

Work is fun, isn't it? Bibliometrics of fun work

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Abstract: The attention and interest in fun work have exponentially increased among practitioners and academic communities. This phenomenon replaced the old-fashioned view that created a rigid climate in the office. Many employees have adopted a fun work culture to improve employer branding and employee experiences and retain their talents. Using bibliometric techniques, this study aimed to capture the trend of research in fun work and identify research streams in fun work derived from the critical topic distributions of the fun work academic literature. We performed word co-occurrence analysis, author network analysis, and publication analysis. This study identified four streams in the science of fun work: activities to make work fun, a fun work environment system, positive effects of fun work, and support for fun work. The research trend and research streams in Fun Work provided insight for researchers to find potential issues to address in future research. They revealed the interactions as well as connections among researchers in fun work.

Keywords: fun work, fun at work, bibliometric study

JEL Classification: L20, L22, D23

Introduction

During the industrial era, clear boundaries existed between work and nonwork activities. Work and leisure time were kept separated, and the idea of mixing the two was discouraged (Fleming & Spicer, 2004). Beynon (1980, as cited in Fleming & Spicer, 2004) expressed this perspective by stating that work and play should be kept distinct, with play only allowed after work. Work was primarily associated with labor and toil, and the notion of fun was seen as contradictory to the purpose of work (Plester, Cooper-Thomas, & Winquist, 2015).

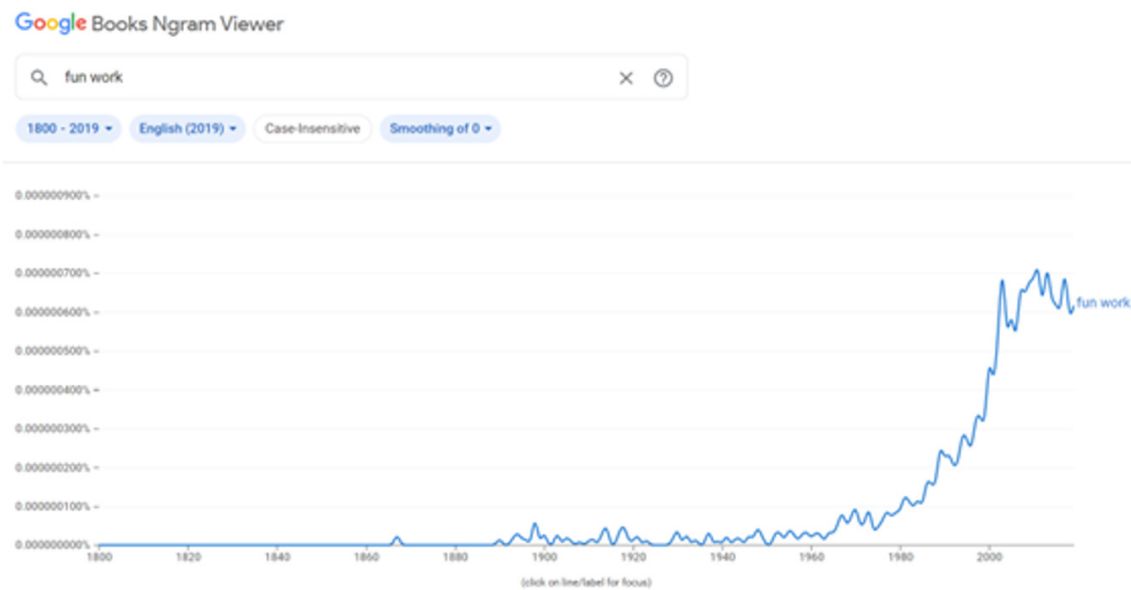
In contrast, the post-industrial era brought a significant shift in organizational culture. Companies started embracing a more flexible, adaptive, and empowering approach to work (Fleming & Spicer, 2004). This transformation led to the blurring of boundaries between work and personal life, also between formal organizational settings and the home. A vital aspect of this evolving culture was the integration of playfulness and fun into the work environment. Deal and Kennedy (1982) emphasized the importance of incorporating fun, playfulness, and humor into the workplace as employees began to expect these elements. They suggested that management should actively embrace and foster a sense of joy within their organizations.

Two notable examples of organizations implementing fun elements in their culture were J. W. Marriott and Google. J. W. Marriott believed in creating a hard-working yet enjoyable environment for employees, emphasizing the need to teach, care for, and incorporate fun (Collins & Porras, 2005). Conversely, Google focused on building a positive working environment, meaningful work, and employee freedom. They adopted the belief that "fun comes from everywhere" (Schmidt & Rosenberg, 2014). Google incorporated fun into various aspects of work, such as celebrating April Fool's Day, allowing employees to engage in recreational activities during breaks, incorporating fun into office design, and encouraging employees to spend 20% of their work week on self-assigned projects (Meek, 2015).

Fleming (2005) described this shift as a fun culture emphasizing the importance of having fun at work. Ford, McLaughlin, and Newstrom (2003) defined fun work as an environment intentionally designed to encourage enjoyable and pleasurable activities that positively impact individuals' and groups' attitudes and productivity. This fun culture replaced the traditional view of work as a strictly serious endeavor, granting freedom for play and humor in the office (Fleming, 2005).

The concept of fun work gained attention in management literature, particularly in the context of corporate culture. It has steadily grown as a topic of interest in academic and practitioner literature over the past three decades (Owler, Morrison, & Plester, 2010). A keyword search using the Google Books Ngram Viewer revealed a significant rise in the use of the term "fun work" from the late 1970s until 2019 (figure 1).

Figure 1. Google's Book Ngram Viewer for fun work.



Numerous researchers have investigated fun work in different contexts, revealing positive organizational impacts. Studies have shown that fun at work can increase applicant attraction (Tews, Michel, & Bartlett, 2012), reduce turnover intention (Karl, Peluchette, & Hall, 2008; McDowell, 2004), and enhance employee engagement and retention (Tsaour, Hsu, & Lin, 2019; Chan, 2019; Djastuti, Rahardjo, Irviana, & Udin, 2019).

Despite the increasing popularity and evolving nature of research on fun work, it is still considered a relatively new topic in organizational studies. Further exploration is needed to understand the concept, its antecedents, the positive and negative impacts of fun at work, and related issues. Therefore, this paper aims to employ bibliometric analysis methods to examine the research trend in fun work and identify the distribution of crucial topics within academic literature.

Literature Review

The "Fun Work" movement emerged from the influential books written by Deal & Kennedy (1982) and Peters & Waterman (1982), which encouraged managers to cultivate a corporate culture that embraces playful, enjoyable, and humorous experiences (Owler, Morrison, & Plester, 2010; Tews, Michel, & Bartlett, 2012). This shift towards a culture of fun challenged the conventional belief that work should solely be serious and devoid of enjoyment (Owler, Morrison, & Plester, 2010).

Scholars have explored the concept of fun work using various terms such as workplace fun, fun environment, fun at work, fun culture, and fun work. Lamm & Meek (2009)

referred to it as workplace fun, encompassing activities that provide amusement, enjoyment, and pleasure, whether social, interpersonal, recreational, or task-oriented. On the other hand, Ford, McLaughlin, & Newstrom (2003) described it as a fun environment where a wide range of enjoyable and pleasurable activities are intentionally encouraged, initiated, and supported to positively impact the attitudes and productivity of individuals and groups. Despite these terminological differences, both Lamm and Meek (2009) and Ford, McLaughlin, and Newstrom (2003) shared a core similarity, considering anything that fosters enjoyment in the workplace as part of the fun work concept. For this article, the term "fun work" will be used as a more general term to encompass the culture, environment, activities, and initiatives promoting workplace enjoyment.

Understanding fun work extends beyond conceptualization. Plester, Cooper-Thomas, and Winquist (2015) contributed to a deeper comprehension of the concept by identifying three categories of fun work: organic fun, managed fun, and task fun. Organic fun occurs naturally and spontaneously through interactions among organizational members. Managed fun comprises activities and initiatives organized by management to achieve business objectives. Task fun refers to the enjoyment experienced by employees while performing their job tasks.

As the popularity of fun work grew in business and academic literature, researchers explored its various contexts and purposes, including investigating its consequences. The accumulating body of literature has demonstrated the positive impact of fun work on organizations (Tews, Michel, & Bartlett, 2012). Ford et al. (2003) explained that implementing fun work influences individual and group attitudes and productivity. Consistent with their findings, fun work had also been associated with better job performance (Tews, Michel, & Stafford, 2013). Tews et al. (2012) found that fun in the workplace has a favorable influence on applicant attraction, suggesting that infusing fun into work can be a strategy to enhance recruitment attractiveness and talent retention (Karl, Peluchette, & Hall, 2008).

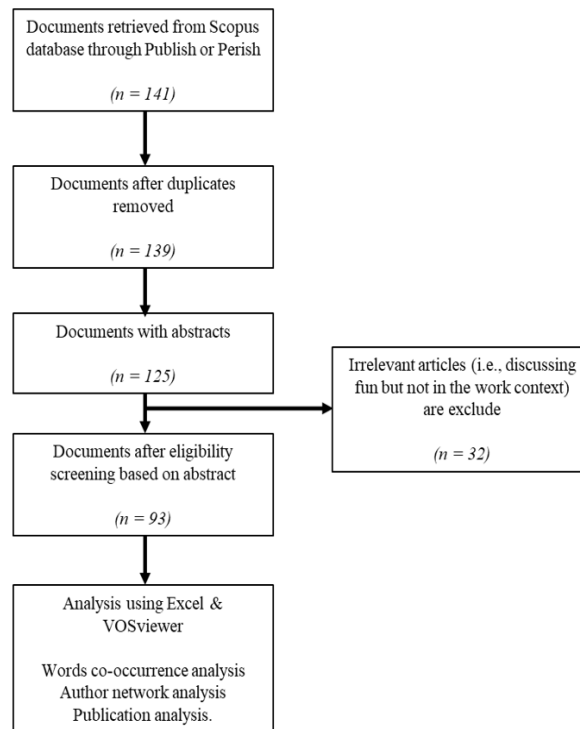
Despite the proven potential benefits of fun work documented by numerous studies, it is also met with negative perceptions from top management and employees (Michel, Tews & Allen, 2018). Some managers express skepticism towards fun work, believing it may blur the boundaries between work and play (Fleming, 2005). Additionally, the subjective nature of what constitutes "fun" can lead to differing interpretations and attitudes among individuals (Plester, Cooper-Thomas, & Winquist, 2015). Interview participants have shown cynicism and resistance towards activities arranged by their organization, contrasting with their more positive views of organic fun. Workplace humor can be perceived as harmful or making fun of someone, creating negative implications (Georganta & Montgomery, 2018). Furthermore, when faced with increased workloads, some employees may view fun activities as annoying.

Methods

This study employed a bibliographic approach to examine the research trend in fun work and identify the distribution of critical topics within academic literature. This study included a bibliometric analysis of publication analysis, author network analysis, and network of words co-occurrence analysis. Bibliographic research enables researchers to investigate the spread and impact of knowledge within a specific area of interest. Its primary objective is to quantify the influence of individuals, publications, or journals on a scientific field's overall development and structure (Kraus, Filser, Eggers, Hills, & Hultman, 2012). Bibliometrics is a quantitative and literature-based analysis that uses statistical methods to analyze the interrelationship of publications and articles. Ferreira (2018) explained that bibliometrics is a monitoring approach to developing a research topic by organizing the basic information, such as citations, authors, co-authors, journals, and keywords. The bibliometric analysis method is excellent in handling many articles to build up research topics, identify areas of interest, researcher interaction, and internal relations explanation (Van Eck & Waltman, 2010; Zupic & Cater, 2014; Vogel & Guttel, 2013). Unlike a traditional systematic literature review, this method also significantly reduces the researcher's bias, effort, and time (Radhakrishnan, Erbis, Isaacs, & Kamarthi, 2017).

Data Search Strategy

One hundred forty-one documents were successfully retrieved from the Scopus database through Publish or Perish software version 7 (Adams, 2019) using specific keywords ("fun work" OR "fun working" OR "fun workplace" OR "fun at work" OR "fun at the workplace" OR "fun of work" OR "fun of working" OR "work fun" OR "workplace fun"). The data retrieval was performed in the middle of May 2021, and the publication timeframe was set until 2020. Afterward, the initial document-checking process found two duplications and 14 documents without abstracts, yielding 125 articles for the period until 2020. Thirty-two articles with unrelated topics were removed after the title and abstract papers were read (i.e., discussing fun but not in the work or workplace context). Hence, 93 document data with abstracts were used in the present analysis, with the oldest document coming from 1988. Figure 2 shows the flow process of data retrieval.

Figure 2. Documents retrieval process

Analysis and Tools

In this study, we conducted several analyses, including a network of words co-occurrence analysis, author network analysis, and publication analysis.

Words co-occurrence was investigated to identify popular scientific research topics in fun work. Words co-occurrence analysis used words in the document (abstract, title, keywords) to find the connection between words and build a conceptual structure based on the idea. The concept behind a set of words that appear in the different documents is likely to have a related vision (Anderson, 2019; Zupic & Cater, 2015). The output of word co-occurrence analysis was a topic network of research in fun work, providing us with an overview of the field.

The author's co-occurrence supplied the overview of research collaboration and the social structure of research in fun work (Zupic & Cater, 2015). Authors work in the same scientific research developed co-authorship. This method analyzed co-authorship among contributing researchers and created authorship networks of research in fun work.

Publication analysis delivers descriptive analysis of the literature in fun work. It consisted of publication frequency by years, publication frequency by journals or publishers' name, the SJR score of the publications, and the number of citations. Publication frequency by year provides information about research trends in the given topic. It pre-

sents the prevalence overview of scientific research in fun work year by year and the rise of publications on a given topic. Publication frequency by journals provides information about the field of science or scientific setting most relevant to fun work.

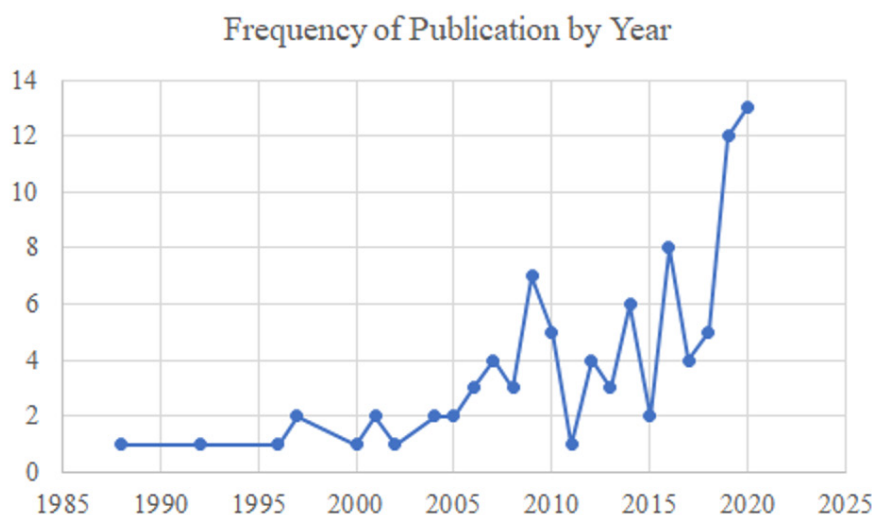
For the words co-occurrence and authors' co-occurrence, we used VOSViewer version 1.6.16 (Centre for Science and Technology Study, Leiden University) in our analyses. VOSViewers is software for constructing and visualizing bibliometric networks. The software extracts keywords, analyses the co-occurrence, and creates clusters based on the data. Words are used as indicators for the content of the research topic. Meanwhile, publication frequency by years and journals and SJR score were analyzed using frequency charts.

Literature Review

Publications Analysis

Ninety-three publications provided information about fun work. The first publications appeared in 1988; the present study's cut-off year is 2020. Figure 3 reveals the trend of research in fun work. Figure 3 shows that before 2005, the number of publications relating to fun work was low, and the growth was steadily slow. After 2005, fun work research started to show rapid growth, with a steep increase in 2019.

Figure 3. Documents retrieval process



In total, 93 publications were identified as research articles (80 documents), review articles (7 documents), conference papers (4 documents), and book chapters (2 documents). These had been cited 1,970 times, averaging 21.18 citations per article. These pub-

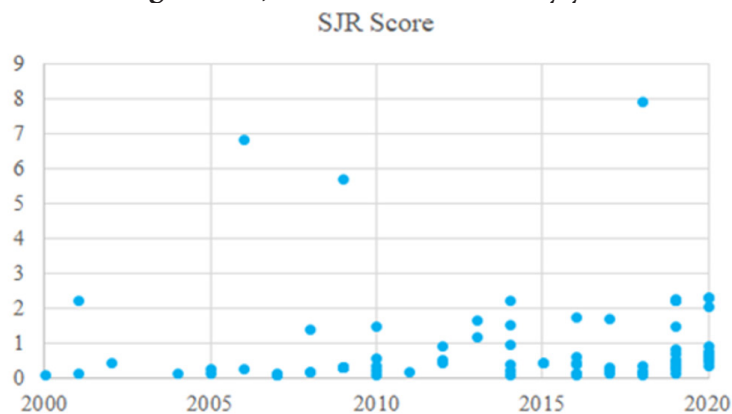
lications appeared in 64 journals, of which the Journal of Employee Relations produced the most and yielded 12 publications relating to fun work (Table 1).

Table 1. Top 10 academic journals with the most publications

Publication Name	Number of Articles
Employee Relations	12
International Journal of Hospitality Management	5
Journal of Human Resources in Hospitality and Tourism	3
Business Information Review	2
Health Care Manager	2
Human Relations	2
Human Resource Management International Digest	2
International Journal of Contemporary Hospitality Management	2
International Journal of Environmental Research and Public Health	2
International Journal of Mechanical and Production Engineering Research and Development	2

We also analyzed the SJR score of the 93 publications to evaluate the quality and relevance of the publications. SJR score represents the prestige of a journal. The SJR score is obtained from www.scimagojr.com. The score is obtained by considering the number of citations and the importance of publications cited in the journal. Since the SJR score was developed from the Scopus database, we only look for publications indexed by Scopus (Scimago Research Group, 2007). Note that for the same journals published twice or more in the same year, we count them as their frequency. The average SJR score is $M = .908$ ($SD = 1.344$, $Min. = .101$, $Max. = 7.936$). It suggested that the SJR score for research in fun work is low.

Figure 4. SJR score distribution by year



In addition to SJR score analysis, the number of articles published in that journal and the number of citations were used to measure the relevance and influence of the journals. Table 1 presented 11 journals that had published the most significant digit. Employee Relations Journal published the most with 12 papers, followed by the Internal Journal of Hospitality Management (5) and the Journal of Human Resources in Hospitality and Tourism (3). Table 2 revealed the most cited journals. The Top 5 journals that were cited the most were Employee Relation (439), Academy of Management Review (297), Human Relations (145), Business Information Review (115), and International Journal of Contemporary Hospitality Management (66).

Table 2. Top 10 academic journals with the most cited

Publication Name	Number of Citations
Employee Relations	439
Academy of Management Review	297
Human Relations	145
Business Information Review	115
International Journal of Contemporary Hospitality Management	66
International Journal of Hospitality Management	65
Journal of Applied Psychology	63
Journal of Leadership and Organizational Studies	57
Journal of Health and Human Services Administration	56
Journal of Non-profit and Public Sector Marketing	45

Author Network Analysis

Between 1988 and 2020, 172 authors contributed to 93 fun work publications. The top six authors with more than three publications were Michael J. Tews (Penn State University), John W. Michel (Loyola University Maryland), Robert C. Ford (University of Central Florida), A. Karl (University of Tennessee at Chattanooga), Barbara Plester (The University of Auckland Business School), and Simon C.H. Chan (The Hong Kong Polytechnic University). Table 3 revealed the number of authors with the highest number of publications. Of 93 publications with 172 contributing authors, 31 were single-authored, and 61 were multi-authored. To display the structure of the co-authors' relationship among contributing authors, we then examined the contribution of 172 unique authors by analyzing their co-occurrence and connection.

Table 3. The authors with the highest number of publications

Authors	Total link strength	Documents
Tews, M.J.	15	7
Michel, J.W.	11	5
Ford, R.C.	9	4
Karl, K.A.	7	4
Plester, B.	5	4
Chan, S.C.H.	1	4
Mclaughlin, F.S.	6	3
Newstrom, J.W.	6	3
Peluchette, J.V.	5	3
Xu, S.	6	2
Aquino, K.	5	2
Stafford, K.	5	2
Kim, W.	4	2
Morrison, R.L.	3	2
Owler, K.	3	2
Fineman, S.	1	2
Mousa, M.	0	2
Chou, C.M.	6	1
Han, J.	6	1
Hoffman, D.I.	6	1

First, we conducted a co-authorship analysis. Figure 5a shows that there were seventy different node colors representing different clusters. Seven clusters with more prominent nodes (red, green, blue ocean, yellow, purple, blue sky, and orange clusters) consisted of more than six authors. The remaining clusters with smaller nodes had several authors ranging from one to five. The authors that represented the significant clusters were Tews (red), Nanche and Chou (green), Ford (blue ocean), Capezio (yellow), Dong and Liu (purple), Karl (blue sky), and Plester (orange).

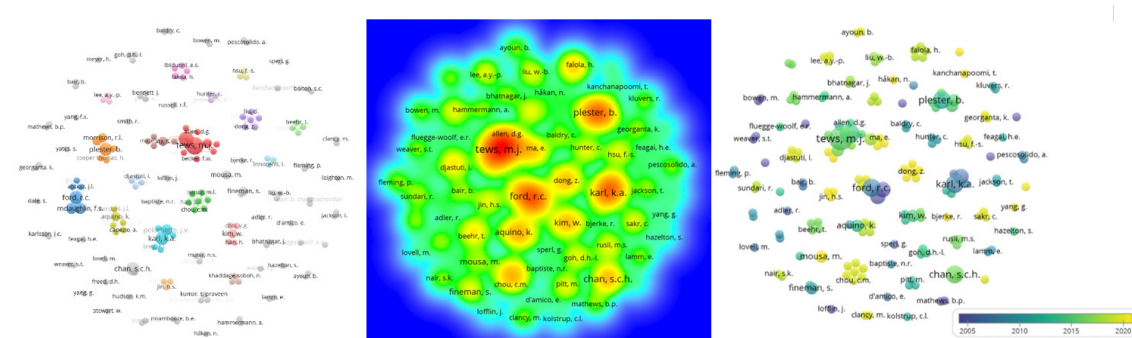
Figure 5b presents a heatmap of the 172 individuals level co-authorship network. Heatmap helps us to visualize the profile of the articles. The co-authorship network heatmap allows the visualization of researcher frequency and connectivity in the given topic, also known as density. Figure 5b informed the density map from an analysis of 172 authors on fun work. The color intensity and font size indicated connectivity. The more intense color and the bigger font size indicated the higher connectivity in the neighborhood. The font size represented the frequency of the author's appearance in several publications. The colors ranged from red to green. The redder the color and parallel, the more extensive the circle, the denser the author's meaning, the more often it appeared in the other articles,

and the more connected.

Four significant clusters (figure 5b) had the reddest color and the most enormous font size. They were Tews, Ford, Karl, and Plester clusters. Those clusters were predicted to be the most significant collaborators. Density offered an overview of 93 articles by showing which authors were necessary for analysis.

The period of article production is shown in Figure 5c. Dark bluer colors showed older articles, while yellower colors showed newer pieces. Karl Cluster was predicted to be a pioneer of fun work research and got stuck. Karl and Ford clusters were also heralded as pioneers and have continued their investigation. In comparison, Plester started her research on fun work late and stopped too soon. Afterward, Tews came later but produced fun work articles consistently. The yellow color wrote down recent research collaborations. Wang, Wang, Ma, Hoefnagel, and Joly are considered newcomers in this field. Between 2018 to 2020, Wang explored the role of play in the workplace in providing favorable outcomes to prevent employee burnout and increase employee productivity.

Figure 5. Documents retrieval process



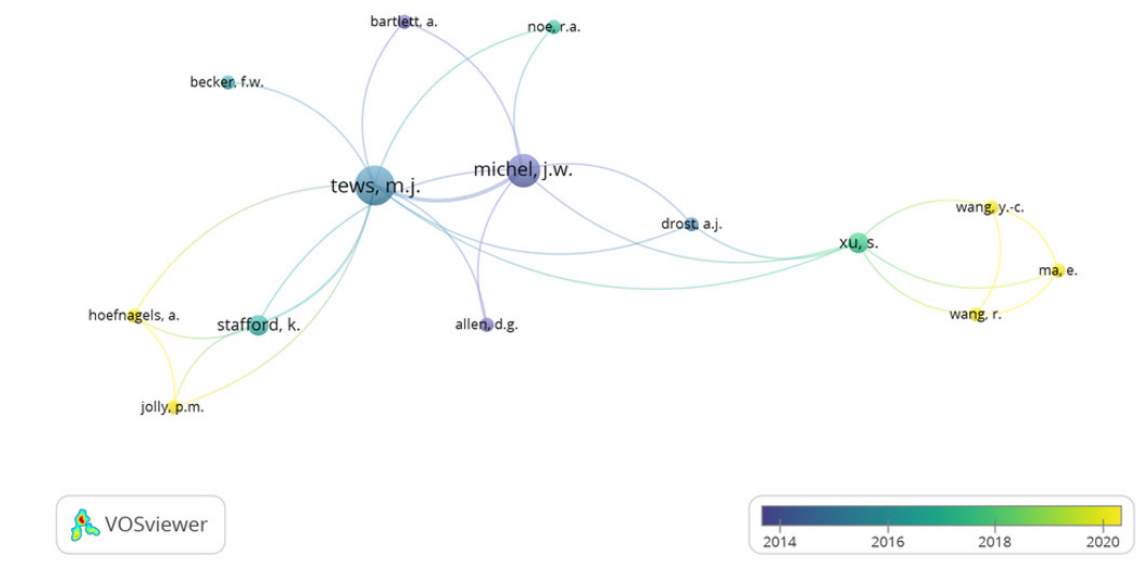
Network analysis also showed 14 authors with the most prominent nodes, indicating recurring research publications in fun work during the period (figure 6). Those 14 authors published ten journal articles that have been cited 239 times. Table 4 shows the number of publications and citations of the 14 most prominent network authors. Tews and Michel as the most central node indicating higher co-occurrence and stronger connections to other papers and publications, followed by Stafford, Jolly, Noe, Becker, Bartlet, Allen, Drost, Xu, Ma, Wang, and Wang. Figure 6 shows Tews and Michael as the most collaborators.

Table 4. Number of publications and citations of 14 authors with the most extensive network

Name	Number of Publications	Number of Citations
Tews	7	217
Michel	5	205
Stafford	1	43
Jolly	1	0
Noe	1	32
Becker	1	12
Barlett	1	57
Allen	1	51
Drost	1	22
Xu	1	22

Tews had been investigating fun work since 2012, made seven publications, and cited 217 other publications. Four out of 10 articles focused on the impact of fun in the workplace on employee turnover in the hospitality industry. The other three articles investigated the relationship between pleasure in the workplace and job embeddedness among millennials, the impact of enjoyment in work on the learning domain, and applicant attraction. Alola, Asongu, and Alola (2019), emphasized the significance of job embedment, highlighting its connection to favorable organizational outcomes like job satisfaction, innovative work behavior, and engagement. Michel had been exploring fun work since 2002 and published four papers with Tews as co-author. The latest research paper was published in 2017. Michel, Stafford, Jolly, Noe, Becker, Bartlett, Allen, Drost, and Xu were involved as Tews's research partners in seven publications on the positive effects of fun work.

Figure 6. The most extensive fun work co-authorships network.



Network of Words Co-Occurrence Analysis

This part identified the most frequent keywords in academic journals regarding fun work. We used at least three co-occurrence terms in VOSViewer and selected 60% of the most relevant comments from all words that met the threshold. As a result, only 89 keywords were retained for co-word analysis.

Of 89 keywords, five keywords (5.6%) appeared more than equal to 10 times, 46 keywords (51.7%) emerged 5 to 9 times and 38 keywords (42.7%) arose less than five times. Table 5 displays the top 13 occurring keywords and their total link strength. The total link strength refers to the number of links an item has with other objects and the overall strength of those connections. It encompasses the number of links an item has with other things and the combined strength or weight assigned to those links (Van Eck & Waltman, 2010). The fun work environment was the most occurring keyword for fun work topics in academic journals and was followed by development, value, strategy, and level. However, development was the most vital link keyword, followed by value, perception, strategy, and need.

Table 5. The most influential publications of co-word analysis

Label	Cluster	Total Link Strength	Occurrences
Fun Work Environ-ment	2	54	11
Development	2	81	10
Value	2	71	10
Strategy	2	69	10
Level	10	58	10
Perception	3	70	9
Attitude	3	63	9
Staff	1	48	9
Problem	2	59	8
Influence	4	52	8
Difference	3	49	8
Group	1	45	8
Job Satisfaction	3	43	8
Need	1	69	7
Year	2	55	7
Consequence	3	54	7
Number	2	52	7
Play	3	45	7
Case	2	43	7
Task	1	28	7

Focus	1	27	7
Creativity	1	44	6
Addition	4	42	6
Commitment	2	42	6

A network map of keyword co-occurrence and interactions in academic journals is looked at in Figure 7. The closeness of two nodes signifies the intensity of their connection, whereas a shorter distance implies a stronger relationship. The network connections represent keywords commonly appearing together in the analyzed papers, and a line connecting two keywords indicates their occurrence. The thickness of the line corresponds to the frequency of their co-occurrence, with thicker lines indicating a higher frequency. Lastly, the color of each node is assigned based on the cluster to which the item belongs (Van Eck & Waltman, 2010).

Figure 7. Fun work words co-occurrence by clusters

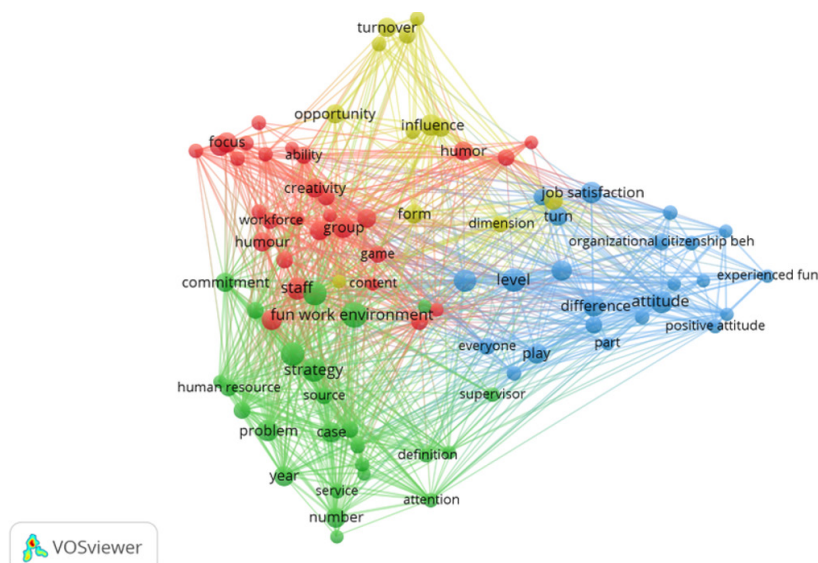


Table 6. Four fun work words co-occurrence themes

Cluster	N of Words	Words (After)	Theme
1	29	ability, attempt, communication, content, creativity, emergence, emotion, employee performance, expectation, fact, focus, game, generation, group, humor, need, negative emotion, organizational culture, positive impact, sense, staff, stress, task, team, view, work environment, work fun, workforce.	Activities of Fun Work

2	25	age, attention, case, challenge, commitment, customer, definition, development, fun work, fun work environment, fun workplace, human resource, leader, nature, new employee, number, practitioner, problem, service, source, strategy, suggestion, supervisor, value, year.	The Environment of Fun Work
3	23	affective events theory, attitude, consequence, difference, direction, everyone, experienced fun, feeling, greater level, higher job satisfaction, job performance, job satisfaction, level, organizational citizenship behavior, part, perception, play, positive attitude, positive effect, salience, task performance, total, turn.	The positive impact of fun work
4	12	addition, co-worker socializing, dimension, diversity, employee turnover, form, influence, manager support, opportunity, respect, retention, and turnover.	Support to fun work

Four clusters emerged from the words co-occurrence network analysis. Table 6 summarizes the findings with details of the terms and themes for each group.

Red cluster: Activities to make work fun

The first cluster that emerges is papers that discuss activities to make work fun. In this theme, researchers investigate research topics such as humor and games to find their associations with fun work. Two prominent examples are Romero and Pescosolido (2008) and Plester (2009), which discuss how humor could lead to workplace fun. Another famous example is Dale (2014), who discusses workplace gamification to make work fun. Further, Chan (2010) breaks fun work activities into four types: staff-oriented, supervisor-oriented, social-oriented, and strategy-oriented. There were three forms of workplace creating fun: managed, organic, and task fun (Plester & Hutchison, 2016). However, for making fun activities, we had to consider the type of employee, such as the generation gap (Lamm & Meeks, 2009), gender, position, tenure, and education (Nnamboozee & Parumasur, 2016).

Green cluster: Fun work environment system

The second cluster is research about fun work environment systems. Here, the green group emphasizes the design of the workplace that is associated with fun. For example, Fleming

and Sturdy (2009) highlight the neo-normative control management that does not restrain employees from being themselves in the workplace. Joy in a work environment becomes essential since the workplace is a serious and stressful place. Hence, support between organization and manager for developing and executing something perceived as fun activities was crucial to becoming a functional, fun workplace (Ford, Newstrom, & McLaughlin, Making workplace fun more functional, 2004). Before fun work became popular, ISO 9000 had already instructed employers to create a fun work environment (Stewart, 1996). At the same time, Berdahl and Aquino (2009) reported that sexual behavior at work (for example, sexual jokes and propositions) had happened, and some men and women employees felt enjoyed. However, it was harmful to employee work and well-being. This research echoed (Chen & Ayoun, 2019) finding that aggressive humor (sarcasm or irony) was considered a significant part of acceptable in-group members as well as helping foster a sense of identity and community.

Blue cluster: Positive effects of fun work

The third emerging cluster indicates how fun work can create positive effects. Some positive outcomes include higher job satisfaction, higher job performance, and organizational citizenship behavior (Choi, Kwon, & Kim, 2013). It has also been found that fun work can attract new talents (Tews, Michel & Bartlett, 2012). Based on Chan and Mak (2016), the relationship between workplace fun and employee job satisfaction was mediated by trust in management. Also, the superior level of fun in the workplace correlated with workplace fun, trust in management, and job satisfaction. Tews, Michel, and Noe (2017) claimed that fun activities were also significantly related to informal learning; they helped the learning process from other employees and non-interpersonal sources. Fun and enjoyable management techniques had advantages in attracting new employees, better customer satisfaction, more substantial employee commitment, lower employee turnover and absenteeism, and increasing job satisfaction, creativity, and an act of citizenship (Ford, McLaughlin, & Newstrom, 2004).

Yellow cluster: Support for fun work

The final cluster that appears is support for fun work. Not all employers support or agree with fun work, although it shows many benefits. The prominent example for this cluster is from Tews, Michel, and Stafford (2013). They discussed that supporting fun work from managers was a critical factor in reducing turnover, although it adversely affects performance. In addition, Tews, Michel, and Allen (2014) found that manager support and high-quality co-worker relationships were vital in reducing turnover value. The study by Nair and Nair (2018) also showed that organizational support for employee engagement increased productivity, retention, commitment, and profitability.

Discussion

This paper extensively explores research papers on the science of fun work spanning the last three decades, utilizing the Scopus database as the primary source of inquiry. The primary goal is to comprehend the trajectory of fun work research and identify distinct research streams by delving into the critical topic of fun work in academic literature. It also introduces a nuanced perspective on managed fun, acknowledging its potential coerciveness while highlighting how organic fun liberates individuals from compulsion. This perspective underscores the importance of fun related to tasks, challenging the conventional notion of a strict work-fun divide. The study illuminates the complexities and tensions surrounding fun at work, offering a rich tapestry of diverse views and experiences among organizational members (Plester, Cooper-Thomas, & Winqvist, 2015). The multifaceted exploration of the science of fun work presented in this paper contributes to a comprehensive understanding of the subject. It paves the way for further research and practical implications in diverse organizational contexts. The surge in the development of fun work becomes palpable in 2019, indicative of a heightened interest in this dynamic subject.

Examining the top three most cited publications associated with fun work reveals Employee Relations (with 439 citations), Academy of Management Review (with 297 citations), and Human Relations (with 145 citations). This analysis serves as an integral part of performance analysis, dissecting the contributions of research constituents to the overarching topic. The frequency of sources serves as a barometer of a journal's influence, with a higher count symbolizing robust interest and exerting a substantial impact on the evolution of fun work research.

The co-author heatmaps unveil four hotspots, denoting frequent collaborations, with the Tews cluster emerging as the most extensive and vibrant. This cluster also garners the highest number of citations, underscoring heightened productivity and a profound interest in the subject matter. The more significant number of citations is a marker of productivity and a strong collective interest in the topic.

This paper identifies four clusters emanating from the co-occurrence network analysis, representing distinct research streams in the science of fun work. These four streams encapsulate the fun work environment system, activities aimed at infusing fun into work, the positive effects of fun work, and support structures for fostering fun work.

McDowell's seminal work in 2004 asserts a significant correlation between a fun climate, the intention to leave, and organizational commitment. This research not only establishes the nexus between job satisfaction and a fun environment but also introduces the multidimensional construct of fun climates, as conceptualized by Fluegge (2008) and McDowell (2004). This construct encompasses socializing, celebrating, personal freedoms, and global fun. Socializing reflects enjoyable interactions with colleagues, celebrating incorporates formal fun activities, personal freedoms denote the freedom to enjoy work,

and global fun assesses the overall fun quotient of the workplace. ISO 9000 guidelines advocate for implementing a fun work environment, positing its critical role in enhancing employee productivity (Stewart, 1996), thus emphasizing the collective responsibility of all organizational elements in cultivating a fun work culture.

Furthermore, many studies substantiate the benefits of fun work, including heightened job satisfaction, job performance, and organizational citizenship behavior. Chan's (2019) research underscores that employees' perception of fun at the workplace can moderate the positive relation between participative leadership and work engagement and job satisfaction. This highlights the managerial imperative to foster fun activities at work, ranging from casual lunch gatherings to game days and other friendly activities aimed at engaging employees. Tews, Michel, and Noe's (2017) survey of 206 managers accentuates the significant contribution of fun activities to informal learning. However, the impact of managerial support for fun exhibits variation, emphasizing the strategic integration of fun into informal learning by considering individual personalities for optimal effectiveness. Djastuti et al. (2019) establish that organizational commitment and job satisfaction act as mediators for the impact of fun work, significantly influencing employee performance, particularly in manufacturing companies. The positive correlation between workplace satisfaction and job performance is echoed by Russell (1988), who proposes that reduced sick leave usage can indicate a fun workplace. Dempcy and Tihista's (1981) research adds depth by positing illness as a product of stress caused by over-commitment to a job, prolonged work hours under extreme pressure, and neglect of personal well-being.

The integral role of Human Resource Management (HRM) in fostering a fun work environment to increase employee commitment is emphasized by Fineman (2007). Empirical research by Chan and Mak (2016) identifies trust in management as a mediator between workplace fun and employee satisfaction. Leaders play a vital role in supporting a conducive environment (Alif & Nastiti, 2022). Chen and Ayoun (2019) highlight the positive correlation between supervisor support for a fun work environment and higher job embeddedness, underscoring the indispensable role of leaders and human resource management in supporting a fun work environment. The findings strongly advocate for leaders to not only encourage playful work design but also inspire their teams to incorporate humor. Chen and Ayoun (2019) go a step further by suggesting that organizations, especially in the hospitality industry, should actively cultivate a culture of fun and humor.

In addition, leadership style also has a vital role in creating a fun environment in the workplace. For example, Syahrul (2020) states that an empowering leadership style increases employee intrinsic motivation (feeling motivated, happy, and enthusiastic in their job). This condition is related to emerging psychological empowerment (meaningful, competent, impactful, and connected) in the employee (Meng, Zou, He, & Luo, 2015).

Not only intrinsic motivation, Thomas and Velhouse (1990) track psychological empowerment also affect employee satisfaction.

Becker and Tews (2016) provide a comprehensive definition of fun activities at work, encompassing various activities conducted during work hours or sponsored by the workplace. These activities are designed to encourage employee socialization, providing avenues for enjoyment, leisure, and play distinct from work-related responsibilities. Ford, McLaughlin, and Newstrom (2003) identify three categories of fun work elements:

1. Recognition of personal milestones (such as birthdays and anniversaries).
2. Social events (such as picnics, parties, and social gatherings).
3. Public celebrations of professional achievements (such as award bouquets).

In 2009, Bolton and Houlihan introduced a matrix exploring managerial motivations for introducing workplace fun. This matrix incorporates HR strategies and management perspectives. It delineates four primary dimensions: fun as a developmental reward, fun as engagement, fun as a means of alleviation, and fun as a form of containment.

In addition, other research underscores the role of humor (Romero & Pescosolido, 2008; Plester, 2009) and gamification (Dale, 2014) in promoting a fun environment in the workplace. Humor, broadly defined as any expression eliciting a positive cognitive or emotional reaction, serves as a collaborative tool, stress buffer, and social interaction enhancer (Romero & Cruthirds, 2006). Aligning this definition with various forms of enjoyment implies that humor from colleagues constitutes a subset of the coworker socializing aspect of enjoyment. In contrast, humor from a manager forms a subset of managerial support for enjoyment.

On the other hand, Fleming and Sturdy's (2009) exploration of Sunray's implementation of a culture program entitled "the 3Fs: Fun, Focus, Fulfilment" provides valuable insights into how a company aims to emphasize "being yourself" in the workplace. However, this culture is perceived as a form of neo-normative control, as outlined by five related dimensions observed at Sunray:

1. Reinforcement of societal constructions: Sunray reinforces societal constructions of identity, framing diversity in specific ways such as sexuality, consumerism, and playfulness rather than considering broader aspects like occupational skills or familial roles.
2. Implicit and explicit limits: Despite encouraging individualism and creativity, there are limits to self-expression. Organized events, such as the Away Day, may exclude those who do not conform to the expected "fun" and "different" persona, contradicting the rhetoric of a laissez-faire approach.

3. Appropriation of identities for productive ends: The regime at Sunray appropriates and partially constructs identities, mainly focusing on youthfulness, sexuality, and enthusiasm. These characteristics enhance customer service and contribute to the overall "fun" atmosphere as part of the job.
4. Self-disciplinary control: The encouragement and visibility of private identities at Sunray lead to a form of self-disciplinary control. Individual success and failure are attributed to the type of person an employee is, fostering a judgmental environment based on how well they embrace the 3Fs program.
5. Resistance and the "be yourself" philosophy: The "be yourself" philosophy at Sunray is seen as a controlling element, inspiring a unique form of resistance. While normative control often leads employees to hide their real identities, at Sunray, the control function encourages the expression of real identities. The passage raises questions about how resistance manifests when employees are encouraged to be themselves.

The idea of fun is subjective, varying from person to person, and the concept is elusive. A clear conceptual understanding of fun is necessary to avoid difficulties when investigating the connections between fun and organizational outcomes. The variability in individuals' experiences of fun contributes to a lack of agreement on what constitutes fun for members within an organization (Owler, Morrison, Plester, 2010; Aldag & Sherony, 2001; Ford et al., 2003; Plester & Sayers, 2007; McDowell, 2004; Warren & Fineman, 2007). Smith and Lewis (2011) introduce the "dynamic equilibrium model of paradox," unveiling how organizations handle diverse perspectives, leading to internal tensions due to differing perceptions and demands. This model sheds light on the intricate nature of workplace fun, particularly the challenges posed by managed fun organized by managers.

Conclusion

This study showed that there has been an increasing trend in fun work research. Since 2005, the number of publications on fun work has accelerated and showed a steep rise in 2019, indicating the increased interest in fun work.

According to the co-authorship network analysis, there were 172 authors who yielded 70 co-authorship clusters based on the heatmap. Out of these clusters, there were four significant ones. We also presented a heatmap of the co-authorship network. It identified the four most prominent contributor authors on fun work literature: Michael J. Tews, R. Ford, Barbara Plester, and Katherine Karl.

We identified four clusters of research streams: activities to make work fun, a fun work environment, positive effects of fun work, and support for fun work. These clusters are also known as research fronts in literature. Recognizing different research fronts can serve as a source of inspiration for researchers to determine the direction in which a particular discourse should progress. Alternatively, it can help identify areas where discussions are lacking and introduce new topics for exploration.

It is anticipated that the exploration study of fun work will inspire new scholars to engage in this emerging field. Furthermore, the findings from the examination of relevant literature will assist researchers in defining the scope of their current research and identifying potential future research paths.

Limitations

While this study contributes valuable insights into the scientific structures and relationships within the field of fun work through bibliometric analysis, it is essential to acknowledge its limitations. These limitations can guide future research and investigations in this area.

Firstly, selecting search terms and query formulation plays a crucial role in the outcomes of bibliometric analyses. In this study, the specific search terms chosen may have unintentionally excluded influential sources and scholars in the field of fun work. Future research may yield a more diverse set of keywords that would provide different results and summarize more relevant publications and researchers. This requires an investigation of various combinations of keywords, synonyms, and related terms that capture the multidimensional nature of joy work to ensure completeness. This will increase the likelihood of detecting all publications and authors who may have made significant contributions to the field but were not included in the initial analysis. With a set of search terms that better cover the diversity of a particular field of study, one can increase the level of representativeness and inclusivity of bibliometric analysis and ultimately provide a better understanding of its development and influential contributors.

Secondly, this study relies on the Scopus database for analysis, mainly due to the SJR score for academic publications provided by Scopus. While this approach ensures consistency and reliability in assessing the impact and significance of included publications, it is essential to acknowledge that other sources may offer alternative and diverse perspectives on the subject matter. Future research could expand its scope by including other databases and sources, as this research is interdisciplinary and can utilize several sources. Adding other databases, such as Web of Science or Google Scholar, would have resulted in a broader range of literature searched for this study, allowing identification of research published in non-traditional academic media, along with gray literature and

publications targeting practitioners. Therefore, an expanded approach such as this will make field examinations more inclusive and enable a wider range of views to be captured, thereby increasing the insight and relevance of research findings.

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Appendix

Table 1. Top 10 academic journals with the most publications

Publication Name	Number of Articles
Employee Relations	12
International Journal of Hospitality Management	5
Journal of Human Resources in Hospitality and Tourism	3
Business Information Review	2
Health Care Manager	2
Human Relations	2
Human Resource Management International Digest	2
International Journal of Contemporary Hospitality Management	2
International Journal of Environmental Research and Public Health	2
International Journal of Mechanical and Production Engineering Research and Development	2

Table 2. Top 10 academic journals with the most cited

Publication Name	Number of Citations
Employee Relations	439
Academy of Management Review	297
Human Relations	145
Business Information Review	115
International Journal of Contemporary Hospitality Management	66
International Journal of Hospitality Management	65
Journal of Applied Psychology	63
Journal of Leadership and Organizational Studies	57
Journal of Health and Human Services Administration	56
Journal of Non-profit and Public Sector Marketing	45

Table 3. The authors with the highest number of publications

Authors	Total link strength	Documents
Tews, M.J.	15	7
Michel, J.W.	11	5
Ford, R.C.	9	4
Karl, K.A.	7	4
Plester, B.	5	4
Chan, S.C.H.	1	4
Mclaughlin, F.S.	6	3
Newstrom, J.W.	6	3
Peluchette, J.V.	5	3
Xu, S.	6	2
Aquino, K.	5	2
Stafford, K.	5	2
Kim, W.	4	2
Morrison, R.L.	3	2
Owler, K.	3	2
Fineman, S.	1	2
Mousa, M.	0	2
Chou, C.M.	6	1
Han, J.	6	1
Hoffman, D.I.	6	1

Table 4. Number of publications and citations of 14 authors with the most extensive network

Name	Number of Publications	Number of Citations
Tews	7	217
Michel	5	205
Stafford	1	43
Jolly	1	0
Noe	1	32
Becker	1	12
Barlett	1	57
Allen	1	51
Drost	1	22
Xu	1	22

Table 5. The most influential publications of co-word analysis

Label	Cluster	Total Link Strength	Occurrences
Fun Work Environ- ment	2	54	11
Development	2	81	10
Value	2	71	10
Strategy	2	69	10
Level	10	58	10
Perception	3	70	9
Attitude	3	63	9
Staff	1	48	9
Problem	2	59	8
Influence	4	52	8
Difference	3	49	8
Group	1	45	8
Job Satisfaction	3	43	8
Need	1	69	7
Year	2	55	7
Consequence	3	54	7
Number	2	52	7
Play	3	45	7
Case	2	43	7
Task	1	28	7
Focus	1	27	7
Creativity	1	44	6
Addition	4	42	6
Commitment	2	42	6

Table 6. Four fun work words co-occurrence themes

Cluster	N of Words	Words (After)	Theme
1	29	ability, attempt, communication, content, creativity, emergence, emotion, employee performance, expectation, fact, focus, game, generation, group, humor, need, negative emotion, organizational culture, positive impact, sense, staff, stress, task, team, view, work environment, work fun, workforce.	Activities of Fun Work
2	25	age, attention, case, challenge, commitment, customer, definition, development, fun work, fun work environment, fun workplace, human resource, leader, nature, new employee, number, practitioner, problem, service, source, strategy, suggestion, supervisor, value, year.	The Environment of Fun Work
3	23	affective events theory, attitude, consequence, difference, direction, everyone, experienced fun, feeling, greater level, higher job satisfaction, job performance, job satisfaction, level, organizational citizenship behavior, part, perception, play, positive attitude, positive effect, salience, task performance, total, turn.	The positive impact of fun work
4	12	addition, co-worker socializing, dimension, diversity, employee turnover, form, influence, manager support, opportunity, respect, retention, and turnover.	Support to fun work

Figure 1. Google’s Book Ngram Viewer for fun work.

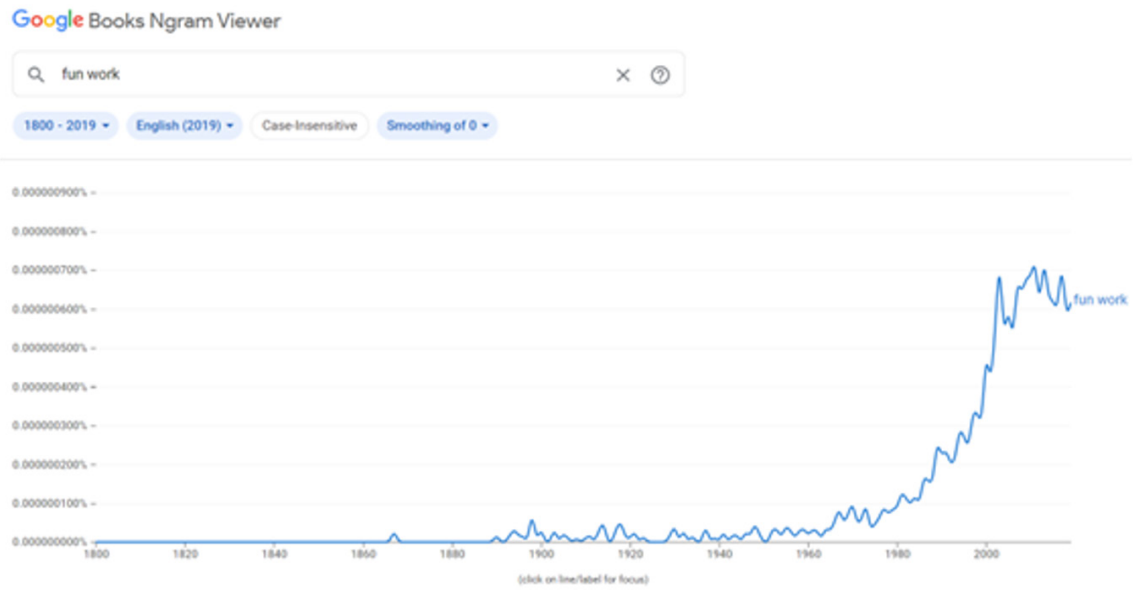


Figure 2. Documents retrieval process

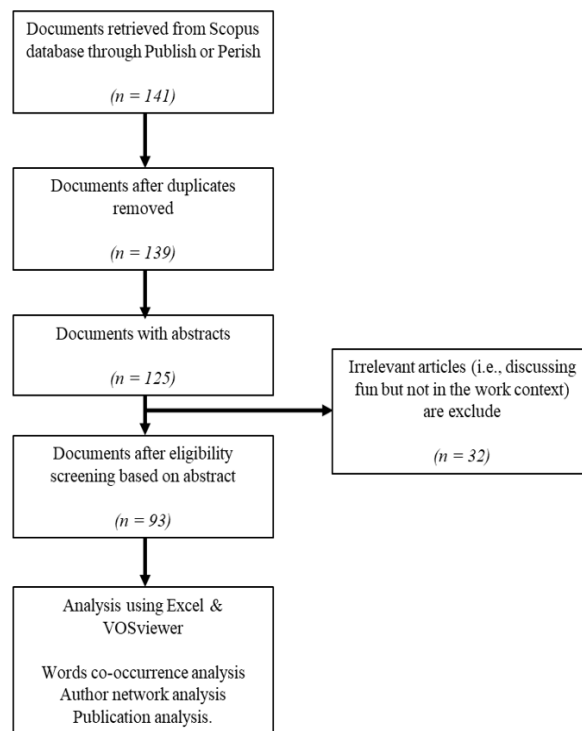


Figure 3. Documents retrieval process

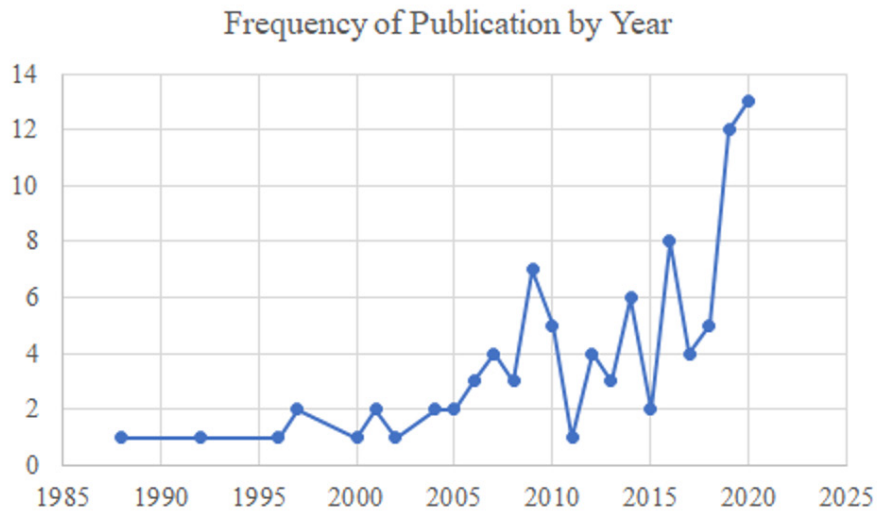


Figure 4. SJR score distribution by year

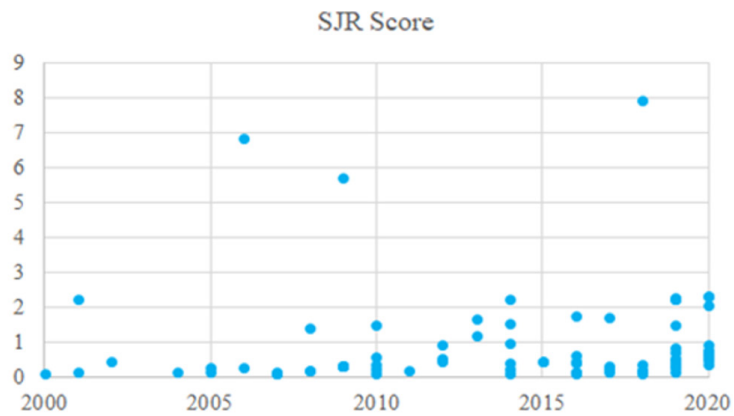


Figure 5. Documents retrieval process

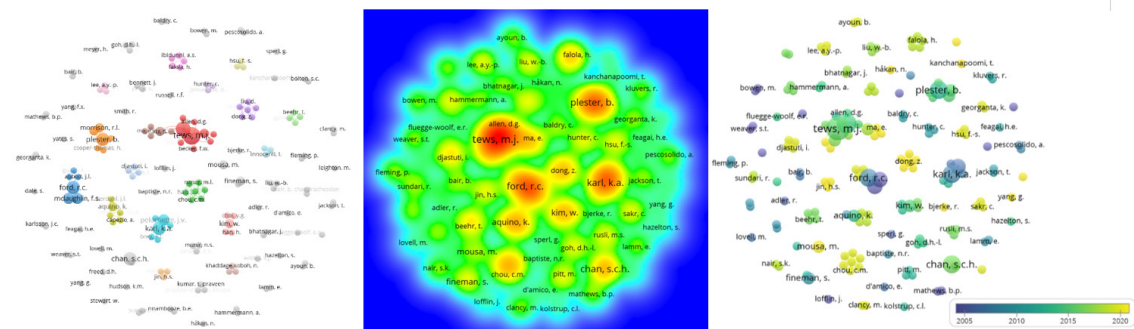


Figure 6. The most extensive fun work co-authorships network.

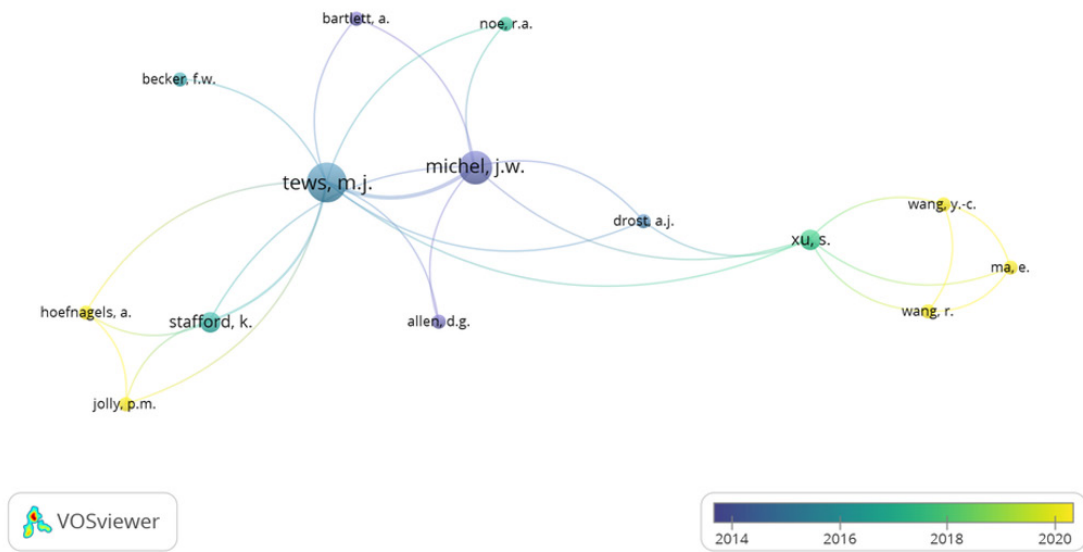


Figure 7. Fun work words co-occurrence by clusters

