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Development and validation of a dual-dimensional career success scale for academics in Malaysian private higher education institution

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ABSTRACT

Career success in academia has traditionally been assessed through objective indicators such as salary, promotions, and scholarly output, often neglecting subjective experiences like job satisfaction and work-life balance that are vital to academic fulfillment. Addressing this gap, the present study developed and validated the Dual-Dimensional Career Success Instrument (DDCS) to measure both objective and subjective aspects of career success among academicians in Malaysian Private Higher Education Institutions (PHEIs). The study employed a sequential explanatory mixed-methods design, beginning with qualitative interviews involving 14 academicians to guide item generation, followed by a quantitative survey administered to 413 academic staff. Findings revealed that academicians reported higher levels of subjective career success compared to objective measures, underscoring the salience of intrinsic values in academic career evaluation. This study contributes to the theoretical advancement of dual-dimensional career success models by contextualizing them within a non-Western academic environment. Practically, the DDCS provides higher education institutions with a robust, psychometrically sound tool to inform faculty development, career planning, and organizational policy. The instrument holds potential for broader adaptation in other professional sectors where both measurable achievements and personal fulfillment constitute career success.

Contribution/ Originality: This study contributes to the existing literature by developing a new research instrument for measuring career success among academicians in private higher education institutions in Malaysia. It is among the few studies to investigate career success specifically within this context, providing a unique tool for future research.

1. INTRODUCTION

The Private Higher Education Institutions (PHEIs) require a re-evaluation of how one measures and defines career success, as academic careers continue to develop. PHEIs have placed new burdens on academics, including a shift towards a more complex publication output, unstable contracts, and funding prioritization, which trigger a new level of teaching, fundamentally changing academic work to a multidimensional, cognitively arduous task (Crisan, 2022). Within this framework, a more comprehensive understanding of well-being and success at an individual level as well as at an institutional level requires both objective and subjective criteria. In the past, success was measured objectively using rank, salary, and number of publications (Judge, Cable, Boudreau, & Bretz Jr, 1995; Seibert, Akkermans, & Liu, 2024). While these metrics are quantifiable, they do not capture professional fulfillment in the

multidimensional nature of work motivation professionals have today. Recent literature has shifted to focus on subjective measures, such as personal satisfaction and alignment with one's values (Shockley, Ureksoy, Rodopman, Poteat, & Dullaghan, 2016). These appraisals take into consideration psychological factors and the context of the organization, including self-efficacy, corporate culture, and role expectations (Briscoe et al., 2021).

To address this issue, researchers have suggested a two-fold objective and subjective framework (Ng, Eby, Sorensen, & Feldman, 2005; Pan & Zhou, 2015; Spurk, Hofer, & Kauffeld, 2021). This model applies in PHEIs due to the market-driven constraints of limited research funding, an overemphasis on teaching, and the underlying academic culture interwoven with institutional politics and personal significance (Crisan, 2022). For example, although faculty pay reflects postgraduate students supervised and publication volume, it does not capture the fulfillment derived from teaching, mentoring, or intellectual autonomy (Chen, 2023). Despite the absence of empirical tools that define and measure both frameworks, meta-dual systems in non-Western or PHEI contexts, the theoretical justification is sound. Subjective Career Success Inventory (SCSI) developed by Shockley et al. (2016) and cross-cultural instrument for subjective career success developed by Briscoe et al. (2021). The focus of many instruments is primarily on corporate environments, whereas academic-centric tools, such as the Career Success Scale (Buddeberg-Fischer, Stamm, Buddeberg, & Klaghofer, 2008), tend to emphasize structural and functional aspects, often neglecting psychological or experiential dimensions.

While dual-dimensional frameworks of career success have been theoretically proposed, most instruments such as the Subjective Career Success Inventory (SCSI) and the Career Success Scale (CSS) have been developed and validated in Western, corporate, or medical settings (Briscoe, Hall, & DeMuth, 2006; Buddeberg-Fischer et al., 2008). These tools often fail to capture the nuanced dynamics of career success within PHEIs in non-Western or Global South contexts (Yang & Fumasoli, 2024), where faculty values such as autonomy in teaching, alignment with educational missions, cultural responsibilities, and unstable career structures differ significantly. There remains a lack of psychometrically validated instruments that consider these unique career determinants. By adapting and extending existing theoretical frameworks, this study introduces a context-specific Dual-Dimensional Career Success Instrument tailored to the PHEI sector, addressing both structural achievements and experiential, value-driven markers of success.

To address this gap, the present study aims to develop and validate a Dual-Dimensional Career Success Instrument specifically designed for academicians within PHEIs. This dual structure includes two subscales: the Objective Career Success Scale (OCSS), which covers salary, tenure, promotion, publication records, and academic leadership; and the Subjective Career Success Scale (SCSS), which assesses quality of work, work-life balance, recognition and respect, and meaning and impact. Drawing from existing literature and consulting experts, the study employs exploratory and confirmatory factor analyses to evaluate the structural and psychometric robustness of the instrument. The research applies dual-career-success frameworks within organizational contexts, representing a sparse cross-context adaptation. Practically, it provides a comprehensive diagnostic tool to inform human resource strategies, faculty development, and institutional planning. By integrating contextual realities with theoretical frameworks, this model shifts traditional metrics of appraisal, offering a multifaceted evaluation of academic and institutional achievement. These findings can benefit institutional leaders, policymakers, and career development professionals seeking to design organizational environments that balance collective objectives with individual self-actualization, thereby extending the applicability of the framework.

Therefore, the present study aims to empirically validate a comprehensive measurement model that encapsulates how academicians within Malaysian PHEIs perceive and assess their career success. By emphasizing both structural indicators and experiential dimensions, this research advances a culturally and institutionally contextualized understanding of academic achievement. Its objectives are to (1) establish empirically grounded indicators specific to the PHEI environment, and (2) develop and test the psychometric robustness of the proposed Dual-Dimensional

Career Success Instrument. In doing so, the study offers a critical recalibration of career success metrics, contributing to more sustainable and meaningful academic career success in Malaysia's private higher education sector.

2. LITERATURE REVIEW

2.1. Conceptualization of Career Success

Career success is often referred to as the accomplishments acquired through an individual's professional endeavors and work-related experiences (Nexhip, Riley, & Robinson, 2023). Research in management and applied psychology has been focused on career success since the 1970s (Hirschi, Nagy, Baumeler, Johnston, & Spurk, 2018; Sullivan & Baruch, 2009; Sultana & Mahmud, 2020). The idea of career success has become a very individual concept, different for each person and changing throughout life depending on current personal, organizational, and social circumstances (Hildred, Piteira, Cervai, & Pinto, 2023; Russo, Guo, & Baruch, 2014). With significant changes to the employment relationship, the notion of career success has taken on greater significance in the new career context (Abele, Spurk, & Volmer, 2011; S. Seibert et al., 2024). It is something that is very much needed and necessary for every individual because attaining it is a type of accomplishment in his or her profession and shows personal happiness (Priyatin, 2019; Steyrer, Strunk, Schiffinger, Mayrhofer, & Meyer, 2005; Weston et al., 2021). Everyone's dream is to be successful in their careers because a career is something that they aspire to achieve in the future as a measure of their success.

A framework used to categorize the operationalization of career success is based on Hughes (1937) theoretical differentiation between objective and subjective career outcomes. Specifically, Hughes established that an objective career is one that can be observed, quantifiable, and verifiable by an impartial third party. On the other hand, a subjective career is solely experienced by the individual pursuing it. Consequently, objective career success is characterized by tangible achievements, including salary, advancements, and professional status, which have traditionally been recognized as fundamental indicators of career success across different societies (Heslin, 2005; Van Der Heijden, Davies, Van der Linden, Bozionelos, & De Vos, 2022). Objective career success is characterized by its external visibility and quantifiable nature (Arthur, Khapova, & Wilderom, 2005).

Subjective career success pertains to how individuals personally perceive and experience their career accomplishments, as well as the fulfillment of significant career outcomes (Shockley et al., 2016). A variety of measurement techniques are frequently used to evaluate subjective career success. Components of subjective career success include elements such as enjoyment, satisfaction, and overall well-being, which stem from various work aspects, including work-family balance and perceived financial security (Mohd Rasdi, Ismail, & Garavan, 2011; Seibert, Kraimer, Holtom, & Pierotti, 2013). Commonly, it is measured through perceived career success (Heslin, 2005) or career satisfaction (Greenhaus, Parasuraman, & Wormley, 1990; Seibert et al., 2013). In recent times, subjective career success has been evaluated using a multidimensional approach that considers different aspects of one's career, which include personal development, growth, and integrity (Shockley et al., 2016).

Numerous studies have undertaken the exploration of factors that could potentially predict career success. These factors span individual aspects such as age, gender, education, structural elements like organizational support, and behavioral traits, self-efficacy, and career identity (Spurk, Hirschi, & Dries, 2019). It is notable that there exist variations in the predictors of subjective and objective career success (Spurk et al., 2019). However, a significant portion of this research has primarily focused on individuals following traditional career success, often within one organization. This context is especially relevant within Malaysia's academic landscape. The workforce and economic environment of the nation are significantly shaped by the higher education sector (Dent, Cheng, Cham, & Lee, 2019). The government's aspirations are ambitious, aiming to elevate Malaysia to an international higher education hub by attracting 250,000 international students by 2025 (Munusamy & Hashim, 2019). Within this setting, the significance of career success among academicians becomes paramount, given their pivotal role in the educational ecosystem.

Drawing from Arthur et al. (2005), this study defines academicians' career success as a holistic representation of their accumulated professional and psychological achievements throughout their academic tenure.

2.2. Previous Studies

Measuring career success is essential for understanding how individuals navigate their professional paths and for evaluating the effectiveness of career development programs and organizational policies. In this study, the researcher selects objective and subjective career success as the primary dimensions because career success is inherently dual-faceted, with both external achievements and internal satisfaction playing significant roles (Arthur et al., 2005; Ng et al., 2005). Academicians' career success is measured through both tangible milestones (e.g., tenure, promotions, salary) and personal fulfillment (e.g., work-life balance, recognition, meaning) (Seibert, Kraimer, & Liden, 2001). Existing studies emphasize these two categories, ensuring consistency with established measurement models.

Over the past several decades, scholars have developed numerous instruments to operationalize the concept of career success, reflecting both evolving career models and measurement priorities. One of the earliest and most widely cited tools is the Career Satisfaction Scale developed by Greenhaus et al. (1990), which focuses on individuals' subjective evaluations of their career progress and personal fulfillment. The primary aim of this instrument was to explore the differential organizational experiences between Black and White managers. It assesses how these experiences impact job performance evaluations and career outcomes (e.g., perceived promotability and career satisfaction). The sponsorship scale, consisting of seven items, and the career satisfaction scale, which included five items, capture managers' subjective evaluations of their own career progress and success, such as satisfaction with meeting personal career goals. These instruments were specifically designed to address the lack of race-sensitive tools in organizational research, allowing the authors to empirically examine how race affects workplace experiences and career outcomes. In contrast, Buddeberg-Fischer et al. (2008) introduced the Career-Success Scale (CSS) to assess more objective markers of career attainment, such as academic achievements and professional status, particularly in the medical context. As researchers began to recognize the limitations of focusing solely on either internal or external success, newer instruments emerged that address both domains. For instance, Briscoe et al. (2006) developed and validated a comprehensive four-scale instrument that distinguishes between key attitudinal dimensions of modern careers. Specifically, the protean career attitude is measured using two subscales: self-directed career management and values-driven orientation, while the boundaryless career attitude is assessed through boundaryless mindset and organizational mobility preference. This multidimensional instrument has demonstrated robust psychometric properties, including internal consistency and construct validity across diverse samples, such as undergraduate students, MBA participants, and executives. Similarly, Hirschi et al. (2018) developed the Career Resources Questionnaire to capture a wide range of psychological and structural resources that support both personal satisfaction and measurable outcomes. This trend toward multidimensionality has broadened the understanding of career success in contemporary, less linear career environments.

3. METHODS

3.1. Research Design

Utilizing a sequential explanatory mixed methods design, the present study investigated and confirmed the two dimensions of career success in academicians at Malaysian private higher education institutions (PHEIs). It integrated both qualitative and quantitative components to capture richly textured yet generalizable insights that align with the multifaceted nature of the career success construct.

3.2. Sample

The research targeted academicians employed in Malaysian PHEIs. The study explicitly focused on institutions with university status, as indicated by the QS World University Ranking 2024, ensuring the inclusion of academics

actively engaged in multifaceted roles such as research, teaching, student supervision, and administrative duties. A stratified purposive sampling approach was adopted to ensure representation across academic ranks and disciplines within selected universities. A total of 413 academicians were involved in the study, representing a diverse range of faculties and academic designations, including lecturers, senior lecturers, associate professors, and professors.

3.3. Scale Development Process

The development of a new instrument to measure both objective and subjective career success necessitated a methodologically rigorous approach to ensure its validity and reliability. The process commenced with the conceptual definition of career success. This study adhered to established psychometric procedures in scale construction, as articulated by Churchill Jr (1979), which involve defining the construct, generating an item pool, refining items through expert judgment, and validating the scale through empirical testing. In alignment with this framework, item generation was grounded in themes identified through qualitative interviews with academicians from Malaysian PHEIs. Thematic analysis revealed distinct dimensions of career success, which informed the initial development of scale items. Following item development, content validity was assessed, consistent with Haynes, Richard, and Kubany (1995) assertion that expert evaluation at the early stages of scale development is essential to ensure conceptual alignment. This expert review facilitated the refinement of the item pool prior to statistical validation.

Subsequently, a pilot study was conducted to assess the performance and clarity of the items. Based on the pilot data, Exploratory Factor Analysis (EFA) was employed to determine the underlying factor structure, following the guidelines by Hinkin (1995). Reliability was examined using Cronbach's alpha, with acceptable thresholds indicating internal consistency. The iterative process of expert review, pilot testing, and statistical validation ensured the retention of only psychometrically robust items. Items deemed redundant or insufficiently representative of the construct were systematically excluded. The scale was conceptualized using a reflective measurement model, whereby items are viewed as manifestations of underlying latent constructs rather than formative indicators (MacKenzie, Podsakoff, & Podsakoff, 2011). This approach aligns with Nunnally and Bernstein (1994) standards for construct validity and scale development. Figure 1 illustrates the multi-stage development process, integrating qualitative insights and quantitative rigor to ensure that the resulting instrument accurately captures the multifaceted nature of career success among academicians in Malaysian PHEIs.

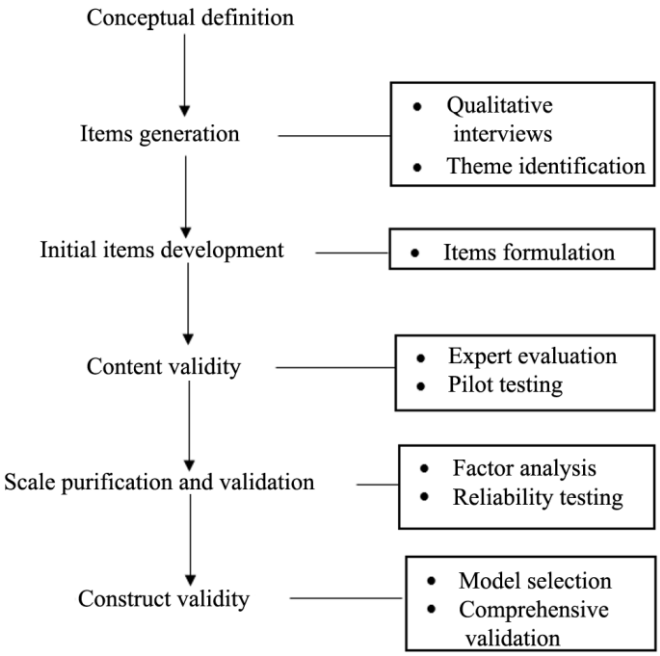

Figure 1. Overview of scale development procedure.

3.3.1. Conceptual Definition

The first step in developing a psychometrically sound instrument is to identify the concept of the construct. Conceptually, career success is defined by the achievement of positive outcomes within the professional domain, progressing incrementally over time (Arthur et al., 2005). Almost similar as stated by Fernández-Díaz, Gutiérrez-Ortega, Llamas-Salguero, and Cantón-Mayo (2021) career success is the balance between a person's professional accomplishments and his or her personal expectations and values, which are different for each person and tied to his or her life achievements.

In this research, career success is operationally defined based on Arthur et al. (2005) as the collection of positive achievements, both professional and psychological, that an individual in academia has attained over the span of their career. This definition encompasses both objective (or extrinsic) elements, such as position, salary, and promotions, as well as subjective (or intrinsic) elements that involve the enjoyment, satisfaction, and well-being derived from various aspects of work, such as work-family balance and perceived financial security. Typically, career success can be seen as both objective and subjective.

Objective career success: Objective career success is marked by tangible and substantial indicators of an individual's career achievement, encompassing factors like income, hierarchical position, promotions, and overall status Arthur et al. (2005). In this context, objective career success is defined as a collection of measurable and tangible accomplishments within the realm of academia. It comprises various elements, including academic rank, career advancement, income, and promotions. It focuses on the things that can be measured to show how an academic is progressing in their career and is recognized by their peers.

Subjective career success: Subjective career success revolves around an individual's self-assessment of their professional advancement, capturing their emotions of fulfillment and accomplishment (Heslin, 2005). In this sense, subjective career success means how one views their progress and joy in their career in academia. It covers their level of satisfaction with their schooling, achievements at work, and their view of their own achievement. This definition points out that an academician's perception of their career matters and also what positive feelings they associate with their scholarly achievements.

3.3.2. Items Generation

3.3.2.1. Interviews and Theme Identification

The second step involves item generation, which includes interviews and theme identification. Interviews were crucial in this study because they helped collect detailed information on how academicians define career success. They supported the main research aims by providing rich information for developing reliable measurement tools. The primary goal of the interviews was to explore how academicians in PHEIs in Malaysia perceive, describe, and experience career success.

The initial step in the interview process involved determining the criteria and procedures necessary for selecting the participants to be interviewed. By establishing clear selection criteria, the data obtained were both relevant and comprehensive for the study. For this research, interviews were conducted with fourteen academicians at various stages of their careers, ensuring a more holistic understanding of career success than would have been achievable by focusing on individual career stages alone Hammarfelt, 2019). Participants were recruited through personal contacts and referrals (i.e., friends of friends), with invitations to participate in the study sent via personal messages and emails. Individual interviews facilitated a more relatable and comfortable environment for participants, allowing them to grant permission for the interviews to take place. The number of interviewees could vary significantly, depending on the chosen research approach. When data collected through qualitative research shows no further changes in information or themes, that's referred to as theoretical saturation (Hennink & Kaiser, 2022). Researchers have found that saturation can occur from seven to thirty-nine interviews, while the most common saturation point is discovered between ten and twelve (Lu, Jian, Muhamad, & Hizam-Hanafiah, 2024). The point at which saturation is reached can

be influenced by factors such as the scope of the research question, the sensitivity of the issue being studied, and the skill of the researcher (Thomson, 2011).

The interviews were conducted following a semi-structured approach, which allows the conversation to flow naturally while still achieving the study's objectives. A semi-structured interview is designed to provide a framework for the research while permitting flexibility to adapt and explore new directions based on the interviewee's responses. Interviews are particularly useful when exploring both personal and societal matters, as the interviewer can focus on and examine areas in detail (Leira-Castiñeira, Domínguez-Almansa, & Martín-Ríos, 2023). Interviews were conducted online and in person, depending on when and how participants preferred to take part. Each participant was willingly recorded for approximately 60 to 90 minutes during their interviews to ensure no part of the conversation was missed. Conducting a lengthy interview for 80 minutes is valuable because this approach helps generate valuable qualitative information (Crawford, Chiles, & Elias, 2021). All of the meetings were recorded on audio to guarantee accuracy and completeness. Subsequently, the content from the recordings was transcribed verbatim into documents, ensuring all spoken details were accurately captured to facilitate proper understanding and use of the data (Nikander, 2008). By relying on both manual transcription and Microsoft Word's web-based tool, thorough analysis of the data was carried out. Numerous studies have shown that automated transcription services tend to make more errors than human transcribers. By combining both methods, however, a more reliable dataset is created, ensuring greater accuracy for analysis (Ahmed, Pereira, & Kimberly, 2023).

Once the interviews were transcribed, thematic analysis was employed to examine the data. Coding the data is an integral part of thematic analysis to identify significant themes. The process consists of reading the data, coding it, and organizing the codes into possible themes (Saunders et al., 2023). Once the themes are identified, they are reviewed and refined to ensure they accurately represent the data. Themes are then grouped into categories, and those that lack sufficient empirical support are excluded (Cernasev & Axon, 2023; Saunders et al., 2023). Through the thematic analysis, this study identified several key factors in measuring success in an academic career within Malaysian PHEIs. Objective career success is primarily determined by salary, promotions, publication output, and teaching performance. However, for subjective career success, factors such as quality of work, work-life balance, recognition, and respect are most significant. Each of these themes was closely examined and refined to ensure they accurately reflected the perspectives of the interviewed academicians.

3.3.3. Initial Items Development

3.3.3.1. Items Formulation

A combination of deductive and inductive methods was used to construct the initial item pool. For the deductive approach, existing literature on career success was reviewed and analyzed. This review focused on identifying key indicators and dimensions of career success (e.g., (Arthur et al., 2005; Dries, Pepermans, & Carlier, 2008)). Both important elements of objective and subjective career success were analyzed in defining how achievement in a career is measured (Heslin, 2005). Existing career success scales were examined (e.g., Greenhaus et al. (1990)) but their limitations in capturing the evolving nature of career success in the 21st century (e.g., focus on traditional hierarchical advancement) necessitated the development of a new measure.

As for the inductive approach, consultations were held with fourteen subject matter experts (SMEs), who are academicians, to gain insights into contemporary perspectives on career success. SMEs were asked to describe what constitutes career success in today's academic work environment, considering factors such as work-life integration, personal growth, and contribution to society. They were asked about any changing trends or challenges that might affect a person's career success. The items were designed to reflect different concepts of career success, categorized into objective and subjective dimensions.

The initial item pool consisted of 56 items, which included both objective and subjective items. Participants responded to each question using a 5-point Likert scale, with options ranging from "Strongly Disagree" to "Strongly

Agree." This format was chosen to provide participants the opportunity to express the degree of their agreement or disagreement with each statement. Some studies have shown that the 5-point scale offers greater reliability and a better understanding of respondents' opinions than 3-point scales do (Adelson & McCoach, 2010; Obon, Balila, & Balila, 2025). By using both positively and negatively phrased items, response bias was reduced. During analysis, the scores for negatively phrased items were reversed. The terminology used in the items was carefully selected to ensure inclusivity, avoiding any bias related to gender, race, or other forms of prejudice.

3.3.4. Content Validity

3.3.4.1. Expert Evaluation

Development and evaluation of measurement instruments largely depend on ensuring that they both have face validity and that the content is suitable for the intended constructs. Face validity refers to the extent to which a test appears effective in terms of its stated aims, while content validity evaluates the degree to which the test comprehensively represents the concepts it is designed to measure (Baharuddin et al., 2024; Marqvorsen et al., 2024). The content of the test was validated by consulting six Subject Matter Experts (SMEs) throughout item generation and content validity assessment. Yusoff (2019) agrees that a minimum of five to six experts is necessary for robust content validity assessment. The SMEs selected for content validity from Malaysian PHEIs included three senior lecturers in business administration, the dean of the Faculty of Health Sciences, and two senior lecturers in accountancy.

The SMEs were presented with a comprehensive definition of career success based on the literature. Subsequently, respondents were asked to evaluate the contribution of each item to career success, using a scale ranging from "Not at all" to "Highly." They were also required to discuss the clarity and conciseness of each item and categorize them into the career success dimensions of objective and subjective. The Item Content Validity Index (I-CVI) was used to quantify the level of agreement among SMEs regarding the essentiality of each item to the construct of career success. The formula for I-CVI is:

$$CVR = \frac{(Ne - N/2)}{(N/2)}$$

According to Polit and Beck (2006) and Polit, Beck, and Owen (2007), a minimum I-CVI value of 0.78 was used as the criterion for retaining an item. The SME feedback and I-CVI analysis led to the removal of seven items from the item pool of objective career success and five items of subjective career success due to low relevance or lack of clarity. The experts also recommended eliminating certain items due to redundancy. The experts were satisfied with the language of the questionnaire, as English is the official language in the higher education sector, and there was no need to rephrase or translate the items into Malay.

3.3.4.2. Pilot Testing

Before the administration of the instruments to the respondents of the chosen sample to collect the study's data, it is beneficial to conduct a pilot study. The collection of proxy data is a valuable strategy in research for enhancing sample size, identifying weaknesses in study design, and pre-testing study instruments (Soori, 2024). Pilots study was also important in the current context, especially for the career success construct, since it is a new instrument developed, and there is a scarcity of studies that utilized other construct instruments of the current study in Malaysian PHEIs. Another objective of the pilot study was to estimate the extent to which respondents were able to understand the language, wording, and context of the items in questionnaires (face validity). A section of comments and recommendations was also included for respondents' feedback. Data was collected from sixty PHEIs academicians in Malaysia. The respondents were approached using social contacts and snowball strategy. Collected data was analyzed

for item reliability (refer Table 1). Overall, the responses from the pilot study confirmed the face validity of the instrument, indicating that participants were able to understand and respond to the questionnaire items comfortably.

Table 1. Reliabilities of survey items based on pilot data.

Main constructs	Dimensions	Items	Cronbach's alpha
Career success		45	0.959
	Objective career success	29	0.953
	Theme: Salary	5	
	Promotion	5	
	Publication records	5	
	Teaching evaluation	5	
	Tenure	5	
	Academic leadership	4	
	Subjective career success	16	0.923
	Theme: Quality of work	3	
	Work- life balance	3	
	Recognition and respect	5	
	Meaning and impact	5	

4. DATA ANALYSIS AND RESULTS

Data analysis involved Exploratory Factor Analysis (EFA) using Principal Axis Factoring with Promax rotation to identify factor structures for both objective and subjective career success. Reliability was assessed using Cronbach's Alpha and Composite Reliability. Confirmatory analysis was evaluated using PLS-SEM, confirming the instrument's validity and robustness.

4.1. Scale Purification

4.1.1. Factor Analysis: Objective Career Success

Prior to conducting confirmatory factor analysis, an exploratory factor analysis (EFA) was carried out to explore the underlying factor structure of the newly developed scales measuring objective and subjective career success. Principal Axis Factoring (PAF) with Promax rotation was employed, as the factors were expected to be correlated.

As shown in Table 2, the Kaiser-Meyer-Olkin (KMO) value was 0.850, which is considered good according to Kaiser (1974). Bartlett's Test of Sphericity was significant ($\chi^2(406) = 6252.705$, $p < 0.001$), indicating that correlations between items were sufficiently large for factor analysis.

Using the eigenvalue-greater-than-one criterion and examining the Scree Plot, six factors were extracted. These six factors cumulatively accounted for 66.818% of the total variance, exceeding the recommended 50% threshold typically considered acceptable in social sciences research (Hair, Black, Babin, & Anderson, 2010). The pattern matrix showed that all items loaded significantly (> 0.50) onto their respective factors, with minimal cross-loadings (< 0.30). Table 3 presents the factor loadings after Promax rotation.

Table 2. KMO and Bartlett's test of sphericity of objective career success.

Kaiser-Meyer-Olkin measure		0.85
Bartlett's test of sphericity	Approx. chi-square	6252.705
	df	406
	Sig.	<.001

Table 3. Pattern matrix of factor loadings of objective career success.

Item	Tenure	Salary	Promotion	Publication records	Teaching evaluation	Academic leadership
T1	0.782					
T2	0.707					
T3	0.901					
T4	0.873					
T5	0.860					
S1		0.744				
S2		0.805				
S3		0.878				
S4		0.896				
S5		0.715				
P1			0.700			
P2			0.826			
P3			0.765			
P4			0.780			
P5			0.730			
PR1				0.640		
PR2				0.741		
PR3				0.682		
PR4				0.784		
PR5				0.782		
TE1					0.771	
TE2					0.622	
TE3					0.786	
TE4					0.784	
TE5					0.781	
AL1						0.678
AL2						0.674
AL3						0.713
AL4						0.587

In addition to the eigenvalue-greater-than-one criterion, the Scree Plot was examined to determine the appropriate number of factors to retain. As illustrated in Figure 2, the Scree Plot revealed a distinct inflection point ("elbow") at the sixth factor. This point marks where the curve begins to flatten, suggesting that the addition of further factors would contribute only minimal additional explanatory power. The sharp decline in eigenvalues from Factors 1 to 6, followed by a plateau, supports the extraction of six factors. This finding is consistent with the results from the eigenvalue analysis, where only six factors had eigenvalues greater than one. Therefore, both the Scree Plot and the Kaiser criterion collectively justify the retention of six factors for further analysis.

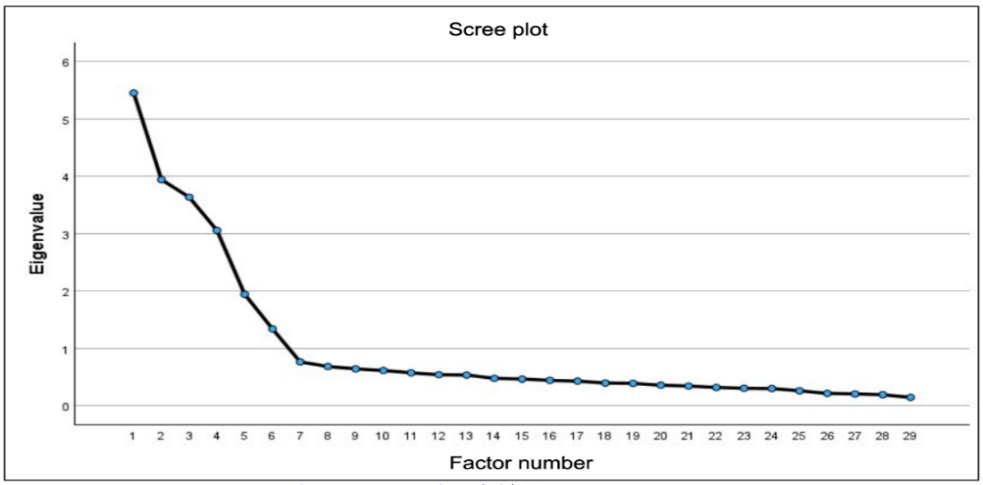

Figure 2. Scree plot of objective career success.

4.1.2. Factor Analysis: Subjective Career Success

Similarly, an exploratory factor analysis (EFA) was conducted for the subjective career success scale. Principal Axis Factoring (PAF) with Promax rotation was also employed, as the factors were expected to be correlated. As shown in Table 4, the Kaiser-Meyer-Olkin (KMO) measure was 0.902, indicating excellent sampling adequacy according to Kaiser (1974).

Bartlett's Test of Sphericity was significant ($\chi^2(120) = 2482.661$, $p < 0.001$), suggesting that the correlations among the items were sufficiently large to justify the use of factor analysis.

Table 4. KMO and bartlett's test of sphericity of subjective career success.

Kaiser-Meyer-Olkin Measure		**0.902**
Bartlett's test of sphericity	Approx. chi-square	2482.661
	df	120
	Sig.	<0.001

Based on the eigenvalue-greater-than-one rule and the examination of the Scree Plot, four factors were extracted. These four factors cumulatively explained 66.859% of the total variance, surpassing the recommended 50% threshold, thereby indicating a strong factor structure (Hair et al., 2010). The Pattern Matrix revealed that all items had significant loadings above 0.50 on their respective factors, with no major cross-loadings observed (cross-loadings > 0.30). Table 5 presents the factor loadings for subjective career success items after Promax rotation. Furthermore, the Scree Plot (Figure 3) displayed a clear inflection point ("elbow") at the fourth factor, where the slope of the eigenvalues noticeably flattened. This visual confirmation, along with the eigenvalue results, supports the decision to retain four factors for the subjective career success scale.

Table 5. Pattern matrix of factor loadings of subjective career success.

Item	Meaning and impact	Recognition and respect	Work-life balance	Quality of work
QOW1				0.607
QOW2				0.854
QOW3				0.623
WLB1			0.615	
WLB2			0.602	
WLB3			0.792	
RR1				
RR2				
RR3		0.739		
RR4		0.670		
RR5		0.612		
MI1	0.691			
MI2	0.651			
MI3	0.785			
MI4	0.684			
MI5	0.665			

4.1.3. Reliability Testing

Internal consistency reliability was evaluated by two criteria which are Cronbach alpha and composite reliability. Based on Table 6, The values for Cronbach's alpha in this research range from 0.750 to 0.913, with most items meeting the threshold of 0.7 recommended by Hair et al. (2010). There have been debates regarding the validity of Cronbach's alpha (α) as a measure of reliability. Conversely, Cronbach's alpha (α) score is considered to potentially underestimate genuine reliability (Hair, Hult, Ringle, & Sarstedt, 2022). As a result of this shortcoming, McNeish (2017) proposed an alternative reliability test, the Composite Reliability (CR) Index.

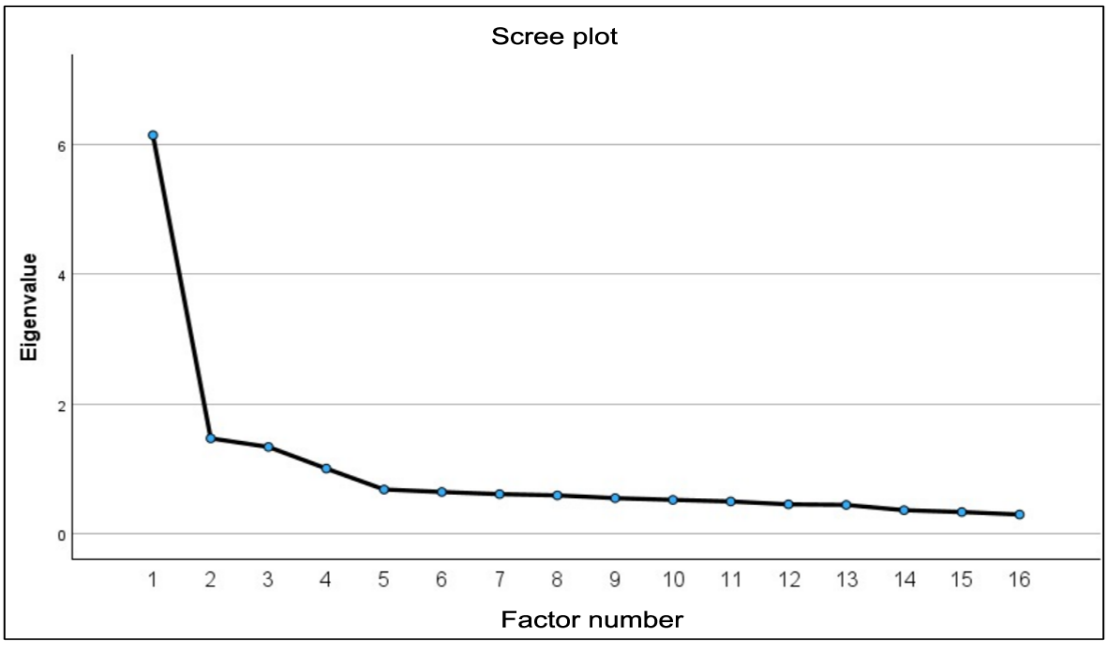

Figure 3. Scree plot of subjective career success.

Table 6. Reliability values for latent constructs.

Latent constructs	Cronbach's alpha	Composite reliability
Salary	0.903	0.927
Promotions	0.867	0.902
Publication record	0.813	0.877
Teaching evaluation	0.844	0.889
Tenure	0.913	0.928
Academic leadership	0.765	0.850
Quality of work	0.769	0.867
Work-life balance	0.750	0.857
Recognition and respect	0.810	0.868
Meaning and impact	0.825	0.877

Initially, internal consistency is used to measure the consistency of the results between test items. It assesses whether the proposed items used for measuring a construct produce similar scores (Hair et al., 2022). Chin (1998) Regards, CR as a much more robust measure of reliability than Cronbach's alpha because it can decide whether or not the specific indicators adequately represent the relevant constructs (Fornell & Larcker, 1981). Therefore, through examining CR, internal consistency reliability was evaluated in this study. Unlike Cronbach's alpha, CR does not assume an equal indicator loading of the construct, according to Hair et al. (2022). CR ranges from 0 to 1; the threshold value should not be lower than 0.60 (Henseler, Ringle, & Sinkovics, 2009), but the most acceptable value is 0.70 and above (Hair et al., 2022; Reinartz, Haenlein, & Henseler, 2009). At this point, the CR values for all the reflective constructs were in the range of 0.850 to 0.928, which exceeded the cutoff value of 0.70 (Hair et al., 2022), asserting the internal consistency reliability of the reflective measures.

4.2. Construct Validity

4.2.1. Model Selection and Comprehensive Analysis

The formative and reflective models are two distinct types of measurement models used to relate latent constructs to their indicators in research, especially in structural equation modeling (SEM) and related fields. For this study, a reflective measurement model was chosen to represent Career Success, where the latent construct causes the

indicators. Changes in the latent variable lead to changes in all the indicators, and the indicators reflect the underlying construct (Hanafiah, 2020).

4.2.2. Preliminary Data Analysis

This segment outlines the methods performed on the data from 413 survey responses before the primary analysis began. A comprehensive data validation procedure was conducted to ensure the accuracy and reliability of the survey results. The initial step in data validation involved identifying responses with more than 25% missing data; such responses were subsequently removed. Data straight-lining, where respondents answer all or most items with the same response, was also validated. Univariate outlier detection for multivariate outliers using the Mahalanobis D^2 method was performed. A cut-off value of 20.515, which flagged three potential outliers, was selected. Follow-up regression analysis indicated that these outliers had minimal influence on the stability of the model's parameters; therefore, they were retained in the dataset. Regarding normality, skewness of 3.725 and kurtosis of 50.423 suggest a non-normal distribution. However, since this study employed PLS-SEM (Partial Least Squares Structural Equation Modeling), a technique that does not heavily depend on data normality, the dataset was considered suitable for further analysis.

4.2.3. Descriptive Statistics

This excerpt highlights the two primary facets of career success: Objective Career Success and Subjective Career Success. The latter's mean score was lower than the Objective Career Success mean score, which was M=3.62. This supports the literature, which states that success framed through subjective lenses tends to prevail in academic environments, where self-fulfillment and meaning derived from work overshadow external benchmarks of success (Heslin, 2005; Ng et al., 2005). Respondents perceived their success in subjective terms with a mean score of M=3.93. As highlighted in the results section, the evaluations indicated that the respondents, rather, perceived career success as mostly defined by fulfillment, overall satisfaction within the job, a balanced life, and quality of work. Both Subjective Career Success and Objective Career Success displayed means of SD=0.83 and SD=0.92. These results indicate a modest scope of dispersion in relation to consensus across both dimensions. There was some degree of difference among participants in their perceptions of the overall success of their careers; however, the patterns associated with both types of success were consistent across the sample.

5. DISCUSSIONS AND CONCLUSIONS

The results of the exploratory factor analysis demonstrate quite clearly that Objective Career Success (OCS) and Subjective Career Success (SCS) are two distinct constructs of career success, and each encompasses different dimensions of perception and experiences of success in an academic career. Certain factors described as Objective Career Success include the quantifiable and externally corroborated achievements of an academic, such as teaching evaluation scores, salary, academic rank, promotion records, and publication output. These factors reflect the classic, externally defined metrics of career success, which are straightforward and abundantly available in the academic world. These reflect the notion of career success that has dominated the literature, which is based on purely objective, externally defined accomplishments and career milestones (Judge et al., 1995; Ng et al., 2005). On the other hand, subjective career success deals with perceptions and internal appraisals of one's career success. The subjective career success factors are those assessments concerning the level of fulfillment, such as work-life harmony, level of satisfaction with one's job, the significance of the job, and acknowledgment (Safin, Abdul Rahim, & Hanifah, 2024). Such subjective facets of appraisal can more adequately be described as internal to the individual's experiences and embody value systems which often do not fit within the structure of external gifts or accolades.

This transition highlights the growing attention to consideration of personal well-being and self-satisfaction in the career success literature, especially in academia where success is largely measured by intellectual engagement,

autonomy, and systemic contributions (Heslin, 2005). The factor analysis reveals a linkage between Objective Career Success and Subjective Career Success, which indicates that both dimensions are integrated in influencing an individual's holistic experience of career success. Each dimension reflects different facets of success that scholars attain during their professional careers. This aligns with theoretical models of career success, which have recognized numerous, interrelated, yet distinct drivers that influence outcomes (Ng et al., 2005).

Distinction of these two dimensions sharpens the precision of, and exhaustively measures, career success, thus more adequately portraying critical dimensions of an academic's professionally and personally developed life. The research adds to the discourse within career success literature emphasizing the range of diversification of outcomes by shifting the focus towards the integration of objective outcomes and subjective assessments of progress and achievements, what is termed an aperture view. It reinforces the assumption that career success is better defined with an equilibrium approach, utilizing both sides of the evaluative divide, which includes objective indicators such as rank advancement and salary increase as compared to subjective assessments such as engagement and satisfaction around the job.

5.1. Implications for Career Success Research

This study enhances the implications concerning career success by furnishing an integrative framework that spans both the conceptual and empirical aspects of career success. Notably, the Dual-Dimensional Career Success Instrument presents objective and subjective dimensions of career success, transferring the center of gravity of career outcomes beyond the reductive salary and promotion models. Including the performing outcomes and dimensions of job satisfaction and work-life balance, while being objective in nature, is formulated in a way that makes them easy to ignore. Despite being neglected within more traditional frameworks, this approach captures the traditional framework of career fulfillment (Heslin, 2005).

By examining the composite features of academic careers, which intertwine extrinsic rewards (academic rank and publications) with intrinsic rewards (intellectual payoff and autonomy), this study enriches the discussion on career success within the academic context. Because of the external burden of rigorous performance evaluation and publication outputs weighing heavily on academic careers, grasping the subjective and objective constructs of career success is vital in allowing institutions to better aid faculty and foster an environment that balances personal well-being and professional activities (Ng et al., 2005).

Furthermore, this study offers scholars a chance to examine the connection between subjective and objective components of success in other fields apart from academia and into the corporate world or healthcare. For example, the Dual-Dimensional Career Success Instrument can aid sectors where intrinsic rewards, like meaning and job satisfaction, dominate. It establishes a framework for perceiving career satisfaction across various professions, promoting cross-case analysis and inter-industry studies of how career success is conceptualized and achieved (Shockley et al., 2016).

5.2. Research Limitations

This study, like many others, has significant contributions; however, there are a number of limitations to be considered. One of the most telling issues appears to be the sample set, which exclusively draws from Private Higher Education Institutions (PHEIs) in Malaysia. This is of great concern as the experiences of faculty members working in public universities or in non-academic roles would starkly contrast to those working in private academic institutions, especially regarding professional mobility and support mechanisms (McKay & Robson, 2023). Further research may target the applicability of the Dual-Dimensional Career Success Instrument in varying academic settings or even in non-academic professions as a means to assess its generalizability. Another issue seems to be the measurement model used in the study. Although the instrument reported high reliability and validity, the measure based on self-reports of the subjects introduces unavoidable response biases (Bauhoff, 2024). Respondents may

exaggerate their job satisfaction or career satisfaction for idiosyncratic social, self-enhancing, or impression management reasons. Future studies may address this issue with the use of more objective measures of performance, such as supervisor ratings, institutional data, or through multi-source feedback to validate subjective measures. Even though the study captures the key objective and subjective dimensions of career success, there are likely additional factors that contribute to perceived success.

For instance, the contributions of personal objectives, as well as organizational culture or career adaptability, were not thoroughly analyzed. Their model could be further refined by incorporating these additional dimensions to provide a fuller explanation of the motivations underlying career success (Briscoe et al., 2021). The instrument's cultural applicability was not fully explored. The objectives of any given profession might differ radically from culture to culture, as might the relative importance assigned to evaluative components and to a priori impressions. Therefore, to verify its cross-cultural validity, additional research on the instrument's development in non-Western contexts or in other disciplines is required (Guan et al., 2013).

5.3. Practical Implications

The Dual-Dimensional Career Success Instrument is particularly relevant to career guidance professionals, human resource specialists, and leaders of educational institutions. In the case of career counsellors, this particular instrument provides a more balanced formulation of evaluating a client's career success owing to its inclusion of objective metrics like promotion and salary and qualitative metrics like satisfaction and work-life harmony. Counsellors, therefore, can assist in personal satisfaction instead of professional success, enabling more effective career decision-making. For human resource practitioners in educational institutions, the instrument can serve to assess the career development ambitions of a faculty member.

Human resource departments understand gaps in faculty support through analyzing indicators of career success, both objective and subjective. For example, faculty members reporting low subjective career success may feel dissatisfied despite possessing strongly positive objective career indicators like promotion to higher ranks and salary increases (Sanchez-García & Suárez-Ortega, 2021). Appreciating these factors allows human resource departments to devise tailored faculty development and retention strategies that enhance career satisfaction and work-life balance. In corporate settings, this instrument may be employed to improve employee engagement and satisfaction because it presents a comprehensive view of career success.

Using this instrument allows companies to assess how employees view career milestones in relation to self-contentment and satisfaction. This information can be used to develop professional growth, management training, and incentivization programs that increase retention and dedication to the organization. For researchers, this allows new avenues of study on career success in multiple areas of academia, comparing results across industries. This tool also captures measurable and non-measurable success, which offers insight into the varying professional environments, cultures, and structures that influence careers from a multidisciplinary perspective.

6. CONCLUDING REMARKS

This research focused on developing the Dual-Dimensional Career Success Instrument (DDCS), which measures the career success of academic staff in Private Higher Education Institutions (PHEIs). The model distinguishes between two interrelated components: Objective Career Success (OCS), which includes measurable achievements such as salary, academic rank, promotion, and publication volume; and Subjective Career Success (SCS), which encompasses personal evaluations such as job satisfaction, recognition, work-life balance, and the execution of meaningful tasks. Both dimensions demonstrated a structured pattern, confirmed by Exploratory Factor Analysis (EFA). The scales exhibited strong internal consistency, with Cronbach's α values exceeding 0.90. These results affirm that DDCS is a reliable multivariate instrument capable of capturing the complexities of academic career success. Integrating objective and subjective measures is essential for a comprehensive assessment of academic careers. While externally

measured milestones are significant, subjective interpretation often has a greater influence on overall career satisfaction. Future research should explore further validation of the instrument across diverse academic settings and investigate the impact of subjective perceptions on career development and satisfaction.

- Cross-cultural validation, particularly comparing Western and Eastern academic environments.
- Adaptation in non-academic sectors, such as corporate or healthcare contexts, where intrinsic success factors are also significant.
- Longitudinal studies to examine how the importance of objective and subjective success evolves over time.
- Interplay between OCS and SCS, to understand whether objective gains influence subjective fulfillment and vice versa.

The Dual-Dimensional Career Success Instrument marks a significant advancement in career development research by capturing both external accomplishments and internal satisfaction. Its validated structure and dual-focus design offer a robust platform for evaluating and supporting academic careers in a more comprehensive and meaningful way. This instrument has the potential to guide more inclusive, targeted, and effective career strategies across sectors and settings.

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