Adu-Yeboah & Ayinselya, 2023). Teachers who are enthusiastic show their effective teaching quality and have a positive impact on students' outcomes through motivational and dynamic ways, as indicated by Song (2022). Fifth, Fessler



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and Christensen (1992) marked the stage of career stability as the phase where teachers maintain their competence and are committed to their teaching profession (as cited in Adu-Yeboah & Ayinselya, 2023). Cawte (2020) classified the phase of career stability as the mid-career stage in which teachers preserve and sustain their teaching job. One teacher might have different experiences while passing their career path as it is influenced by both personal and organizational factors at a certain period (Aylin, 2018).

### ***Sustainable Education and Career Management***

Hypothesis: The more effective sustainable education is, the more effective career management will be.

The relationship between sustainable education and career management shows a path coefficient of 0.316 with a t-statistic of 3.019 and a p-value of 0.003. These results also indicated a significant positive relationship, as the p-value is below the threshold of 0.05. This explains that improvements in sustainable education have a positive impact on career management, highlighting the importance of sustainable education in career development strategies.

Concerning career management, Meesuk et al. (2021) stated that sustainable education becomes part of teacher development. Teachers are powerful agents of change who need education for sustainable development (ESD) to respond to the needs of achieving sustainable development (Rieckmann, 2020). As Pauw et al. (2015) previously mentioned, the implementation of effective sustainable education is carried out by several factors, and one of them is teachers' self-evaluation in terms of their professional management. The seven elements of teacher career management used in this study were: (1) administrative abilities; 2) individual commitment; 3) the needs and levels of awareness; 4) intellectual and conceptual abilities; 5) independent attitude; 6) managing career activities ability; 7) teacher e-portfolios.

First, administrative abilities. Patel et al. (2023) said that the roles of educators are enriched by the cultivation of their administrative skills. In the Indonesian context, teachers' teaching practices should be equipped with administrative tasks, including: preparing a lesson plan before coming to the class, writing a self-reflection journal after each meeting, making an assessment report of students' learning progress, etc. These administrative tasks require teachers' abilities to manage time between their main responsibility to carry out daily teaching and learning activities. Besides, teachers need to gradually cope with the updated policy from the National Education Board regarding the applied curriculum, indicators used in the lesson plan, and learning assessment method, which, to some extent, call for teachers to be skilful administrators. Second, individual commitment. As Norman (2024) remarked, effective teacher administrative management supports the quality of the instructional process. Concerning individual commitment, Ganjali et al. (2019) opined that one of the pivotal elements in school effectiveness and academic framework achievement is the commitment of educators. This commitment is dedicated to the school, students, prolongation of the profession, the expertise, and teaching career (as cited in Shu, 2022). Committed teachers are able to employ any new teaching approaches for the successful achievement of their students (Altun, 2017).

Third, the needs and levels of awareness. Runhaar et al. (2017) found that teachers' self-management steered their careers by looking for networking, opportunities, and or searching for supervisory support. Liang (2024) suggested that teachers have a clear career development goal and put their best effort towards it to sustain healthy development of the institution, and one of the factors affecting this career development path is teachers' self-awareness of their professional development. Fourth, intellectual and conceptual abilities. Individuals' intellectual development is primarily affected by the environment where they interact and get stimuli from social interactions (Darling-Hammond, 2019; Gusmão et al., 2019). With this explanation, it can be said that teachers' intellectual development is affected by the school and its people, including the school principal, school managers, colleagues, and students. Whereas the conceptual abilities are the knowledge of teachers related to their expertise (Yurniwati, 2018). These two ideas explain that intellectual and conceptual abilities are the ability of teachers to develop both their teaching competence (expertise) and performance (social relationships). As these abilities support teachers'





teaching performance, they obviously influence their career management.

Fifth, independent attitude. Independent attitude is intended for teachers who can create creative activities in the teaching and learning process, as stated by Kozhushkova et al. (2021). The concept of independent in the context of education in Indonesia seen from the implementation of 'Independent Curriculum' officially applied in national education of the country in which teachers are given freedom to prepare and design their teaching materials creatively based on diverse needs of the students (Effendi, 2023; Hasan & Mukhlisa, 2023). Therefore, teachers who are able to go with the demands of this curriculum policy will be successful in their teaching career. Sixth, managing career activities' ability. According to Ucejeso et al. (2020), career activities involve several techniques including educational and training opportunities, career planning and monitoring, and performance appraisal, which help employee to manage their career development. In teachers' jobs, career activities are all related actions which support teachers' professional development, such as taking higher studies, joining any workshop and or seminar, grabbing any opportunities offered by the institution or educational board to develop their teaching performance.

Seventh, teacher e-portfolios. E-portfolios are proof of performance collected digitally (Hardy et al., 2012). Since 2020, e-portfolios have been used as authentic evidence in teacher career management (Ciesielkiewicz, 2019). E-portfolios present teachers' performance, their strengths and weaknesses, as well as their career reflection committed to improvement (Modise & Madau, 2023). In general, e-portfolios are used to describe how good teachers' teaching practices are (Walland & Shaw, 2022). Therefore, what teachers have on their e-portfolios reflects their capacity as professionals. E-portfolios are powerful to gather, present, process, and manage information with large storage capacity, easy saving, and more convenience for teachers in managing their teaching careers (Fang, 2019). Murtono (2020) said that most countries use portfolios to evaluate and improve the professionalism of teachers. In the United States, portfolio assessment has been prevailing in teacher education in the last two decades. Teacher qualification certification in this country is assessed by the National Board of Professional Teaching Standards according to a teaching portfolio. In 1989, teacher evaluation in Britain was first carried out in accordance with the Education Reform Act (1988). It is aimed at improving teachers' skills and professional knowledge. Additionally, in China, teacher evaluation was promoted by the Ministry of Education in 2004 in order to improve teachers' teaching quality and professional development. In Indonesia, assessing teachers' competencies through portfolios was first implemented in 2007 (Murtono, 2020) as a requirement to certify teachers and determine their additional incentives from the government.

As mentioned earlier, there are five indicators of sustainable education used in this study, i.e., career policy, qualification improvement, competency improvement, performance assessment, and collaborative supervision of professional ethics between the government, teachers and educational institutions. For career policy, McMahon and Knight (2024) stated that sustainability, as proposed by the United Nations in its Sustainable Development Goals (SDGs), has become the focus of attention, including in career development. Therefore, career development needs to promote sustainability through guidance (Plant, 2014). In the context of teachers, clear guidance on how to improve their careers, together with the policy, needs to be taken into account by both the school management and the government.

Next is qualification and competency improvement. Sustainability in education needs qualified and competent teachers as they are the main actors to transfer skills, knowledge, behaviours, and values to the learners to face global challenges in a sustainable world (Dittrich et al., 2024; European Commission, 2022; UNESCO, 2021). For performance assessment, per Almeida (2017), the teacher is the core element of educational system, thus, the evaluation of their performance should be carried out in a methodological way so that it will not only give positive impacts to their professional development and personal value but also to intellectual development of the students.

Not to forget, the collaborative supervision of professional ethics between the government, teachers and educational institutions. Collaborative supervision should be built to facilitate the exchange of ideas and best practices between teachers and the supervisors (Susanto & Arifani, 2023). Besides, being engaged in collaborative



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supervision will improve teachers' ownership of the sense of the learning process (Pérez-Ordás et al., 202) and responsibility for students' achievements (Wahlstrom & Louis, 2008).

Darling-Hammond (2020) described that career management portrays teachers' knowledge, skill, capability, and attitude required in promoting quality education. In line with this, Horokhivska (2022) said that by putting attention to their career, teachers will be successful in their career management, which involves good practices in a sustainable manner.

## CONCLUSION

Like other professions, teachers are also required to manage their career stages and develop their professionalism. One of the pivotal aspects which affects teacher career development is its relationship with sustainable education. This research work resulted in three findings as follows: First, there was a statistically significant positive relationship between teacher career stages and their career management, proven by a p-value of 0.001, which was less than 0.05. Second, there was a positive correlation between sustainable education and teacher career stages, in which the p-value of 0.000 was lower than 0.01. Third, there was a strong positive relationship between sustainable education and teacher career management, evidenced by statistical analysis in which the p-value of 0.003 was lower than 0.05. These findings underscore the need for organizations to adopt a comprehensive career management strategy and sustainability education. By doing so, they not only promote individual career growth but also contribute to the success and sustainability of the organization.

## REFERENCES

- Adu-Yeboah, C. and Ayinselya, R.A. (2022). *Introduction to in-service education and training*. GHANA Training and Retraining Programmed for Private School Teachers.
- Altun, M. (2017). The effects of teacher commitment on student achievement. *International Journal of Social Sciences & Educational Studies*, 3, 51 – 54. <https://doi.org/10.6007/IJARBS/v7-i11/3475>
- Anoq, M.D.I. and Peteros, E.D. (2024). Examining teacher retention through the lens of job satisfaction and commitment in a Philippine private school. *International Journal of Learning, Teaching and Educational Research*, 23(9), 242 – 264. <https://doi.org/10.26803/ijlter.23.9.13>
- Arumsari, C., Suherman, U., Nurihsan, J., Yustianan, Y.R., Budianmin, A. & Yulianto, E. (2024). Profile of teacher career satisfaction: A cultural review on school quality. *JOMSIGN: Journal of Multicultural Studies in Guidance and Counselling*, 8(1), 16 – 32. <https://doi.org/10.17509/jomsign.v8i1.58286>
- Asaf, M., Shachar, R., Tohar, V., & Kainan, A. (2008). From superteacher to a super teacher: The career development of teacher educators. *FQS: Forum Qualitative Sozialforschung*, 9(3), Art 19. <http://nbn-reso:ving.de/um:nbn:de:0114-fqs0803192>
- Aulia, N., & Haerani, I. (2023). Teacher retention and turnover: Exploring the factors that influence teacher decision-making. *Journal of Education Review Provision*, 2(2), 36–42. <https://doi.org/10.55885/jerp.v2i2.155>
- Avidov-Ungar, O., and Tsybulsky, D. (2019). Teachers in leadership positions: Experiences of professional career development. *International Journal of Leadership in Education*, 25(4), 567 – 585. <https://doi.org/10.1080/13603124.2019.1662950>
- Aydin, I. (2018). Teacher career cycles and teacher professional development. *Journal of Human Sciences*, 15(4), 2047 – 2065. <https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/5450>
- Boyd, P., & Tibke, J. (2012). Being a school-based teacher educator: Developing pedagogy and identity in facilitating work-based higher education in a professional field. *Practitioner Research in Higher Education Cumbria*, 6(2), 41–57.
- Cawte, K. (2020). Teacher crisis: Critical events in the mid-career stage. *Australian Journal of Teacher Education*, 45(8), 74 – 92. <https://doi.org/10.14221/ajte.2020v45n8.5>
- Christensen, J., Burke, P. & Hagstrom, D. (1983). *Stages of teachers' careers: Implications for professional development*. ERIC Clearinghouse on Teacher Development.



## MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B. & Osher, D. (2019). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97 – 140. <https://doi.org/10.1080/10888691.2018.1537791>
- Dittrich, A.M., Eloff, I., Boon, W., Weinberg, L., Rabani, M., Mathabathe, K.C., and Agostini, E. (2024). Assessing the professionalism of teacher educators in relation to sustainability: Developing the teacher education and sustainability scale (TESS). *Education Sciences*, 14, 1 – 15. <https://doi.org/10.3390/educsci14091000>
- Effendi, D. (2023). The teacher's paradigm to learning in the independent curriculum at elementary school: A study in Jayapura City. *JIP: Jurnal Ilmiah PGMI*, 9(2), 6 – 18. <https://doi.org/10.19109/jip.v9i2.20761>
- UNESCO. (2021). *Teachers have their say-motivation, skills and opportunities to teach education for sustainable development and global citizenship*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf000379914>
- European Commission. (2022). *Teachers, trainers and school leaders*. European Commission. <https://education.ec.europa.eu/focustopics/teachers-trainers-and-school-leaders>
- Fang, Z. (2019). Teacher evaluation based on e-teaching portfolio – developing trend of teacher evaluation in China. *Advances in Social Science, Education and Humanities Research*, 43, 382 – 388.
- Fessler, R. & Christensen, J. (1992). *The teacher career cycle: Understanding and guiding the professional development of teachers*. Allyn & Bacon.
- Gamborg, L, Webb, AW., Smith, A., Baumgartner, JJ. (2018). Understanding self-efficacy of novice teachers during induction. *Research Issues in Contemporary Education*, 3(2), 16 – 26.
- Ganjali, R., Ashraf, H., & Motallebzadeh., K. (2019). Developing and validating EFL instructors' professional commitment questionnaire through PLS-SEM. *Iranian Journal of Applied Language Studies (IJALS)*, 11, 81 – 114. <https://doi.org/10.22111/IJALS.2019.5447>
- Geeraerts, K., Vanhoof, J. & Van den Bossche, P. (2016). Teachers' perceptions on intergenerational knowledge flows. *Teaching and Teacher Education*, 56, 150 – 161. <https://doi.org/10.1016/j.tate.2016.01.024>
- Grönqvist, E., Hensvik, L., Thoresson, L. (2022). Teacher career opportunities and school quality. *Labour Economics*, 77, 101997. <https://doi.org/10.1016/j.labeco.2021.101997>
- Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education*, 23(8), 1302–1316. <https://doi.org/10.1016/j.tate.2006.06.006>
- Gusmão ECR., Matos, G.S., Alchieri, J.C. & Chianca, T.C.M. (2019). Social and conceptual adaptive skills of individuals with intellectual disability. *Revista da Escola de Enfermagem da USP*, 53, 03481, 1 – 8. <http://dx.doi.org/10.1590/S1980-220X2018014903481>
- Hardy, A., Tinney, J., & Davies, S. (2012). Using e-portfolios to support trainee Design and Technology teachers in developing their subject knowledge. In *PATT 26 Conference: Technology Education in the 21st Century* (pp. 1–7).
- Hargreaves, A. & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Hasan, K., & Mukhlisa, N. (2023). Evaluation program of independent curriculum in elementary school: A new curriculum in Indonesia. In *The 8<sup>th</sup> Progressive and Fun Education International Conference* (pp. 61 – 69).
- Hays, J. and Reinders, H. (2020). Sustainable learning and education: A curriculum for the future. *International Review of Education*, 66(1), 29 – 52. <https://doi.org/1007/s11159-020-09820-7>
- Hong, J., Day, C., & Greene, B. (2017). The construction of early career teachers' identities: Coping or managing? *Teacher Development: An International Journal of Teachers' Professional Development*, 22(2), 249 – 266. <https://doi.org/10.1080/13664530.2017.1403367>
- Horokhivska, T.M. (2022). Assessing promising ways of developing professional-pedagogical competency in lecturers from technical universities. *Humanities Science Current Issues*, 1(54), 284 – 290. <https://doi.org/10.24919/2308-4863/53-1-41>
- Huberman, A.M. (1993). *The lives of teachers*. Cassell.
- Jokinen, H., Heikkinen, H.L.T., & Morberg, A. (2012). The induction phase as a critical transition for newly qualified teachers. *Transitions and Transformations in Learning and Education*, 169 – 185. [https://doi.org/10.1007/978-94-007-3212-2\\_11](https://doi.org/10.1007/978-94-007-3212-2_11)
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of



## MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

- experience, and job stress. *Journal of Educational Psychology*, 102(3), 741–756. <https://doi.org/10.1037/a0019237>
- Korhonen, H. (2017). Student teachers' experiences of participating in mixed peer mentoring groups of in-service and pre-service teachers in Finland. *Teaching and Teacher Education*, 61, 153 – 163. <https://doi.org/10.1016/j.tate.2016.10.011>
- Kozhushkova, N.V., Soldatchenko, A.L., Rudakova, S.V., Ovcharova, S.V., Velkanova, S.S. & Terenteva, N.G. (2021). Management model to become a teacher during university education. *Current Context of Education and Psychology in Europe and Asia*, 9 (SPE3), 1153. <https://doi.org/10.20511/pyr2021.v9nspe2.1153>
- Leithwood, K.A. (1992). *Teacher development and educational change*. Routledge.
- Lewis, A.L., Trechsel, L.J., & Zimmermann, A.B. (2023). Monitoring the integration of sustainable development into higher education teaching: A collaborative learning approach. *Journal of Higher Education Development*, 18(4), 61 – 76. <https://doi.org/10.21240/zfhe/18-04/0>
- Liang, Y. (2024). Teacher career planning model and career development path optimization strategy in educational management. *Applied Mathematics and Nonlinear Sciences*, 9(1), 1-15. <https://doi.org/10.2478/amns-2024-2692>
- López-Martín, E., Gutiérrez-de-Rozas, B., González-Benito, A.M. & Expósito-Casas, E. (2023). Why do teachers matter? A meta-analytic review of how teacher characteristics and competencies affect students' academic achievement. *International Journal of Educational Research*, 120, 102199, 1 – 14. <https://doi.org/10.1016/j.ijer.2023.102199>
- Lynn, S.K. (2002). *The winding path: Understanding the career cycle of teachers*. The Clearing House.
- Mammadov, R. and Cimen, I. (2019). Optimizing teacher quality based on student performance: A data envelopment analysis on PISA and TALIS. *International Journal of Instruction*, 12(4), 767 – 788. <https://doi.org/10.29333/ijii.2019.12449a>
- McMahon, M., Knight, E. (2024). Sustainability: Implications for career development. *International Journal of Educational and Vocational Guidance*. <https://doi.org/10.1007/s10075-024-09693-4>
- Meesuk, P & Wongrugsu, A. (2021). Sustainable teacher professional development through professional learning community. *Journal of Teacher Education for Sustainability*, 23(2), 30 – 44. <https://doi.org/10.2478/jtes-2021-0015>
- Modise, M. E. P. & Mudau, P. K. (2023). Using e-portfolios for meaningful teaching and learning in distance education in developing countries: A systematic review. *Journal of Continuing Higher Education*, 71(3), 286–298. <https://doi.org/10.1080/07377363.2022.2067731>
- Nguyen, N.T.L. (2023). How to develop four competencies for teacher educators. *Frontiers in Education*, 8: 1147143, 1 -13. <https://doi.org/10.3389/educ.2023.1147143>
- Norman, E. (2024). Exploring teacher workload challenges in the Merdeka Curriculum era: A Nasa-Tlx-based analysis of administrative task impact on performance and well-being. *International Conference on Education, Society and Humanity*, 2(2), 827 – 835. <https://ejournal.unuja.ac.id/index.php/icesh>
- Plant, P. (2014). Green guidance. In *Handbook of Career Development* (pp. 309 – 316). [https://doi.org/10.1007/978-1-1464-94607\\_17](https://doi.org/10.1007/978-1-1464-94607_17)
- Patel, S., Larsen, T., Ayoub, M.F. & Chuang, K. (2023). The role of administrative skills in a career as an academic clinician educator. *Brown Hospital Medicine*, 2(4). <https://doi.org/10.56305/001c.88175>
- Pauw, J. B. de, Gericke, N., Olsson, D. & Berglund, T. (2015). The effectiveness of education for sustainable development. *Sustainability (Switzerland)*, 7(11), 15693–15717. <https://doi.org/10.3390/su71115693>
- Pérez-Ordás, R., Nuviala, A., Grao-Cruces, A., & Fernandez-Martinez, A. (2021). Implementing service-learning programs in physical education; teacher education as teaching and learning models for all the agents involved: A systematic review. *International Journal of Environmental Research and Public Health*, 18(2), 669.
- Petrusheva, K.M. and Popeska, B. (2015). Teachers' professional development – condition for quality of education in future. In *ICON Best Conference 2015 – Economic Analysis of Global Trends in Tourism, Finance, Education and Management at Skopje, Republic of Macedonia* (pp. 539 – 551).
- Rieckmann, M. (2019). Education for sustainable development in teacher education: An international perspective.



## MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

- In S. Lahiri (Ed.), *Environmental education* (pp. 33–48). Delhi.
- Runhaar, P., Bouwmans, M., & Vermeulen, M. (2019). Exploring teachers' career self-management: Considering the roles of organizational career management, occupational self-efficacy, and learning goal orientation. *Human Resource Development International*, 22(4), 364 – 384. <https://doi.org/10.1080/13678868.2019.1607675>.
- Schleiche, A. (2011). *Building a high-quality teaching profession lessons from around the world*. OECD Publishing. <https://dx.doi.org/10.1787/9789264113046-en>
- Senge, P. (1990). The learning organization. *Dimension*, 14.
- Setiawati, Y.H., Baharun, H., Sa'diyah, H. & Hidayati, Y. (2023). Career management in building teacher professional performance. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(3), 3387 – 3394. <https://doi.org/10.31004/obsesi/v7i3.4156>
- Shu, K. (2022). Teachers' commitment and self-efficacy as predictors of work engagement and well-being. *Frontiers in Psychology*, 13(850204), 1 – 7. <https://doi.org/10.3389/fpsyg.2022.850204>
- Smylie, MA. & Conyers, JG. (1991). Changing conceptions of teaching influence the future of staff development. *Journal of Staff Development*, 2(1), 12 – 16.
- Smith, K.A., Dockrell, J., Matthews, D., Sturrock, A. & Wilson, C. (2023). Towards an evidence based approach to fostering collaborative conversation in mainstream primary classrooms: Response to commentators. *First Language*, 43(6), 660 – 667. <https://doi.org/10.1177/01427237231209805>.
- Song, Y. (2022). The constructive role of teacher enthusiasm and clarity in reducing Chinese EFL students' boredom. *Frontiers in Psychology*, 13(874348), 1 – 5. <https://doi.org/fpsyg.2022.874348>
- Steffy, B.E., Wolfe, M.P., Pasch, S.H. & Enz, B.J. (1999). *Life cycle of the career teacher*. Corwin Press.
- Susanto, R. (2020). Kontribusi faktor mendasar kepuasan kerja: Fondasi pengembangan profesionalitas tenaga pendidik. *Jurnal Ilmiah Pendidikan dan Pembelajaran*, 4(1), 232 – 248. <https://doi.org/10.23887/jipp.v4i2.25665>
- Susanto, S. & Arifani, Y. (2023). Beliefs and emotions on becoming a CALL teacher: A narrative inquiry of personal-professional growth. *Computer Assisted Language Learning*, 24(1), 25 – 40. <https://old.callej.org/journal/24-1/Susanto-Arifani2023.pdf>
- Susanto, R., Yulhendri & Rachbini, W. (2024). Sustainable action and transformation of change in teachers' learning leadership model: Promoting student' independent learning. *IEJEE: International Electronic Journal of Elementary Education*, 16(4), 521 – 534. <https://doi.org/10.26822/iejee.2024.35>
- Tolstikova, S., Osechkina, L., Tabolova, E., & Travinova, G. (2021). *Development of teachers' professional skills in education for sustainable development*. *E3S Web of Conferences* 250, 07007. <https://doi.org/10.1051/e3sconf/202125007007>
- Uchejeso, O.M., Baguma, J.C., & Egodi, E.M. (2020). Career management for educational organization success: The human resources perspectives. *Journal of Advances in Education and Philosophy*, 4(6), 306 – 312. <https://saudijournals.com/jaep>
- van der Klink, M.R. (2023). Professional learning and development: Sustainability in education. *Professional Development in Education*, 49(5), 781 – 782. <https://doi.org/10.1080/19415257.2023.2259694>
- Wahlstrom, K. L., & Louis, K. S. (2008). How teachers experience principal leadership: The roles of professional community, trust, efficacy, and shared responsibility. *Educational Administration Quarterly*, 44(4), 458–495. <https://doi.org/10.1177/0013161X0832150>
- Walland, E., & Shaw, S. (2022). E-portfolios in teaching, learning and assessment: Tensions in theory and praxis. *Technology, Pedagogy and Education*, 31(3), 363 – 379. <https://doi.org/10.1080/14759339X.2022.2074087>
- Wamsler, C. (2020). Education for sustainability: Fostering a more conscious society and transformation towards sustainability. *International Journal of Sustainability in Higher Education*, 21(1), 112 – 130. <https://doi.org/10.1108/IJSHE-04-2019-0152>
- Yağan E, Özgenel M, Baydar F. Professional self-understanding of teachers in different career stages: A phenomenological analysis. *BMC Psychology*, 10(1), 57. <https://doi.org/10.1186/s40359-022-00769-w>
- Yurniwati. (2018). Improving conceptual and procedural knowledge of prospective teachers through multisensory approach: Experience from Indonesia. *Journal of Research and Advances in Mathematics Education*, 3(2),





## MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

106 – 117. <http://journals.ums.ac.id/index.php/jramathedu>

Zamir, S. (2018). A teaching career: Mobility and stagnation. *Athens Journal of Education*, 5(2), 145 – 160.  
<https://doi.org/10.30958/aje.5-2-3>