

# **Clustering Career Development of HR Graduates: Insights through Locke's Value Theory**

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## **Abstract**

**This research uses the framework of Locke's Value Theory to investigate the career development trajectories of HR Management graduates from the University of Mindanao over the past five years. Utilizing Fuzzy C-Means Clustering, five distinct career development clusters were identified, showing variations in job satisfaction, employment status, skill acquisition, and professional engagement. The sample of 16 graduates was surveyed with a standardized tracer study questionnaire administered through Google Forms, and the data were bootstrapped for analysis. The results suggest that the value alignment between people and their careers is essential to ensuring satisfaction and professional development. Recommendations aim to upgrade the training programs and support professional organization memberships with aligned educational offerings that cater to industry requirements, thus helping fulfill UNSDG goals for Quality Education and Decent Work and Economic Growth.**

**Keywords: Career Development, HR Management Graduates, Locke's Value Theory, Fuzzy C-Means Clustering**

## **Introduction**

It is critical for graduates in Human Resource Management in the emerging context of organizational management and workplace dynamics (Khan, 2024). The employment of human resource management workers is projected to grow by 5% from 2022 to 2032 (Staff, 2020), adding around 160,000 new jobs annually, as reported (Remo, 2024). This growth trajectory puts a premium on understanding how the current batch of HR graduates develop their careers and align their professional values with the organization's needs (Lieff, 2009).

The last five years have seen the most rapid shifts in the workplace (Ola, 2022), especially in the post-pandemic era. In 2023, many companies have altered their HR practice significantly since 2020, bringing forth new challenges and opportunities for the HR workforce (Stone & Deadrick, 2015). This has also added more emphasis to knowing how HR graduates' value systems and career development patterns need to tackle these shifting challenges of workplaces (Vinkenburg & Weber, 2012).

Early career development has been critical in long-term professional success (Busse, 2021). According to SHRM research, 68% of HR professionals with apparent value alignments in their first five



years of practice have more job satisfaction and career progress rates (Employees, n.d.). This aligns with Locke's Value Theory regarding the importance of personal values in determining the type of professional goals achieved (Locke & Latham, 2015).

Today, the financial implications of proper management on HR are increasingly self-evident. Indeed, according to the recent Deloitte report named Human Capital Trends, enterprises with strong HR leadership see 3.5-fold revenue growth and 2.1-fold higher than respective peers' profit margins (Deloitte, 2024). Thus, understanding HR's career development patterns will finally lead them to hold influential positions that, when strongly realized by HR, influence enormous organizational performance (Anwar & Abdullah, 2021).

The infusion of technology in human resource practices has given new dimensions to career development. According to LinkedIn's 2023 Workplace Learning Report, HR professionals have had to build new technical competencies to 59% over the past five years, requiring awareness of how value systems can adapt to technological advancements (LinkedIn, 2023). Therefore, this evolution of technology brings complexity to the applications of Locke's Value Theory in modern HR career developments (Locke & Latham, 2015).

Recent graduates have challenges because of the mismatch between the values needed in organizations and their educational value systems. A recent 2023 Gallup study showed that only 34% of HR professionals consider themselves fully prepared for graduation (Gallup, 2024). It is pertinent to understand early career development trends (McMahon, 2014). This gap between training received in academic settings versus the needs of practice mandates that one understands how value systems change over the transition from education to practice (Grant & Hertzberg, 2015).

The significance of understanding the career development of HR graduates is understood from the retention statistics. The Association for Talent Development has documented that organizations lose around 25% of their HR professionals within the first three years of employment (ATD, 2017). It reflects the possibility of a mismatch between personal values and professional experiences, thereby requiring a study of career development through the prism of Locke's Value Theory (Locke & Latham, 2013).

Diversity and inclusion initiatives also form a core of HR practice. According to Forbes, 76% of job seekers consider workplace diversity an essential factor in career decisions (Orozco, 2021). How HR graduates develop their careers while integrating these values becomes critical for educational institutions and organizations. It will enable them to create more effective HR education programs and organizational development strategies (Locke, 2007).

Investment in HR professional development remains significant, with organizations investing an average of \$1,308 per employee on learning and development annually, according to the Association for Talent Development. This investment makes it even more important to understand how HR graduates develop their careers and align their values with organizational objectives, making applying Locke's Value Theory particularly relevant in optimizing such investments.

Therefore, it is critical to understand the career development patterns of graduates of HR Management through the lens of Locke's Value Theory. This understanding informs better educational practices, improves organizational development strategies, and enhances the effectiveness of HR professionals in dealing with contemporary workplace challenges.

This study endorses UNSDG 4: Quality Education and UNSDG 8: Decent Work and Economic Growth. By investigating the trajectories of HRM graduates for a professional career, this research gives relevance to educational programs to align more closely with industry demands for enhanced employability and career satisfaction. Meaningful employment opportunities are developed through lifelong learning, professional development, and skill-building. It also supports economic growth by covering employment gaps and promoting value-congruent workplaces to support job satisfaction, productivity, and long-term career sustainability in advancing equitable and inclusive economic development.

This study aims to delve into the career development pattern of Human Resource (HR) Management graduates in the context of Locke's Value Theory by identifying distinct clusters of graduates based on their career experiences and value alignment. Utilizing a standardized university tracer study questionnaire administered through Google Forms, the present study aims to understand the influence of values such as organizational contribution, decision-making, collaboration, research involvement, and entrepreneurial engagement of HR graduates on their professional trajectories. Through Fuzzy C-Means Clustering, the study aims to classify graduates into meaningful groups, providing insights into aligning their career paths with their values and implications for academic institutions and employers to support their career satisfaction and growth better.

## **Theoretical Framework**

Locke's Value Theory provides a strong basis for understanding how personal and professional values shape the career development trajectories of HR Management graduates (Lan et al., 2013). The values of individuals act as fundamental determinants of their goals, behaviors, and final satisfaction in the professional field (Judge et al., 2005). In the case of graduates in HR, these values appear as both conscious and unconscious forces that influence career choices, professional engagement, and development patterns (Locke et al., 1970).

This theory develops on Locke's assumption that values are hierarchical and shape goal-setting behaviors (Locke, 1978). For graduates in HR, this hierarchy is specifically crucial since it will be in the early stages of their careers when professional values meet the demands of organizations and personal aspirations (Locke & Latham, 2006). The theory says that career satisfaction and success are best when the value hierarchy of an individual matches the activities and accomplishments that occur during their professional life (Wallin, 2002), particularly critical in HR, where individuals must balance their personal value systems with their role in organizational human capital strategies (Gimmon&Levie, 2009).

In this context, the self-conceptual aspect of value formation describes how HR graduates perceive their professional identity and ability (Sunley & Locke, 2010). Through this orientation, they

will approach career development opportunities and the readiness to participate in different professional activities. Another core theoretical construct represents the standards graduates set for themselves and the drive to move toward career goals (Ismail & Lu, 2014). Orientations are dynamic, however, and change with time as graduates experience and are challenged in various professional contexts (Holtschlag et al., 2019).

The theory also emphasizes the role of value congruence in professional development (Ostroff et al., 2005). For HR graduates, this manifests in how well their values align with their chosen career activities, whether in consultation, decision-making (Muindi, 2011), team participation (Lunenburg, 2011), research engagement, or entrepreneurial ventures (Locke & Baum, 2014). Locke's theory suggests that more substantial value congruence leads to higher engagement and satisfaction in professional activities, influencing career trajectory and development patterns (Moore et al., 2007).

Locke's value complexity explains the multidimensional nature of career development in HR (Carter & Harris, 2010). This part of the theory clarifies how unique combinations of values can generate different kinds of career development patterns, and it is supported by graduate clustering based on their professional activities and orientations (Laud & Johnson, 2012). According to the theory, these patterns occur because of the interaction between individual value systems, professional opportunities, and constraints experienced at early career stages (Bandura & Locke, 2003).

Additionally, the framework draws upon Locke's view of how values influence goal-setting and achievement behavior (Locke & Latham, 2015). This is highly relevant to HR graduates beginning their professional identities and career trajectories. People set goals and engage in professional activities that fit into their value systems, and hence lead to differentiated patterns of career development and professional engagement (Wang et al., 2020).

Applying Locke's Value Theory in the career development of HR graduates also considers the dynamic nature of value formation and evolution (Foss & Lindenberg, 2013). As recent graduates move into professional roles, their value systems are refined and adjusted based on real-world experiences and organizational contexts (Williamson & Mundy, 2010). This theoretical perspective explains why various career development patterns are observed in the clustering analysis, suggesting that different value configurations lead to distinct professional trajectories and engagement patterns (Valette&Culié, 2015).

This theoretical framework, therefore, provides a holistic lens for understanding how personal values shape professional development among HR graduates. It offers explanatory power for the observed clusters of career development patterns while acknowledging the complex interplay between individual values, professional orientations, and career-related behaviors. Thus, the framework suggests that successful career development in HR requires technical competence and alignment between personal values and professional activities, which would lead to sustainable and satisfying career trajectories.

## **Method**

### *Research Design*

The quantitative study adopted cluster analysis to determine the trends in HRM graduates. It explored natural groupings of career development patterns among HRM professionals, who might then identify with orientations that these patterns take them into. Such a research design would correspond with understanding career paths and their relation to an individual's career orientation using a theoretical model provided by Locke's Value Theory. The model emphasizes that individuals' values, in turn, impact how one sets up their career goals or achievements.

### *Sampling and Participants*

Purposive sampling was employed, targeting graduates from a single university's HR Management program over the last five years. Sixteen volunteers were involved in the study, comprising recent alumni who had entered the professional world. The relatively small sample size led to applying bootstrapping techniques to improve the statistical reliability of the analysis. The resampling method helped generate more robust estimates of cluster parameters and improved the stability of the clustering solution.

### *Instrumentation*

It was administrated on Google Forms using the same standard tracer study questionnaire the university used. It collected data at all the above-mentioned points of professional development or steps through his career. This instrument assessed the different dimensions of consulting roles, decision-making participation, team involvement, engagement in research, and entrepreneurial activities; thus, Professional Ego Orientation measures and Success Orientation measures; this questionnaire was standardized from all the cohorts of university graduates.

### *Data Collection Procedure*

The questionnaire was sent to HR management graduates who had graduated within the last five years. The digital format via Google Forms made it easy to collect data and record responses in a standardized manner. The participants could fill out the questionnaire at their convenience, thereby providing thoughtful and accurate responses to the measured professional development indicators.

### *Data Analysis*

The analytical approach focuses on the fuzzy C-Means (FCM) clustering method, a soft clustering with degree membership. Given the career development complexities of professional attributes, this method was especially required and, therefore, may be expected to cluster partially overlapping in some way. Multiple criteria of the five-cluster solutions include model fit, such as  $R^2$ , AIC, BIC, and silhouette scores. These clusters have been verified with various cluster validation metrics to ascertain the robustness of the clustering solution-the Calinski-Harabasz index, Dunn index, and entropy measures.

The study followed standard research ethics protocols, with participants volunteering to participate in the tracer study. Google Forms were used for data collection, ensuring participant privacy

was maintained, and access was convenient. All responses were kept confidential; data was analyzed and reported in aggregate to protect individual identities.

### *Limitations*

Significant limitations of the study include a relatively small sample size at initiation (n=16), although bootstrapping techniques partially offset this. Using the standardized tracer study questionnaire ensured consistency but potentially limited the scope of the investigation into some specific features of Locke's Value Theory. It is also limited in generalizability across a more general population of HR professionals by its focus on a single institution.

This methodology allowed for a systematic examination of the career development patterns of HR graduates while keeping scientific rigor intact by ensuring proper statistical techniques and caution in consideration of research design elements. The standardized instrumentation, digital data collection, and sophisticated clustering analysis provided a robust foundation for examining the professional development patterns and their relationship with Locke's Value Theory.

### **Result and Discussions**

This research analyzes the career development of HR graduates in the last five years, including the reasons for job changes, industries they work in, and methods for securing first jobs. Applying the job satisfaction value theory propounded by Locke analyzes how well graduates are matched with personal, intrinsic, and extrinsic values related to job characteristics for high levels of job satisfaction and eventual career development. Using cluster analysis to recognize different groups from Fuzzy C-Means identifies what is diverse and significant to HR graduates.

Table 1 captures the general picture of the career development of graduates in Human Resource (HR) Management at the University of Mindanao (UM) based on Locke's Value Theory, which gives much importance to values in realizing career satisfaction. A substantial percentage of graduates (30%) conducted short training or seminars following graduation, showing an attitude towards continuous learning and upgrading skills, essential values in career development. This includes a further 20% in graduate school, certificates, or both, clearly indicating professional growth and personal development values. 10% of respondents did not enroll in further education, perhaps due to other career value priorities or feelings of satisfaction about the current skills and qualifications.

**Table 1. General Characteristics of Career Development**

<b>Training pursued after graduating from UM</b>	<b><i>f</i></b>	<b>Percentage</b>
Short trainings/ Seminars	3	30%
Graduate school, Certificate courses, short trainings/ Seminars	2	20%
Certificate courses	2	20%
Graduate school	2	20%
None so far	1	10%
<b>Member of a professional organization</b>		
No	10	100%



<b>Presently employed</b>		
Yes	10	100%
<b>Employment status</b>		
Regular	6	60%
Contractual	4	40%
<b>Place of work</b>		
Local	10	100%
<b>Sector of employment</b>		
Private	9	90%
Government	1	10%
<b>First job after college</b>		
No	7	70%
Yes	3	30%
<b>Current industry of employment</b>		
Business/ Finance/ Marketing	4	33%
Service	3	25%
Construction	2	17%
Health	1	8%
Academe/ Education	1	8%
Hospitality/ Tourism	1	8%
<b>Monthly salary</b>		
PhP 15,000 - 24,999	6	50%
PhP 5,000 - 14,999	3	25%
PhP 25,000 - 34,999	2	17%
PhP 45,000 - 54,999	1	8%
<b>Satisfaction in current job</b>		
Yes	10	100%

None of the respondents had a professional organization membership, which indicates limited awareness or perceived value of professional networking opportunities. However, 100% of all graduates are now employed, 60% of which are used on permanent terms and 40% on contractual terms, which shows career stability in the majority and alignment with values related to job security. All respondents are employed locally, predominantly in the private sector (90%), with a small proportion (10%) in government roles, highlighting sector-specific preferences or opportunities.

Interestingly, 70% of respondents did not secure their first job immediately after graduation, while 30% transitioned directly into their first roles. This delay in obtaining employment reflects personal career values' alignment—or misalignment—with market opportunities. The respondents are now employed in multiple industries: business, finance, and marketing (33%), service (25%), construction, health, academia, and hospitality. Hence, the different industries mirror other diversified individual value priorities—creativity and problem-solving to stability and interpersonal engagement.

Regarding compensation, 50% of the graduates receive PhP 15,000–24,999 a month, while the others are spread across lower and higher salary brackets. These levels reflect the industry, role, or level of experience of these individuals as well as the value placed on monetary compensation or career advancement; 100% of respondents expressed satisfaction in their current jobs, thus strongly supporting Locke's Value Theory. This theory asserts that people get satisfied when the values a person holds are aligned with the work environment. In this case, it may imply that the graduates have secured roles that cater to value-driven aspirations through stability, learning opportunities, or alignment with personal and professional goals.

From Table 2, several career stages of HR Management graduates of the University of Mindanao were obtained and evaluated through the context of Locke's Value Theory, which asserts the alignment of individual value with workplace experience for the successful realization of a career. The first job tenure differs considerably, with 40 percent of respondents spending more than two years there, reflecting a long-term commitment toward their first roles. Still, 30% stayed there for just one to six months and 10% less than that period, indicating those have mismatches concerning values and the characteristics of the job that involved its scope, workplace culture, or opportunities for advancement.

**Table 2. Career Development Stages**

<b>Length of stay in your first job</b>	<i>f</i>	<b>percentage</b>
Less than a month	1	10%
1 to 6 months	3	30%
1.1 to 2 years	2	20%
more than 2 years	4	40%
<b>Current job related to the course/ program in college</b>		
Yes	8	67%
No	4	33%
<b>Length of time to first job</b>		
0 to 6 months	10	83%
1.1 to 2 years	1	8%
more than 2 years	1	8%
<b>Number of individuals supervised</b>		
None	3	25%
less than 5	1	8%
5 to 10	3	25%
11 to 20	1	8%
more than 20	4	33%

The relationship between the graduates' current jobs and their degree programs indicates that 67% are working in fields related to their HR Management background, which shows a strong connection between academic preparation and career outcomes. The alignment probably fosters a sense



of fulfillment and competency for these individuals. Consistent with Locke's theory, 33% of those working in unrelated fields may reflect a shift in personal career values or limited opportunities within their specialization.

The majority (83%) secured their first job within six months of graduation, demonstrating a relatively smooth transition into the workforce. This prompt employment reflects the graduates' preparedness and alignment of their skills with labor market needs. However, 17% took longer, with 8% waiting over two years, potentially indicating challenges in finding opportunities that matched their values or career aspirations.

Regarding the supervisory role, a significant percentage of respondents (33%) supervise more than 20 individuals, and 25% supervise teams between 5 to 10 people, presenting that people achieve supervisory roles in their early careers. These jobs probably align with intrinsic values such as responsibility, influence, and making a difference in organizational success. At the same time, 25% have no supervisory responsibilities; this might be either in terms of the job that they currently do or as a mismatch with what they aspire to be.

The data highlights diverse career paths for graduates, where many have aligned their values with their career experiences through related fields, rapid employment, and leadership positions. However, for some, misalignments may be noted in shorter job tenures or employment in unrelated fields, indicating opportunities for further career guidance or support to improve alignment and satisfaction.

Table 3 uses this perspective on HR graduates for the past five years, their jobs, and the industry they serve, including why they changed and where they first got a job.

**Table 3. Job Characteristics of HR Graduates**

<b>Reasons for Changing Job</b>	<i>f</i>	<b>Percentage</b>
Salaries and benefits Related to special skill, Career challenge	1	8%
Salaries and benefits, Career challenge	7	54%
Career challenge	1	8%
Salaries and benefits	3	23%
Character and attitude within the workplace	1	8%
<b>Current Industry of Employment</b>		
Business/Finance/Marketing	5	38%
Service	3	23%
Health	1	8%
Construction	2	15%
Academe/Education	1	8%
Hospitality/Tourism	1	8%
<b>Finding Their First Job</b>		

As a walk-in applicant	4	31%
Recommended by someone	4	31%
Information from friends	2	15%
Response to an advertisement	2	15%
Job Posting online platform	1	8%

The top reasons that influence graduates to change jobs are salary and benefits, career challenges, and matching their unique skills. These represent the intrinsic and extrinsic values that people want from their careers. For instance, salaries and benefits are extrinsic values since they offer financial security and stability, which are important factors for job satisfaction. On the other hand, career challenges related to special skills are intrinsic values that fulfill the need for personal growth, skill utilization, and professional development. The frequent mention of these reasons indicates that HR graduates are seeking roles that offer financial rewards and opportunities for career advancement and skill application.

HR graduates are employed in Business/Finance/Marketing, Service, Health, Construction, academia/Education, and Hospitality/Tourism. The diversity of the industry suggests that what HR graduates value in a job differs according to the industry. For instance, those in Business/Finance/Marketing value the dynamic and competitive nature of the industry, which coincides with their need for career challenges and growth. Graduates in the service and health sectors want a stable job that provides an opportunity to contribute to society, keeping with their intrinsic values of service and contribution to society.

The ways HR graduates find their first jobs include being walk-in applicants, recommendations from someone, information from friends, responses to advertisements, and job postings on online platforms. These approaches emphasize the role of networking and proactivity in job hunting toward career development among graduates majoring in HR. Advice from friends or family members about jobs would depict the need for connecting through social networks and relationships as the core worth of forming ties or bonding. Applying walk-ins and replies to advertisements again points out the students being proactive and grabbing chances. It expresses an internal motivation for the effort or the urge to keep achieving.

Locke's Value Theory has placed importance on value alignment in job satisfaction. Reasons for changing jobs, the industries of employment, and the methods of finding jobs among HR graduates indicate a pursuit of value alignment. They seek employment opportunities that reward them with financial or extrinsic values and allow them personal and professional growth or intrinsic values. The diversity in industries and job search methods further underscores HR graduates' varied values and motivations, highlighting the need for a personalized approach to career development.

Applying Locke's Value Theory to the career development of HR graduates over the past five years reveals a strong emphasis on aligning job characteristics with personal values. Graduates prioritize salaries and benefits, career challenges, and skill utilization, and they have used various methods to look for jobs that meet their criteria. This alignment has been crucial in achieving job satisfaction and successful career development.

The main reasons for changing jobs among HR graduates are salaries and benefits, career challenges, and alignment with special skills. These reasons reflect the intrinsic and extrinsic values that individuals seek in their careers. For instance, salaries and benefits are extrinsic values that provide financial security and stability, which a person needs to satisfy all their needs. On the other hand, career challenges related to special skills are intrinsic values that fulfill the need for personal growth, skill utilization, and professional development. The frequent mention of these reasons indicates that HR graduates are seeking roles that offer financial rewards and opportunities for career advancement and skill application.

HR graduates are employed in the Business/Finance/Marketing, Service, Health, Construction, academia/Education, and Hospitality/Tourism industries. The diversity in the sectors suggests that HR graduates value different aspects of their jobs based on the industry. For instance, those working in business/finance/marketing might be more interested in the industry's dynamic nature, which will reflect their need for career challenges and growth. Graduates in the Service and Health sectors may value job stability and the chances of contributing to the environment through positive impacts, which are intrinsic values of service and contribution to the environment.

How HR graduates found their first jobs includes walk-in applicants, recommendations from some, information from friends, responses to advertised opportunities, and job postings online. These practices, therefore, underscore the relevance of networking and proactive job-seeking in the career development of HR graduates. Recommendations and information from friends highlight the importance of social relationships and networks in finding employment, which aligns with the intrinsic value of building relationships and community. Walk-in applications and responses to advertisements reveal that the graduates are proactive in their approach and take the initiative, indicating that they are intrinsically motivated and driven.

Locke's Value Theory focuses on the significance of value congruence in job satisfaction. The reasons for changing jobs, industries of employment, and ways of finding jobs among graduates point to value congruence. Graduates seek jobs that provide extrinsic values (extrinsic rewards) and intrinsic values of personal or professional growth. The diversity in industries and the methods of job search further underlines the differences in values and motivations of the graduates, which calls for a personalized approach to career development.

Applying Locke's Value Theory in the career development of HR graduates for the last five years shows that aligning job characteristics with personal values is strongly emphasized. Salaries and benefits, career challenges, and skill utilization are the top priorities for graduates, and various methods are used to find jobs that meet these criteria. Alignment is essential for achieving job satisfaction and successful career development.

The Fuzzy C-Means clustering analysis in Table 4 gives an overall view of the clustering results for a dataset of HR graduates. This analysis clarifies the various groups within the dataset based on

factors such as job satisfaction, decision-making, and engagement in research and entrepreneurial activities.

The model summary shows that the dataset was divided into five clusters with 190 data points. The  $R^2$  value of 0.781 implies that 78.1% of the variance in the data is explained by the clustering model, which means a good fit. The AIC and BIC values are 412.370 and 526.020, respectively, which are measures of the model's goodness of fit, with lower values indicating a better fit. The silhouette score of 0.540 shows that the clusters have a moderate level of cohesion and separation.

**Table 4. Model Summary: Fuzzy C-Means Clustering**

Clusters	N	R <sup>2</sup>	AIC	BIC	Silhouette
5	190	0.781	412.370	526.020	0.540

In Table 5 the clusters' sizes differ, with Cluster 3 having the highest size, comprising 52 members, while Cluster 4 is the smallest, with 22 members. The explained proportion within-cluster heterogeneity reflects how well each cluster explains the variance within itself. Cluster 1 and Cluster 5 show the highest explained proportions, 0.365 and 0.363 respectively, and Cluster 4 shows the lowest, with a value of 0.000, meaning there is no variance in this cluster. The sum of squares gives the total variance within a cluster, and lower values indicate more tightly packed clusters. Cluster 4 is within the sum of squares of 0.000, showing no variance in this cluster. The silhouette scores tell how much an object is like its own cluster compared to other clusters; Cluster 4 has a silhouette score of 1.000, indicating it is very well-clustered, and Cluster 5 has the lowest score at 0.247.

**Table 5. Cluster Information**

Cluster	1	2	3	4	5
Size	43	31	52	22	42
Explained proportion within-cluster heterogeneity	0.365	0.090	0.182	0.000	0.363
Within sum of squares	124.922	30.836	62.424	0.000	124.193
Silhouette score	0.423	0.658	0.595	1.000	0.247
Center Consulted for inputs for the betterment of current organization	0.913	0.112	0.823	-2.188	0.892
Center Making decisions that are crucial to solving problems at work	-0.019	-0.062	0.694	-2.368	0.721
Center Participate in teams, or any multidisciplinary projects or activities	-0.591	0.893	0.937	-0.567	0.956
Center Engaged in research projects as part of present work	-1.445	-1.461	0.988	0.106	0.126
Center Engaged in entrepreneurial ventures	-0.881	-0.883	1.171	0.467	0.421
Center PEO	-2.048	1.121	-0.468	0.334	1.090

Cluster	1	2	3	4	5
Center SO	-1.412	0.438	0.116	1.774	-0.108

*Note. The Between Sum of Squares of the 5 cluster model is 1223.92*

*Note. The Total Sum of Squares of the 5 cluster model is 1566.29*

The model performance metrics in Table 6 give supplementary information about the quality of the clustering. The maximum diameter of 3.465 refers to the most significant distance between any two points in the same cluster, and the minimum separation of 2.001 refers to the smallest distance between points in different clusters. Pearson's  $\gamma$  of 0.697 measures the correlation between distances in the original space and those in the clustered space. The Dunn index 0.578 measures cluster compactness and separation, where higher values indicate better clustering. The entropy value of 1.570 represents the amount of mess or randomness within the cluster, and the Calinski-Harabasz index of 132.469 measures the ratio of the total between-cluster dispersion to that of within-cluster dispersion, implying that higher values represent the better definition of clusters.

**Table 6. Model Performance Metrics**

	Value
<b>Maximum diameter</b>	3.465
<b>Minimum separation</b>	2.001
<b>Pearson's <math>\gamma</math></b>	0.697
<b>Dunn index</b>	0.578
<b>Entropy</b>	1.570
<b>Calinski-Harabasz index</b>	132.469

*Note. All metrics are based on the Euclidean distance.*

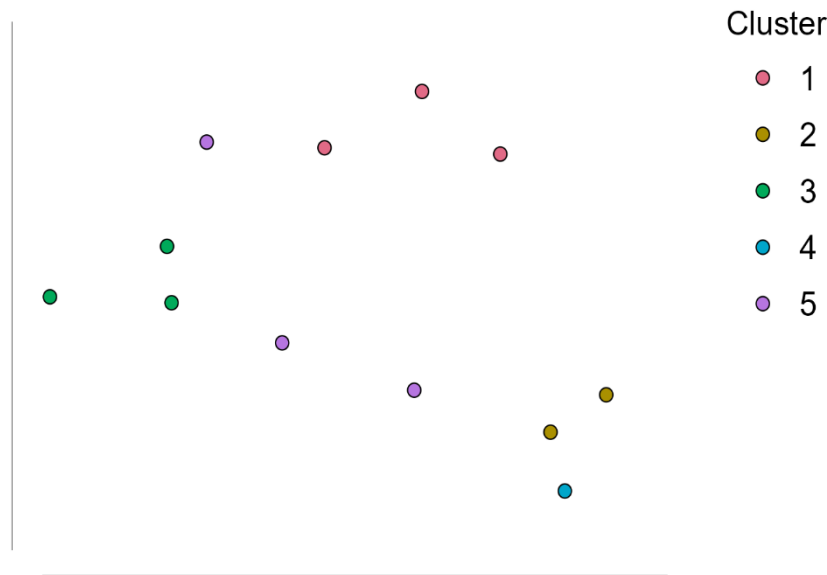
Displayed in Table 7 is the cluster centers are averages for all features of each cluster. For instance, Cluster 1 has a high center value for *Consulted for inputs for the betterment of the current organization* (0.913) and a low value for *Engaged in research projects as part of present work* (-1.445). Cluster 2 has a high value for *Engaging in entrepreneurial ventures* (1.169) and a low value for *participating in teams or multidisciplinary projects or activities* (-1.546). Cluster 3 shows good engagement in decision-making and participation in teams, while Cluster 4, where values of consulting and decision-making have negative values but are moderately engaged in research; and Cluster 5 presents moderate involvement in all activities but with positive values for PEO and SO, and thus being well aligned with educational outcomes and results.

**Table 7. Cluster Means**

	<b>Consulted for inputs for the betterment current organization</b>	<b>Making decisions that are crucial to solving problems at work</b>	<b>Participate in teams, or any multidisciplinary projects or activities</b>	<b>Engaged in research projects as part of present work</b>	<b>Engaged in entrepreneurial ventures</b>	<b>Program Educational Objectives</b>	<b>Student Outcome</b>
<b>Cluster 1</b>	0.446	-0.891	-0.465	0.211	-1.075	-1.097	-1.090
<b>Cluster 2</b>	-0.218	-0.891	-1.546	-0.427	1.169	0.275	0.583
<b>Cluster 3</b>	0.505	1.358	1.167	0.500	-0.511	0.562	0.022
<b>Cluster 4</b>	-2.223	0.485	0.114	-2.410	0.337	-0.566	1.807
<b>Cluster 5</b>	0.244	-0.366	0.114	0.742	0.693	0.521	-0.289

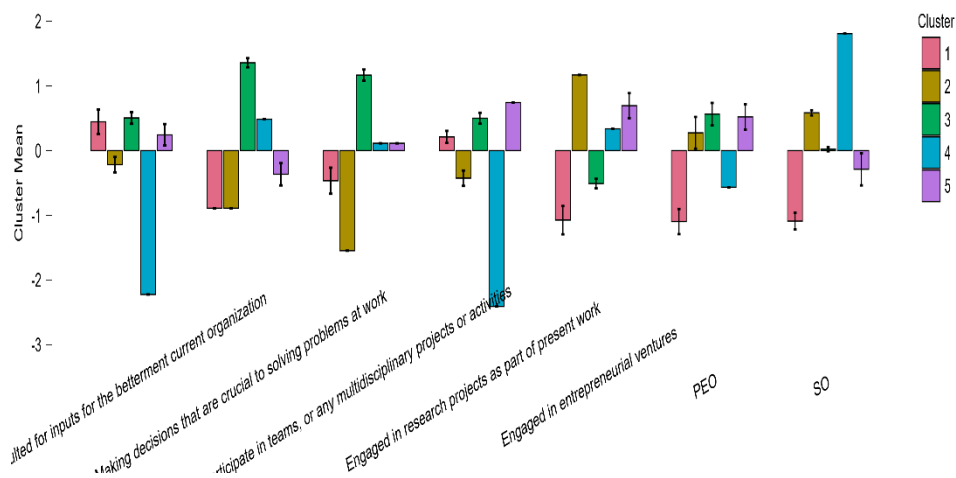
Figure 1 below shows the scatter plot of how data points are spread across the five clusters. The different clusters are shown in different colors-Cluster 1 in red, Cluster 2 in yellow, Cluster 3 in green, Cluster 4 in blue, and Cluster 5 in purple. Spatial arrangements of the clusters suggest varied degrees of separation; in some clusters, like Cluster 1 and Cluster 5, the clusters seem more dispersed, while others are more compact, such as Cluster 4. The color-coded clusters indicate the groupings based on shared characteristics or similarities in the data derived from a clustering algorithm. This visualization is valuable for interpreting patterns, relationships, or distinctions among groups within the dataset.





**Figure 1. t-SNE Cluster**

Figure 2 shows a bar plot of differences in cluster means for multiple variables across five clusters, distinguished by unique colors to distinguish Clusters 1–5. Different variables represent different elements of the career outcomes, such as participating in decisions, multidisciplinary projects, entrepreneurial ventures, and meeting PEOs and SOs. The heights represent mean scores and errors in the variability of each variable among the different clusters. Essential observations are the strong positive correlation between Cluster 4 for Engaged in entrepreneurial ventures and Cluster 3 for *Engaged in research projects*. Conversely, Cluster 2 shows means that are negatively signed for several of these, like *Making decisions critical to resolving job problems*, indicating less positive alignment with career development metrics. The visualization emphasizes how clusters show different career paths and performance measures.



**Figure 2. Cluster Mean Plots All features**

The study's theoretical framework is Locke's Value Theory regarding the career development of HR graduates for the past five years. This theory by Locke posits that the satisfaction and advancement

in the careers of individuals are intrinsically derived from personal values as they are applied to actual career experiences. The core of this theory is that career satisfaction occurs when work outcomes meet or exceed the individual's value-based expectations, making it a fascinating lens through which to examine the varied career paths of HR graduates.

The analysis yielded five clusters of HR graduates, each representing a different level of alignment with the key career values highlighted by Locke's theory. The *Strategic Contributors* (Cluster 1) were very much aligned toward values such as organizational improvement and decision-making, which means that, for these graduates, priority roles can genuinely contribute to the success of an organization. In contrast, the *Collaborative Team Players* (Cluster 2) are great in team-based and multidisciplinary activities, wherein values such as teamwork, inclusiveness, and collaborative behavior are central to satisfaction with their careers.

The *Innovative Achievers* (Cluster 3) proved to be a strongly entrepreneurial and highly innovative group. They thus best represent autonomy and creativity, which, according to Locke, are vital career values. On the other hand, the *Research-Oriented Professionals* (Cluster 4) had academic and research-oriented roles emphasizing intellectual growth and specialized expertise. Finally, the *Versatile Practitioners* (Cluster 5) displayed balanced competencies across entrepreneurial and organizational domains, emphasizing adaptability and integrating diverse career values.

Locke's Value Theory provides a robust framework to interpret these clusters, as each group uniquely prioritizes career values that influence their satisfaction and professional growth. The study shows that the interplay between these values and career outcomes is vital in aligning personal values with career roles to achieve long-term success and satisfaction among HR graduates. This theoretical underpinning also points out the need for organizations and academic institutions to help graduates identify and pursue roles that resonate with their value systems, thus enhancing their professional fulfillment and contributions to the workforce.

## Conclusion and Recommendations

This study highlights HR Management graduates' diverse career development experiences through the lens of Locke's Value Theory, emphasizing the importance of aligning personal values with workplace attributes to achieve career satisfaction. The findings reveal that many graduates have successfully transitioned into roles that align with their academic preparation, demonstrated by high employment rates in HR-related fields and leadership positions, contributing to their job satisfaction. The swift employment of most graduates indicates that their competencies are aligned with labor market demands. However, the challenges experienced by some, such as short job tenures or employment in unrelated fields, indicate value-alignment gaps that may affect long-term satisfaction and growth. The study underscores the importance of fostering value-based alignment in career pathways to enhance job satisfaction and professional fulfillment among HR graduates.

Based on the above findings, it is therefore recommended that HR Management programs align more with industry expectations by incorporating value-driven career development initiatives such as mentorship programs and professional readiness seminars into the curriculum. Graduates should be

motivated to seek further skills enhancement through certifications, graduate studies, and short courses to be competitive in the evolving job market. Professional networks can be strengthened by establishing partnerships with professional organizations and creating opportunities for graduates to join. Moreover, targeted career guidance and support services should address value-alignment challenges, especially for graduates working in non-related fields or experiencing short job tenure. Employers are also encouraged to create value-congruent work environments that foster satisfaction and retention of HR professionals.

## References

1. Anwar, G., & Abdullah, N. N. (2021). The impact of Human resource management practice on Organizational performance. *International journal of Engineering, Business and Management (IJEEM)*, 5.
2. ATD. (2017). *ATD | The World's Largest Talent Development Association*. Main. <https://www.td.org/>
3. Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of applied psychology*, 88(1), 87.
4. Busse, W. W. (2021). Mentoring: a lifetime cycle and key to successful career development. *Journal of Allergy and Clinical Immunology*, 147(5), 1634-1637.
5. Carter, J. A., & Harris, L. (2010). *Philosophic Values and World Citizenship: Locke to Obama and Beyond*. Lexington Books.
6. Deloitte. (2024). *2024 Global Human Capital Trends*. Deloitte Insights. <https://www2.deloitte.com/us/en/insights/focus/human-capital-trends.html>
7. *Employees With a Positive Employee Experience are 68% Less Likely to Consider Leaving*. (n.d.). [www.shrm.org. https://www.shrm.org/about/press-room/employees-with-a-positive-employee-experience-are-68--less-likel](https://www.shrm.org/about/press-room/employees-with-a-positive-employee-experience-are-68--less-likel)
8. Foss, N. J., & Lindenberg, S. (2013). Microfoundations for strategy: A goal-framing perspective on the drivers of value creation. *Academy of Management Perspectives*, 27(2), 85-102. <https://doi.org/10.5465/amp.2012.0103>
9. Gallup. (2024). *State of the Global Workplace Report*. Gallup. <https://www.gallup.com/workplace/349484/state-of-the-global-workplace.aspx>
10. Gimmon, E., & Levie, J. (2009). Instrumental value theory and the human capital of entrepreneurs. *Journal of Economic Issues*, 43(3), 715-732. <https://doi.org/10.2753/JEI0021-3624430307>
11. Grant, R. W., & Hertzberg, B. R. (2015). Locke on education. *A Companion to Locke*, 447-465. <https://doi.org/10.1002/9781118328705.ch23>
12. Holtschlag, C., Reiche, B. S., & Masuda, A. D. (2019). How and when do core self-evaluations predict career satisfaction? The roles of positive goal emotions and occupational embeddedness. *Applied Psychology*, 68(1), 126-149. <https://doi.org/10.1111/apps.12153>
13. Ismail, M., & Lu, H. S. (2014). Cultural values and career goals of the millennial generation: An integrated conceptual framework. *Journal of International Management Studies*, 9(1), 38-49.
14. Judge, T. A., Bono, J. E., Erez, A., & Locke, E. A. (2005). Core self-evaluations and job and life satisfaction: the role of self-concordance and goal attainment. *Journal of applied psychology*, 90(2), 257. [https://doi.org/10.1016/0030-5073\(70\)90011-5](https://doi.org/10.1016/0030-5073(70)90011-5)

15. Khan, D. S. (2024). Organizational Behaviour insights: Examining dynamics of Workplace Culture and Employee Interaction in Modern Organizations. *International Journal for Multidimensional Research Perspectives*, 2(5), 37-53.
16. Laud, R. L., & Johnson, M. (2012). Upward mobility: A typology of tactics and strategies for career advancement. *Career Development International*, 17(3), 231-254. <https://doi.org/10.1108/13620431211241072>
17. Lan, G., Okechuku, C., Zhang, H., & Cao, J. (2013). Impact of job satisfaction and personal values on the work orientation of Chinese accounting practitioners. *Journal of business ethics*, 112, 627-640. <https://doi.org/10.1007/s10551-012-1562-5>
18. Lieff, S. J. (2009). Perspective: the missing link in academic career planning and development: pursuit of meaningful and aligned work. *Academic Medicine*, 84(10), 1383-1388. DOI: 10.1097/ACM.0b013e3181b6bd54
19. LinkedIn. (2023). *2023 Workplace Learning Report | LinkedIn Learning*. LinkedIn.com; 2023 Workplace Learning Report | LinkedIn Learning. <https://learning.linkedin.com/resources/workplace-learning-report-2023>
20. Locke, E. A. (1978). The ubiquity of the technique of goal setting in theories of and approaches to employee motivation. *Academy of Management Review*, 3(3), 594-601. <https://doi.org/10.5465/amr.1978.4305786>
21. Locke, W. (2007). Higher education mergers: Integrating organisational cultures and developing appropriate management styles. *Higher Education Quarterly*, 61(1), 83-102. <https://doi.org/10.1111/j.1468-2273.2006.00339.x>
22. Locke, E. A., & Baum, J. R. (2014). Entrepreneurial motivation. In *The psychology of entrepreneurship* (pp. 125-144). Psychology Press.
23. Locke, E. A., Cartledge, N., & Knerr, C. S. (1970). Studies of the relationship between satisfaction, goal-setting, and performance. *Organizational behavior and human performance*, 5(2), 135-158.
24. Locke, E. A., & Latham, G. P. (2006). New directions in goal-setting theory. *Current directions in psychological science*, 15(5), 265-268. <https://doi.org/10.1111/j.1467-8721.2006.00449.x>
25. Locke, E. A., & Latham, G. P. (2013). Work motivation: The high performance cycle. In *Work motivation* (pp. 3-25). Psychology Press.
26. Locke, E. A., & Latham, G. P. (2015). Breaking the rules: a historical overview of goal-setting theory. In *Advances in motivation science* (Vol. 2, pp. 99-126). Elsevier. <https://doi.org/10.1016/bs.adms.2015.05.001>
27. Lunenburg, F. C. (2011). Goal-setting theory of motivation. *International journal of management, business, and administration*, 15(1), 1-6.
28. McMahan, M. (2014). New trends in theory development in career psychology. In *Handbook of career development: International perspectives* (pp. 13-27). New York, NY: Springer New York. [https://doi.org/10.1007/978-1-4614-9460-7\\_2](https://doi.org/10.1007/978-1-4614-9460-7_2)
29. Moore, C., Gunz, H., & Hall, D. T. (2007). Tracing the historical roots of career theory in management and organization studies. *Handbook of career studies*, 13-38.
30. Muindi, F. K. (2011). The relationship between participation in decision making and job satisfaction among academic staff in the school of business, university of Nairobi. <http://hdl.handle.net/11295/92096>



31. Ola, D. E. (2022). Pace of Technology Changes, Need for Adaptation, and Demand for Skills: Skills Adaptation for Quickly Evolving Technology-Based Workplaces. In *Sustainability and the Future of Work and Entrepreneurship for the Underserved* (pp. 364-383). IGI Global.
32. Orozco, F. (2021, May 27). How Can We Better Measure The Impact Of Workplace Diversity And Inclusion? *Forbes*. <https://www.forbes.com/councils/forbestechcouncil/2021/05/27/how-can-we-better-measure-the-impact-of-workplace-diversity-and-inclusion/>
33. Ostroff, C., Shin, Y., & Kinicki, A. J. (2005). Multiple perspectives of congruence: Relationships between value congruence and employee attitudes. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 26(6), 591-623. <https://doi.org/10.1002/job.333>
34. Remo, A. (2024, December). *PH real estate 2025: Poised for growth amid shifting dynamics*. INQUIRER.net. <https://business.inquirer.net/494580/ph-real-estate-2025-poised-for-growth-amid-shifting-dynamics>
35. Staff, G. P. (2020, September 23). *What Is Human Resources Management?* Graduate Blog. <https://graduate.northeastern.edu/resources/what-is-human-resource-management/>
36. Stone, D. L., & Deadrick, D. L. (2015). Challenges and opportunities affecting the future of human resource management. *Human Resource Management Review*, 25(2), 139-145. <https://doi.org/10.1016/j.hrmr.2015.01.003>
37. Sunley, R., & Locke, R. (2010). Exploring UK secondary teachers' professional values: an overview of the literature since 2000. *Educational Research*, 52(4), 409-425. <https://doi.org/10.1080/00131881.2010.524751>
38. Valette, A., & Culié, J. D. (2015). Career scripts in clusters: A social position approach. *Human Relations*, 68(11), 1745-1767. <https://doi.org/10.1177/0018726715569515>
39. Vinkenburg, C. J., & Weber, T. (2012). Managerial career patterns: A review of the empirical evidence. *Journal of vocational behavior*, 80(3), 592-607. <https://doi.org/10.1016/j.jvb.2012.02.001>
40. Wallin, J. I. M. (2002). *Facet importance and job satisfaction: another look at Locke's value theory*. San Jose State University.
41. Wang, C., Xu, J., Zhang, T. C., & Li, Q. M. (2020). Effects of professional identity on turnover intention in China's hotel employees: The mediating role of employee engagement and job satisfaction. *Journal of Hospitality and Tourism Management*, 45, 10-22. <https://doi.org/10.1016/j.jhtm.2020.07.002>
42. Williamson, K., & Mundy, L. A. (2010). Graduate radiographers' expectations for role development—the potential impact of misalignment of expectation and valence on staff retention and service provision. *Radiography*, 16(1), 40-47. <https://doi.org/10.1016/j.radi.2009.05.001>

