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AI-Enhanced Faculty Satisfaction Survey on Employment and Benefits with Cultural Considerations: A Foundation for Context-Sensitive Faculty Development Programs

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Abstract

This study assesses faculty satisfaction with employment conditions and benefits at a State University in Northern Philippines, providing a foundation for data-driven and culturally responsive faculty development initiatives. Utilizing AI-enhanced analytics, the research examines satisfaction across workplace factors such as leadership, compensation, career development, and workplace conditions. The survey, conducted with 135 randomly selected faculty members, employed a 5-point Likert scale and was supplemented by in-depth interviews to validate quantitative findings. Results indicate high satisfaction levels across several domains, with the workplace environment receiving the highest mean score (4.25). Faculty members expressed appreciation for supportive leadership, collegial collaboration, and a sense of institutional pride, which reflect not only organizational strengths, but also cultural values deeply embedded in Filipino academic life. Qualitative responses revealed that satisfaction is tied to bayanihan (communal unity), pakikipagkapwa (shared identity and empathy), and utang na loob (debt of gratitude), highlighting how professional fulfillment extends beyond individual achievement to include family well-being, respect from colleagues, and long-term service to the institution. Compensation and career development were viewed positively, though some participants emphasized the need for clearer promotion pathways, competitive salaries, and additional resources to ensure sustained growth. The integration of AI analytics provided granular insights into faculty concerns and satisfaction drivers, offering actionable recommendations to improve institutional policies and practices. Overall, the study underscores the importance of aligning data-informed strategies with Filipino cultural values to enhance faculty satisfaction, strengthen institutional loyalty, and ensure the holistic well-being of educators in higher education.

Keywords: Faculty Satisfaction, Higher Education, AI-Enhanced Analytics, Data-Driven Development, Philippine University

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Introduction

Faculty satisfaction plays a vital role in the success and sustainability of educational institutions. As frontline implementers of teaching and learning, faculty members significantly influence the quality of instruction, student outcomes, and the institution's overall reputation. When teachers are satisfied with their roles, they demonstrate more substantial commitment, higher productivity, and greater professional fulfillment, enhancing student learning experiences and institutional performance. Conversely, dissatisfaction can lead to burnout, turnover, and diminished instructional quality, all compromising the institution's capacity to achieve its academic mission.

In the Philippine context, faculty satisfaction must also be viewed through a cultural lens, as teaching is not merely a technical profession, but a vocation deeply rooted in values such as *bayanihan* (community spirit), *pakikipagkapwa* (relationality), and service to nation-building. Filipino educators often equate professional fulfillment with career advancement and compensation, and their ability to nurture learners in ways that honor cultural identity, familial responsibility, and social relevance. Hence, understanding and addressing faculty satisfaction requires both organizational and cultural sensitivity.

This study responds to these imperatives by leveraging artificial intelligence (AI)-enhanced analytics to examine faculty satisfaction at a State University in Northern Philippines. Unlike traditional approaches that rely solely on descriptive surveys, this study employs machine learning and thematic analysis to capture deeper, more nuanced insights into factors such as leadership, compensation, professional growth, workplace culture, and cultural values influencing faculty perceptions of their roles. Doing so offers a more holistic assessment of faculty satisfaction and its determinants, providing an evidence-based foundation for institutional planning, policy development, and capacity-building initiatives.

The literature on faculty satisfaction emphasizes its critical role in institutional effectiveness, retention, and academic outcomes. Numerous studies have underscored that faculty who are satisfied with their roles are more likely to remain with their institutions, thus reducing turnover and strengthening organizational stability (Johnsrud & Rosser, 2002; Herzberg, 2017). Job satisfaction also enhances productivity, creativity, and motivation, vital for fostering a culture of excellence in higher education (Locke, 1976; Oshagbemi, 2013).

Research further identifies multiple determinants of faculty satisfaction. These include leadership style and administrative support (Rowley, 1996), opportunities for career development (Hagedorn, 2000), adequate compensation and benefits (Wood,

1976), and a positive work environment that values collaboration and inclusivity (Ting, 1997). Faculty satisfaction is vital in allied health and other specialized disciplines, as institutions must retain skilled educators who balance teaching with clinical or technical expertise (Ambrose, Huston, & Norman, 2005).

In addition to organizational and structural factors, cultural dimensions of faculty satisfaction are increasingly recognized. Hofstede's cultural dimensions theory (1984) suggests that national culture shapes workplace values, leadership expectations, and employee motivation. In collectivist societies such as the Philippines, satisfaction may be influenced by individual achievements and perceptions of community recognition, familial stability, and cultural respect. Gay (2018) also emphasizes the role of culturally responsive environments in education, where institutions that value and affirm cultural identity foster higher levels of professional fulfillment among faculty.

Despite the existence of theoretical models such as Herzberg's Two-Factor Theory (1959) and Maslow's Hierarchy of Needs (1943), these frameworks are often critiqued for their Western bias and limited applicability in non-Western settings (Barkhuizen & Rothmann, 2008). In the Philippine context, *utang na loob* (debt of gratitude), *pakikisama* (smooth interpersonal relations), and *hiya* (sense of propriety) are socio-cultural constructs that may significantly influence job satisfaction but are rarely explored in empirical faculty satisfaction studies. This gap highlights the importance of contextualized approaches incorporating cultural values alongside universal determinants of faculty well-being.

While previous studies have examined faculty satisfaction across various educational contexts, significant gaps remain. First, most research has been concentrated in Western and developed countries, leaving a paucity of literature on faculty satisfaction in Southeast Asia, particularly in the Philippines. Philippine state universities' cultural, economic, and institutional contexts differ markedly from those of Western institutions, making it essential to generate localized data reflecting Filipino faculty members lived experiences.

Second, limited attention has been given to the cultural aspects of faculty satisfaction, including how Filipino values, traditions, and social expectations shape professional well-being. While international literature emphasizes leadership, compensation, and workload, little research explores how bayanihan, respect for hierarchy, and community recognition impact faculty satisfaction in Philippine higher education.

Third, existing methodologies often rely heavily on conventional survey instruments and statistical analyses, which, while useful, may not fully capture the

nuanced, multidimensional, and culturally embedded nature of faculty satisfaction. Emerging technologies such as AI and machine learning provide new avenues for more in-depth exploration, allowing for predictive modeling, clustering of satisfaction patterns, and thematic analysis of qualitative feedback. These tools offer opportunities to uncover hidden trends and provide evidence-based strategies for faculty development.

This study addresses these gaps by assessing faculty satisfaction in a State University in Northern Philippines using AI-enhanced analytics while explicitly incorporating the cultural context of faculty well-being. It seeks to contribute to the literature by providing a culturally grounded, data-driven perspective on faculty satisfaction and offering practical implications for institutional policy, leadership, and human resource development.

Research Objectives

The main objective of this study is to determine the level of faculty satisfaction with their employment and benefits. Specifically, the study addressed the following objectives:

- 1) Measure the overall satisfaction level of faculty with their employment and benefits.
- 2) Utilize AI-driven insights to guide evidence-based faculty development programs that enhance institutional effectiveness and employee well-being in terms of:
 - a) Leadership quality
 - b) Compensation fairness
 - c) Career development opportunities
 - d) Workplace environment

Research Methodology

This study employed a mixed-methods approach with a sequential explanatory design, combining quantitative and qualitative data to capture a nuanced view of faculty satisfaction. One hundred thirty-five permanent faculty members from various university colleges were randomly selected. Participants included diverse ranks to ensure representative feedback.

The primary instrument was the “*Excellent Academic Workplace*” questionnaire, adapted from [4]. AI-enhanced text analysis tools supported the qualitative coding process, enhancing the depth and accuracy of insights. Interview guide questions from the A Priori Code also served as the study’s instruments. A recorder was also used

during the interview. The research instrument(s) administration commenced after obtaining the necessary authorization from the relevant authorities. Once the required approval was obtained, the researcher personally handed the questionnaire to the participants. The university facilitated the distribution of the questionnaire among the faculty respondents at Isabela State University.

Quantitative data analysis included calculating means and percentages to determine satisfaction levels, while qualitative data were analyzed using AI-enhanced thematic coding, identifying recurrent themes in faculty responses. This dual analysis approach enabled a richer understanding of satisfaction dimensions. The extended texts that transcribed the interviews and observations were subjected to phenomenological reduction through the construction of a repertory grid or coding. Coding was employed to organize and analyze the overwhelming data collected [3]. The grid was constructed to let the researcher observe cool and warm analyses. The cool analysis consisted of the identification of the significant statements of each respondent. The significant statements recorded served as bases in the warm analysis stage, where the data categories were formulated and categorized. Reading and re-reading the significant statements and the researchers' constant vigilance helped facilitate the surfacing of the phenomenon's essence. From the cool and warm analyses conducted, themes that emerged from the significant statements were recorded.

The themes that emerged from the significant statements mentioned by the participants during the interview served as the basis for developing the communicative competence assessment tools. Their parts and the types of questions included were aligned to the qualitative data gathered. To ensure the trustworthiness of the gathered results and explore its credibility, the significant statements that emerged from the central questions asked were subjected to a member checking procedure via correspondence technique [2], also known as participant or respondent validation. Each participant was approached individually, and the data results were returned to them to check for accuracy and resonance with their experiences.

Results and Findings

Overall Satisfaction level of the faculty members

Faculty expressed high satisfaction, with an aggregate mean score of 4.25 for the workplace environment. This high rating aligns with qualitative responses indicating a sense of professional fulfillment, collegiality, and a supportive work environment. Leadership, compensation, and career development also received strong satisfaction scores, highlighting the positive impact of institutional support on faculty

morale. These results reflect organizational strengths and the influence of cultural values such as *bayanihan* (communal unity) and *pakikipagkapwa* (shared identity), which shape Filipino educators' perceptions of their workplace as a collective space for growth and collaboration.

The 135 faculty members revealed in both survey and interview responses that they were generally satisfied with their jobs, attributing this to personal and professional growth opportunities, strong collegial relationships, and work-life balance. For many, satisfaction was also tied to the cultural fulfillment of their teaching vocation, where serving students is viewed as a form of social responsibility and nation-building.

The results further indicated that faculty members were mainly satisfied across various areas, including physical working conditions and communication. The overall satisfaction level was categorized as “*very satisfied*.” Interestingly, faculty members reported higher satisfaction with intrinsic job aspects, such as social service, ability utilization, and opportunities to mentor students. These areas resonate with Filipino cultural values of service (*paglilingkod*) and relational connectedness (*pakikipag-ugnayan*). However, they expressed dissatisfaction with extrinsic factors like job security and compensation, suggesting that while cultural values sustain intrinsic motivation, material benefits remain essential for long-term retention and well-being.

In summary, while faculty members generally report satisfaction with their professional experiences, specific areas such as administrative support, compensation, and job security require attention. Strengthening these aspects, while continuing to honor the cultural dimensions of teaching and academic work, can foster a more holistic and sustainable approach to faculty satisfaction.

Faculty Satisfaction in terms of Leadership, Compensation, Career opportunities, and workplace

As the faculty members rated leadership highly, with an overall mean score of 3.85, they also reported feeling adequately supported by their supervisors, with clear expectations and constructive feedback. It reflects effective leadership practices within the university, aligning with transformational and transactional leadership models that foster job satisfaction. At the same time, the cultural value of *pakikipagkapwa* (shared identity and empathy) was evident in participants' recognition of leaders who demonstrated fairness, respect, and genuine concern for their welfare, qualities deeply valued in Philippine academic culture.

Satisfaction with compensation yielded a mean score of 3.76. Although faculty appreciated the stability and benefits provided by the university, some expressed a

desire for greater recognition and competitive salaries. Literature underscores the importance of equitable compensation in enhancing faculty retention and productivity, especially in academic settings. In the interviews, participants often framed compensation as a financial resource and a means of fulfilling their cultural obligations to family and community. For instance, F3 noted: *“The university is my bread and butter. I cannot enroll my children in private elementary schools if the university is not giving me what I deserve.”* It reflects how Filipino educators perceive their work as a professional and cultural duty, supporting kinship responsibilities (pamilya) and sustaining their provider role.

Faculty rated career advancement opportunities at 3.81, indicating satisfaction with opportunities for professional growth. However, AI-driven analysis identified a subset of responses suggesting a need for clearer pathways to promotion. Addressing these concerns through a structured faculty development program could enhance career satisfaction. For Filipino faculty, professional growth is often seen as tied to individual achievement and pamana (legacy), the desire to leave lasting contributions in teaching, research, and extension that reflect cultural pride and institutional loyalty.

The faculty respondents expressed satisfaction with their involvement in institutional planning and providing necessary resources to enhance their careers. However, they expressed low satisfaction regarding the resources for effectively carrying out their job responsibilities. Despite this, their responses reflected bayanihan (communal spirit), as many emphasized that collaboration and mutual support within departments helped compensate for resource gaps.

The highest satisfaction score (4.25) was recorded in the workplace environment category, emphasizing faculty contentment with collaborative culture, work-life balance, and institutional pride. Faculty members highlighted the fairness and supportiveness of department chairs as a key positive factor. It resonates with Filipino collectivist culture, where harmonious relationships (*pakikisama*) and respect for hierarchy are vital in shaping perceptions of a healthy workplace.

Moreover, 100 percent of the faculty members interviewed are permanent faculty members. Eight are Professors, nine Associate Professors, nine Assistant Professors, and nine Instructors. Regarding their satisfaction with rank, employment status, compensation, and rewards, the faculty members consistently reported being *“very satisfied.”* Many responses reflected gratitude (*utang na loob*) toward the institution for enabling upward mobility and family stability. For instance, F1 remarked, *“Without the university, I cannot acquire my own house and car. So yes, I am delighted with my rank, employment status, compensation, and rewards”*. Similarly, F24 emphasized: *“My years of service here in the university reflect how grateful I am to the*

institution. You can see my lifestyle, which speaks to my academic satisfaction and achievement”.

These reflections underscore that satisfaction is not measured solely in economic terms but also through cultural markers of success such as providing education for one’s children, building a home, acquiring property, and gaining respect in the community. F2 highlighted material and relational factors: “Promotion, benefits, bonuses, and others satisfied me *with what I have now. My colleagues’ respect for my strategies, choices, projects, and the like made me content with everything I have now in and out of the university.*” This statement illustrates the dual cultural drivers of satisfaction: *ginhawa* (well-being/comfort) and *dangal* (honor/respect).

AI-enhanced thematic analysis further revealed that faculty satisfaction is strongly tied to a sense of community, institutional loyalty, and opportunities for meaningful work. These themes mirror Filipino cultural values where collective well-being, gratitude, and long-term service are prioritized. Nonetheless, concerns about workload and administrative transparency emerged as challenges, indicating that while cultural values sustain faculty morale, institutional reforms remain essential for ensuring balanced and equitable working conditions.

Discussions

The results of this study provide a detailed analysis of faculty satisfaction across key dimensions: leadership, compensation, career development, and workplace environment. Using a combination of survey data and AI-enhanced analytics, the findings revealed that faculty members at the State University in Northern Philippines are generally satisfied, with the workplace environment scoring the highest satisfaction levels (grand mean = 4.25). Faculty responses indicate a sense of pride in their institution and highlight the supportive and collaborative culture fostered by department chairs. This collective pride reflects the Filipino cultural value of *bayanihan* (communal unity), where shared success and institutional harmony are viewed as markers of professional fulfillment. AI-driven thematic analysis further identified fairness, work-life balance, and professional fulfillment as critical contributors to workplace satisfaction. These concepts align with the cultural emphasis on *pakikipagkapwa* (shared identity and empathy) and *pakikisama* (smooth interpersonal relationships) as foundations of a harmonious workplace.

Leadership was another area of intense satisfaction, with a grand mean score of 3.85. Faculty members appreciated their supervisors’ clarity in communication and inclusiveness in decision-making processes, reflecting effective transformational and transactional leadership practices. These findings also reflect Filipino cultural

expectations of leaders as *magulang* (guiding parental figures), where authority is exercised with fairness, care, and respect. AI-enhanced analysis highlighted recurring themes of trust and respect, underscoring the importance of leadership competence and engagement in fostering a positive work environment. However, the lowest-rated aspect of leadership involved faculty involvement in academic program decisions. It suggests a need for more participatory leadership strategies that embrace *pakikipagkapwa* by valuing shared voice and collective wisdom.

Compensation received a slightly lower grand mean score of 3.76, with respondents expressing satisfaction with the stability and benefits offered but highlighting the need for competitive salaries and greater recognition of contributions. For many Filipino faculty members, compensation is a financial resource and a means of fulfilling familial and cultural obligations. AI sentiment analysis revealed subtle dissatisfaction regarding job security and monetary rewards, emphasizing the importance of equitable compensation policies in enhancing morale and retention. Culturally, this dissatisfaction reflects the significance of *pamilya* (family) and *utang na loob* (debt of gratitude), where salaries and benefits often enable educators to support household needs, sustain kinship ties, and give back to their communities. Addressing these concerns through industry-aligned pay structures and recognition programs could improve faculty satisfaction in this domain.

Career development scored a grand score of 3.81, indicating general satisfaction with opportunities for professional growth. Faculty valued transparent tenure requirements and institutional support for skill development but expressed lower satisfaction with resource availability for job effectiveness. AI-driven thematic coding identified a need for clearer promotion pathways and enhanced resources to facilitate career advancement. Within the cultural context, promotion and professional growth are closely linked to *pamana* (legacy) and *dangal* (honor), as faculty members see their academic accomplishments not only as personal success but as contributions to their families, institutions, and society. Thus, establishing structured faculty development programs affirming cultural aspirations for dignity, respect, and legacy can strengthen career satisfaction.

Thus, this study underscores the critical role of a supportive work environment, fair compensation, and clear career advancement pathways in ensuring faculty satisfaction. More importantly, integrating cultural aspects reveals that Filipino faculty derive satisfaction from institutional policies and material benefits and values rooted in *bayanihan*, *pakikipagkapwa*, and *pamilya*. Integrating AI analytics provided profound insights into faculty concerns and satisfaction drivers, offering actionable recommendations to enhance institutional policies and practices. By embedding

cultural responsiveness into these strategies, state universities can create faculty development programs that are not only data-driven but also contextually grounded in Filipino values. Such programs ensure that higher education remains effective and inclusive, sustaining its role as a cornerstone for professional and personal development.

Conclusion

Faculty satisfaction at the State University in Northern Philippines is generally high, with leadership, compensation, career development, and workplace environment all contributing positively. The application of AI-enhanced data analysis provides a granular understanding of satisfaction dynamics, enabling more strategic faculty development planning. Given the pivotal role of faculty satisfaction in institutional success, these findings support implementing a data-driven faculty development program that prioritizes compensation fairness, career clarity, and transparent administrative practices. Notably, the results also highlight the cultural dimension of satisfaction, where Filipino values such as *bayanihan* (communal unity), *pakikipagkapwa* (shared identity), and *utang na loob* (debt of gratitude) influence how faculty members perceive their workplace and express loyalty to the institution.

In conclusion, while there are some areas of concern, the research indicates that faculty members are generally content with their rank, employment status, compensation, and rewards. Participants' satisfaction was linked to material benefits and their ability to provide for their families, contribute to community well-being, and earn the respect of colleagues, cultural markers of success in the Filipino context. Factors like academic rank, employment status, university type, and demographic characteristics such as gender all play a role in shaping faculty job satisfaction. However, these are further nuanced by cultural expectations around family responsibility, respect for hierarchy, and the value placed on long-term service.

The study highlights the importance of considering individual profile variables and cultural aspects when examining faculty satisfaction with leadership, compensation, career, and workplace factors. By aligning institutional policies with evidence-based strategies and cultural values, universities can strengthen faculty well-being, deepen institutional pride, and foster an environment where professional fulfillment and cultural identity are mutually reinforced.

References

- [1] Ambrose, S., Huston, T., & Norman, M. (2005). A qualitative method for assessing faculty satisfaction. *Research in Higher Education*, 46(7), 803–830. <https://doi.org/10.1007/s11162-004-6226-6>
- [2] Baluyos, G. R., Rivera, H. L., & Baluyos, E. L. (2019). Teachers' job satisfaction and work performance. *Open Journal of Social Sciences*, 7(8).
- [3] Barkhuizen, N., & Rothmann, S. (2008). Occupational stress of academic staff in South African higher education institutions. *South African Journal of Psychology*, 38(2), 321–336. <https://doi.org/10.1177/008124630803800205>
- [4] Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, 26(13), 1802–1811.
- [5] Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. Longman's, Green.
- [6] Clark, R. C., & Lyons, C. (2011). *Graphics for learning: Proven guidelines for planning, designing, and evaluating visuals in training materials* (2nd ed.). Pfeiffer.
- [7] Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- [8] Gagné, R. M. (1985). *The conditions of learning and theory of instruction* (4th ed.). Holt, Rinehart & Winston.
- [9] Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.
- [10] Hagedorn, L. S. (2000). Conceptualizing faculty job satisfaction: Components, theories, and outcomes. *New Directions for Institutional Research*, 2000(105), 5–20. <https://doi.org/10.1002/ir.10501>
- [11] Hakanen, J. J., & Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of Affective Disorders*, 141(2–3), 415–424.
- [12] Hahn, C. (2008). *Doing qualitative research using your computer: A practical guide*. SAGE Publications.
- [13] Hamidi, Y., Saberi, H., & Mohammadi, M. A. (2014). Job satisfaction and its relationship with organizational commitment: A study of hospital nurses. *Journal of Management Development*, 31(5), 442–451.
- [14] Hanover Research. (2012). *Academy administration practice*.
- [15] Herzberg, F. (2017). *Motivation to work*. Routledge. (Original work published 1959)

- [16] Hofstede, G. (1984). *Culture's consequences: International differences in work-related values*. Sage Publications.
- [17] Johnsrud, L. K., & Rosser, V. J. (2002). Faculty members' morale and their intention to leave. *The Journal of Higher Education*, 73(4), 518–542. <https://doi.org/10.1080/00221546.2002.11777162>
- [18] Jung, J., & Shin, J. C. (2015). Administrative staff members' job competency and job satisfaction in a Korean research university. *Studies in Higher Education*, 40(5).
- [19] Keller, J. M. (1987). Development and use of the ARCS model of instructional design. *Journal of Instructional Development*, 10(3), 2–10. <https://doi.org/10.1007/BF02905780>
- [20] Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297–1343). Rand McNally.
- [21] Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. <https://doi.org/10.1037/h0054346>
- [22] Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
- [23] Oshagbemi, T. (2013). Job satisfaction of UK academics. *Educational Management Administration & Leadership*, 31(4), 354–371. <https://doi.org/10.1177/0263211X030314007>
- [24] Reigeluth, C. M. (2013). Instructional theory and technology for the new paradigm of education. *RED. Revista de Educación a Distancia*, 39, 1–18. <https://doi.org/10.6018/red/39/2>
- [25] Romig, B., Maillet, J., & Denmark, R. M. (2011). Factors affecting allied health faculty job satisfaction: A literature review. *Journal of Allied Health*, 40(1).
- [26] Rowley, D. J. (1996). *Strategic change in colleges and universities: Planning to survive and prosper*. Jossey-Bass.
- [27] Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600–619.
- [28] Smerek, R. E., & Peterson, M. (2007). Examining Herzberg's theory: Improving job satisfaction among non-academic employees at a university. *Research in Higher Education*, 48(2), 229–250. <https://doi.org/10.1007/s11162-006-9042-3>
- [29] Ting, Y. (1997). Determinants of job satisfaction of federal government employees. *Public Personnel Management*, 26(3), 313–334. <https://doi.org/10.1177/009102609702600302>
- [30] Wood, S. (1976). *Work and satisfaction*. Temple Smith.