



# How Do Job Crafting Profiles Manifest Employees' Work Engagement, Workaholism, and Epistemic Approach?

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## Abstract

The present study identifies job crafting profiles of public sector employees and how they differ in terms of employees' work engagement, workaholism, and approach to learning. Participants represent various occupations from educational field (e.g., teachers), technical field (e.g., ICT-experts), and administrative field (e.g., customer servants). Using latent profile analysis, three job crafting profiles could be identified: *Passive crafters* (25%), *Average crafters* (57%), and *Active crafters* (18%). Passive crafters reported the lowest values in all approach-oriented job crafting strategies (increasing job resources and demands) and the highest value in avoidance-oriented job crafting (decreasing hindering job demands). Active crafters reached the highest values in all approach-oriented job crafting and the lowest value in avoidance-oriented job crafting. Average crafters used all job crafting strategies close to the average level. The lowest work engagement, workaholism, and reflective-collaborative approach to learning were reported by passive crafters. Both average crafters and active crafters reported higher workaholism and reflective-collaborative learning approach than passive crafters. Active crafters reported the highest work engagement. Study findings show the interplay between employees' job crafting, work engagement, workaholism, and epistemic approach. This study extends workplace learning research field by offering new theoretical information and is the first one exploring job crafting profiles and their differences regarding employees' epistemic approach; reflective learning, collaborative knowledge-building, and metacognition. Study discusses theoretical contributions and practical implementations, which may be used in work life induction, and in fostering job crafting and continuous workplace learning.

**Keywords** Job crafting · Work engagement · Workaholism · Epistemic approach · Workplace learning

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## Introduction

Life in workforce is constantly changing due to structural and societal changes (Li et al., 2020), work intensification (Korunka et al., 2015), increased mental health challenges (Blomgren & Perhoniemi, 2022), and accelerated digitalization (Hazelzet et al., 2019; Korunka et al., 2015; Mazzetti et al., 2018). Digitalization brings along new job demands but it may also create new opportunities for workplace learning (Harteis, 2022). In fact, continuous self-directed learning via digitalization services (e.g., blogs, YouTube) is perceived as a natural part of work and shared responsibility among ICT employees (Lemmetty & Collin, 2020). Also increased use of AI (Artificial Intelligence) is influencing learning and skill development, knowledge sharing, and e.g., problem solving in workplaces (Pereira et al., 2023).

Increases in speed and number of changes challenge learning and increase stress if employees do not have sufficient resources to deal with them (Hobfoll, 1989). To cope with these challenges, employees need adaptivity, which involves understanding and flexibly using different ways of knowing at work (Markauskaite & Goodyear, 2017). Employees also need tools to learn new skills and to keep up in professional development (Tims et al., 2012). Workplace learning is becoming more important because solving unprecedented work-related challenges often need to be constructed and solved at the very moment they arise (Harteis, 2022; Markauskaite & Goodyear, 2017).

Workplace learning may be increased in work activities (Billett, 2014) by utilizing job-related theoretical knowledge, knowledge learned in practice, and self-regulative knowledge including metacognitive and reflective skills (Tynjälä, 2008; Tynjälä & Gijbels, 2012). In the present study, the Job Demands-Resources Theory is seen as a workplace learning framework (JD-R; Demerouti et al., 2001) and job crafting as a tool for workplace learning (Decius et al., 2023). Job crafting refers to self-regulative behavior (Bakker & Oerlemans, 2019) when employees make concrete self-directed changes at work to better align their job with their own competencies and preferences (Wrześniewski & Dutton, 2001). These self-directed changes are operationalized via four job crafting strategies (Tims et al., 2012; Tims & Bakker, 2010) manifesting job resources and demands. Three of these strategies involve increasing job resources and job demands and one strategy involves decreasing job demands. It is interesting to examine job crafting profiles, as various job crafting strategy combinations may play different roles and have different outcomes regarding well-being and learning (Petrou & Xanthopoulou, 2021). Investigating job crafting may also extend the understanding of developing employees' general working life capabilities (e.g., self-regulation and learning), which may be very valuable in hectic working life (Harteis, 2022). Consequently, this study explores job crafting profiles among public sector employees.

This study further explores whether job crafting profiles differ regarding positive work engagement (Schaufeli et al., 2002) and unhealthy relation towards work, namely workaholism (Clark et al., 2016; Gillet et al., 2018). Work

engagement refers to a long-lasting positive psychological state of well-being and work-related fulfillment of vigor, dedication, and absorption (Schaufeli & Bakker, 2004; Schaufeli et al., 2006). Workaholism is a compulsory attitude towards work, which often has negative impacts on employees' health and work performance (Gillet et al., 2018; Shimazu et al., 2015). Exploring job crafting profile differences in work engagement and workaholism will extend the workplace learning research by offering new theoretical knowledge to utilize in workplace learning and it may increase understanding about how job crafting behavior is associated with well-being and ill-being (Gillet et al., 2022).

Literature on workplace learning often describes workplace circumstances focusing less on learning processes (Harteis, 2022). Therefore, we are motivated to bring earlier epistemic research on students and teachers into other contexts of work life. Epistemic approach refers to individuals' beliefs of what knowledge, knowing and learning is (Lonka et al., 2021). Namely reflective-collaborative approach is based on reflection, metacognition, collaboration, and knowledge creation related learning (Lonka, 1997; Lonka et al., 2021; Deng et al., 2014). It is interesting and important to investigate job crafting in terms of employees' approach to learning and knowing because the approach may influence their behavior in job crafting and workplace learning (Lonka & Lindblom-Ylänne, 1996). For example, if employees see themselves as reflective and active professionals who can proactively create in collaboration with others, they may be active in job crafting. Awareness about epistemic approach may boost employees' workplace learning because individuals' beliefs about knowledge and learning are dynamic and evolving constructs (Nussbaum & Bendixen, 2003; Nist & Holschuch, 2005). Employees' learning, motivation, commitment, and well-being may also increase the organizational capital and the ability of organizations to survive in the global and societal changes (Rantanen et al., 2022) as well as enhance organizational goals to be realized through employees' capacities and interests (Billett, 2014).

### **Job Crafting as a Workplace Learning Tool**

Job Demands-Resources Theory (Demerouti et al., 2001) provides the framework for resource-based job crafting model, which emphasizes employees' active role in balancing job demands and job resources according to ones' own abilities and preferences (Tims & Bakker, 2010). Balancing means changing job demands, job resources, or both simultaneously. Employees who craft their jobs often gain positive outcomes in dealing with new demands (van Wingerden & Poell, 2017), building a good person-job fit (Kooij et al., 2017; Li et al., 2020), enhancing satisfaction of psychological needs (De Bloom et al., 2020), and increasing well-being, meaningfulness, and good work performance (Tims et al., 2012; Wrześniewski & Dutton, 2001) even in the retirement age (Lichtenthaler & Fischbach, 2016).

Employees may use job crafting in workplace learning through four strategies: (1) increasing structural job resources (e.g., developing one's capabilities); (2) increasing social job resources (e.g., colleagues' support); (3) increasing challenging job demands (e.g., working in new projects), and (4) decreasing hindering job demands

(e.g., minimizing cognitive/emotional demands) (Tims & Bakker, 2010). Job crafting strategies are hierarchically organized to positive energization and future focused approach-oriented job crafting (employees increase their job resources and demands) and to negative energization or away-directed avoidance-oriented job crafting (employees decrease job demands) (Bruning & Campion, 2018; Elliot, 2006; Zhang & Parker, 2019). Approach-oriented job crafting strategies involve active behaviors to enhance personal development (Boehnlein & Baum, 2020), such as developing skills, increasing autonomy (Lazazzara et al., 2020; Tims et al., 2021), asking for feedback and guidance, and gaining responsibilities (Lazazzara et al., 2020; Tims et al., 2012, 2021). Avoidance-oriented job crafting involves less proactive behavior (Zhang & Parker, 2019), instead it often is about reducing work intensity, avoiding non-routine tasks, and withdrawing from collaboration (Lazazzara et al., 2020; Tims et al., 2012). Avoidance-oriented job crafting may result in accumulation of demands and role conflicts (Bakker & Demerouti, 2017), which, in turn, may drain employees' energy and make them less able to reach work-related goals (Salmela-Aro et al., 2009).

These two job crafting orientations may occur also differently, as approach-oriented job crafting may involve costs like increased workload (Harju et al., 2021), and avoidance-oriented job crafting may become necessary to optimize employees' well-being and performance (Nissinen et al., 2022; Demerouti & Peeters, 2018). Either approach- or avoidance-oriented crafting strategies alone are not optimal for work engagement or performance, however, employing both orientations simultaneously is often beneficial (Mäkikangas, 2018; Petrou & Xanthopoulou, 2021; Sepälä et al., 2020; van Wingerden et al., 2017a, b, c), especially in complex jobs (Bai et al., 2021) or during demanding work periods (Petrou & Xanthopoulou, 2021), such as crisis.

Employees may use various combinations of job crafting (Mäkikangas & Schaufeli, 2021), which may depend on the direction they seek to develop their jobs. Some may use mainly avoidance-oriented job crafting (e.g., avoiding energy draining meetings and colleagues, or mentally demanding tasks), whereas others may use both job crafting orientations or mainly approach crafting (e.g., developing skills or learning to use new technological tools) (Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021). Previous person-oriented studies have shown the importance of the simultaneous use of approach- and avoidance-oriented job crafting for employees' work engagement and person-job fit (Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021). However, less is known about the relationship between job crafting and workaholism and between job crafting and employees' epistemic approach.

## How Work Engagement and Workaholism Relate with Job Crafting

Work engagement refers to experiences of energy, dedication, and absorption at work (Schaufeli et al., 2002) and is positively associated with job crafting (Rudolph et al., 2017). Engaged employees are an important resource for sustainable productivity and prosperity (Phelps, 2013) and work engagement is seen as an optimal state for both employee and employer (Bakker & Bal, 2010). Workaholism, in

turn, refers to excessive addiction to work, causing burnout and negative outcomes (e.g., physical and mental health problems, decreased work performance) (Gillet et al., 2018; Shimazu et al., 2015). Thus, workaholism is not related to high levels of performance or job satisfaction, and it may end up costing organizations more money through decreased health and increased absence from work (Clark et al., 2016). Engaged employees invest a lot of energy in work because they find it enjoyable and meaningful, while employees who score high in workaholism do so due to obsession, anxiety (Morkevičiūtė et al., 2021), or irrational beliefs about the consequences if they do not reach their goals (Zeijen et al., 2018). Decreasing ones' job demands via job crafting has shown to decrease workaholism, however, merely decreasing job demands is not a successful strategy for increasing work engagement (Nissinen et al., 2022).

Job crafting often predicts work engagement (Knight et al., 2019; Schaufeli et al., 2009; Vogt et al., 2016) as approach-oriented strategies are positively and avoidance-oriented strategies are negatively associated with work engagement (Hakanen et al., 2018; Harju et al., 2021). However, the relationship can be reciprocal (Zeijen et al., 2018) as the intention to act on job crafting and the experience of work engagement predicted actual job crafting, which in turn predicted future work engagement (Tims et al., 2015). Active and diverse use of job crafting strategies is seen as one prerequisite for a stable work engagement (Hakanen et al., 2018) and a sign of a healthy and active employee (Mäkikangas, 2018).

The relationship between workaholism and job crafting often varies, because there is a lack of a unified definition of workaholism (Lee et al., 2021; Morkevičiūtė et al., 2021). Workaholism has been found to be positively associated with approach-oriented job crafting strategies of increasing structural job resources, challenging job demands (Hakanen et al., 2018), and with increasing social job resources (Zeijen et al., 2018). Decreasing hindering job demands on the other hand, has shown to associate negatively with workaholism, which means that it decreases workaholism (Nissinen et al., 2022). Thus, it may depend on job crafting combinations and e.g., occupational factors whether job crafting associates with work engagement or with workaholism.

### **What are Epistemic Approaches and Why May They Matter?**

In this study we have named employees' relatively permanent beliefs about learning, knowledge and the processes of knowing (Hofer, 2016; Muis et al., 2016) as epistemic approach. A reflective-collaborative approach about learning and knowledge was found among university students (Lonka et al., 2021) and later among in-service teachers (Lammasaari et al., 2021, 2022). This particular approach presents knowledge as complex, relativistic, and integrated in nature (Fives et al., 2015; Lammasaari et al., 2021, 2022). It emphasizes metacognition, collaborative knowledge creation, and adaptive way of thinking about learning and knowing (Lammasaari et al., 2021, 2022; Lonka et al., 2008, 2021).

Reflective-collaborative approach positively associates with work engagement (Lammasaari et al., 2022) and may act as a resource buffering epistemic and

developmental demands, such as engaging in complex work with new intelligent tools and with changes in requirements of expertise (Markauskaite & Goodyear, 2017). As engaging and renewing knowledge at work is essential for employees to stay enrolled in working life (Jensen et al., 2012), the present study focuses on exploring the relationship between job crafting profiles and particularly reflective-collaborative approach to learning.

Epistemic approach is related to ones' actions (Lonka & Lindblom-Ylänne, 1996), and may direct the capacity and willingness to participate learning and job crafting in workplace (Markauskaite & Goodyear, 2017). For example, employees whose epistemic approach helps them to see themselves as active professionals, who can proactively create new ideas in collaboration with others, may foster job crafting and workplace learning. Job crafting strategies of increasing structural job resources and challenging job demands reflect proactive knowledge creation processes through which employees increase their capacities (Tims et al., 2012). Increasing social job resources reflects the collaborative aspect by emphasizing interaction, whereas decreasing hindering job demands e.g., reducing non-routine tasks (Tims et al., 2012) may reflect more fixed epistemic approach (Lammassaari et al., 2022). More fixed epistemic approach consisting of beliefs that knowledge is something certain, simple, and fixed or given by authorities (knowledge-transmission approach; Lammassaari et al., 2022), may out-source workplace learning and result in passive job crafting.

## Research Questions

Job crafting is a multifaced research topic. By using the Resource-based job crafting model grounded on the JD-R theory, this study investigates latent job crafting profiles and their associations with well-being (work engagement), ill-being (workaholism), and learning (reflective-collaborative approach), (Clark et al., 2016; Lonka et al., 2021; Lammassaari et al., 2022; Robinson, 1999; Schaufeli et al., 2002, 2006). The following research questions are examined:

*RQ1: What kind of job crafting profiles can be identified in a sample of public sector employees?*

Referring to the previous person-oriented research on job crafting, we expected to find two to four profiles representing either active, passive or average job crafting. We also expected to find profiles that would resemble approach-oriented job crafting strategies, avoidance-oriented job crafting strategies, and mixed job crafting strategies (Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021). Based on previous research, we did not expect approach- and avoidance-oriented job crafting strategies to be mutually exclusive in job crafting profiles (Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021).

*RQ2: Do job crafting profiles differ regarding work engagement and workaholism?*

We expected that work engagement would be high among employees who report more approach-oriented job crafting strategies, and low among employees who report more avoidance-oriented job crafting strategies (Mäkikangas, 2018). Further, we expected workaholism to be higher in approach-oriented job crafting profiles, and lower in avoidance-oriented job crafting profiles (van Beek et al., 2011; Gillet et al., 2022).

*RQ3: Do job crafting profiles differ regarding reflective-collaborative approach?*

Work related goals and tasks vary among public sector employees and different jobs may have different meanings for knowledge and knowledge practices (Buehl & Fives, 2016). Moreover, some employees may focus on reflecting their own learning, some may focus on creating knowledge collaboratively, while others may prefer direct knowledge from the supervisor (Lonka et al., 2008; Ketonen et al., 2014). We expected that reflective-collaborative approach towards learning and knowledge would be related to approach-oriented job crafting strategies (Lammasaari et al., 2021).

## Material and Methods

### Participants

The participants were 201 employees from three public organizations in Finland, both governmental and municipal. Participants came from a wide variety of professional backgrounds and included, e.g., teachers, educational experts, architects, parking supervisors, ICT-experts, administrative and customer service personnel. The largest age distribution of the participants was 45–54 years (27%), 55–64 years (17%), 35–44 years (11%), 24–34 years (7%), and 1% were over 64 years old (missing data for age 37%). The total sample consisted of more female (40%) than male (20%), missing value in gender being 40%. The overall mean work experience in the current job was 12 years.

### Measures

Job crafting was measured using a 19-item questionnaire based on a previous Job Crafting Scale (Tims et al., 2012, see altered scales also in Petrou et al., 2017, van Wingerden et al., 2017b, and Mäkikangas, 2018). The participants answered the questions using a six-point Likert scale (1 = totally disagree, 6 = totally agree). The questions concerned increasing structural job resources (4 items), increasing social job resources (4 items), increasing challenging job demands (5 items), and decreasing hindering job demands (6 items). Two original questions of increasing structural job resources were combined, namely, “I try to develop my capabilities” and “I try to develop myself professionally,” into one item: “I try to develop my professional capabilities and my work.” Cronbach’s alpha was 0.80. Increasing social job resources was measured with four items and we omitted the original item “I look to my supervisor for inspiration” from this dimension. Cronbach’s alpha was 0.65.

Increasing challenging job demands, had five original items and the Cronbach's alpha was 0.78. The decreasing hindering job demands dimension was measured with six original items and Cronbach's alpha was 0.67.

Work engagement was measured with the UWES-9 concerning vigor, dedication, and feelings of absorption at work (9 items) (Hakanen, 2009; Schaufeli et al., 2006). The participants answered the questions using a seven-point Likert scale (1 = never, 7 = every day). Cronbach's alpha was 0.93.

Workaholism was measured with four items using the Work Addiction Risk questionnaire (Robinson, 1999) of excessive work and sense of duty. The participants answered the questions using a seven-point Likert scale (1 = never, 7 = every day). Cronbach's alpha was 0.82. Table A1 shows instrumental examples of all questionnaires.

Reflective-collaborative approach was measured by using six items from original MED NORD questionnaire (Lonka et al., 2008), which were modified from educational context (Ketonen et al., 2014). Metacognition and collaborative knowledge construction scales formed the reflective-collaborative approach (Lammasaari et al., 2021; Lonka et al., 2021). The statements were rated on a six-point Likert scale (McLaughlan & Lodge, 2019; Lonka et al., 2008, 2021), the anchors were 1 = totally disagree, 6 = totally agree. The original questionnaire was modified to fit public sector work context in collaboration with the organization's contact person. During this customizing process, we paid attention to the definitions and words (e.g., "team", "group") that were used in the respective organization, which made the questionnaire more face valid and relevant to the participants. Cronbach's alpha was 0.75.

## Statistical Analysis

Confirmatory factor analysis (CFA) for the data was previously conducted and published (Nissinen et al., 2022) to test the measurement model for the modified four job crafting dimensions originally presented by Tims et al. (2012). Mplus version 8.3 (Muthén & Muthén, 2018) was used for the statistical analyses and CFA results confirmed the four-factor structure of job crafting. By employing person-oriented research, we examined whether employees sharing similar job crafting strategies could be identified as belonging to the same latent profile (Hofmans et al., 2020). The data were analyzed using latent profile analysis (LPA; Muthén & Muthén, 2018), assuming that homogeneous profiles can be identified in the data. The estimation was performed step-by-step, starting from the one-profile solution to estimate parameters for 1 - 5-class solutions. All the analyses were performed using the Mplus statistical package (Version 8; Muthén & Muthén, 2018). The estimation method was maximum likelihood with robust standard errors (MLR). The LPAs were performed for different latent pattern solutions using mean values, and the result fit indices were compared. Six criteria were used to decide the final number of classes: (1) the Bayesian information criterion (BIC), (2) the Adjusted Bayesian Information Criterion (ABIC), (3) the Akaike information criterion (AIC), (4) the Vuong-Lo-Mendell-Rubin (VLMR) test and Lo-Mendell-Rubin test (LMRT), (5) entropy value, and (6) the clarity and interpretation of the profiles.



Further, it was examined whether and how job crafting profiles differed in terms of work engagement, workaholism, and reflective-collaborative approach. To test these differences, we used the auxiliary measurement-error-weighted-method (BCH) evaluating the mean scores across profiles for continuous auxiliary variables by using a Wald Chi-Square Test (Asparouhov & Muthén, 2021).

## Results

Table 1 shows Pearson correlations, Mean values and Standard Deviations as descriptive statistics at the variable level. Job crafting strategies and their relations with the other variables are viewed more closely from the person-oriented perspective through the differences between the profiles.

### Profile Analysis

The goodness-of-fit indices for the models with different numbers of latent profiles are presented in Table 2. The fit indices Bayesian Information Criterion (BIC), Adjusted Bayesian Information Criterion (ABIC), and Akaike’s Information Criterion (AIC) are supposed to be as small as possible. As can be seen they all reached lowest point for the three profile solution. In contrast, Entropy index is expected to be close to 1.0, or at least 0.80 (Ferguson et al., 2020), but it is still considered acceptable when larger than 0.70 (Celeux & Soromenho, 1996). The highest Entropy value was found for a model with five profiles (Entropy=0.803) and after that in four profile solution but the model significance was far from acceptable in these solutions. *p*-values of Vuong–Lo–Mendell–Rubin likelihood ratio test (VLMRT) and Lo– Mendell–Rubin test (LMRT) were used to investigate how a model significantly fits the data (Ferguson et al., 2020). The *p*-values supported two profile solution, which was contrary to BIC, ABIC, AIC, and Entropy values. Two profile solution showed extremes of the data, and in addition to these statistical measures, the interpretability of the profiles also needed to be considered when deciding the profile model (Wang & Wang, 2012). Because most of the indices supported three profile solution, a decision in favor of three profiles was made.

**Table 1** Descriptive statistics by Pearson correlation

| Variable                               | 1.                 | 2.                | 3.                 | 4.                 | 5.                | 6.                | <i>M</i> | <i>SD</i> |
|--|--------------------|-------------------|--------------------|--------------------|-------------------|-------------------|----------|-----------|
| 1. Increasing structural job resources |                    |                   |                    |                    |                   |                   | 4.3      | .87       |
| 2. Increasing social job resources     | .319 <sup>b</sup>  |                   |                    |                    |                   |                   | 3.3      | .81       |
| 3. Increasing challenging job demands  | .619 <sup>b</sup>  | .327 <sup>b</sup> |                    |                    |                   |                   | 3.9      | .94       |
| 4. Decreasing hindering job demands    | -.154 <sup>a</sup> | .016              | -.203 <sup>b</sup> |                    |                   |                   | 2.8      | .76       |
| 5. Work engagement                     | .499 <sup>b</sup>  | .230 <sup>b</sup> | .405 <sup>b</sup>  | -.200 <sup>a</sup> |                   |                   | 5.8      | 1.1       |
| 6. Workaholism                         | .184 <sup>a</sup>  | -.002             | .282 <sup>b</sup>  | -.240 <sup>b</sup> | .208 <sup>b</sup> |                   | 4.6      | 1.5       |
| 7. Reflective-Collaborative approach   | .316 <sup>b</sup>  | .181 <sup>a</sup> | .335 <sup>b</sup>  | -.038              | .182 <sup>a</sup> | .198 <sup>b</sup> | 5.1      | .54       |

<sup>a</sup>Correlation is significant at 0.05 level

<sup>b</sup>Correlation is significant at 0.01 level

**Table 2** Fit indices for the compared latent pattern models

| Model          | BIC      | ABIC     | AIC      | Entropy | $pVLMR$ | $pLMRT$ | Difference in the number of parameters | Group sizes   |
|----------------|----------|----------|----------|---------|---------|---------|--|---------------|
| One pattern    | 2044.976 | 2019.631 | 2018.550 | -       | -       | -       | -                                      | 201           |
| Two patterns   | 1970.305 | 1929.119 | 1927.362 | 0.705   | 0.0001  | 0.0001  | 5                                      | 70,131        |
| Three patterns | 1951.412 | 1894.385 | 1891.952 | 0.763   | 0.0578  | 0.0623  | 5                                      | 50,115,36     |
| Four Patterns  | 1967.644 | 1894.776 | 1891.668 | 0.775   | 0.3935  | 0.4062  | 5                                      | 111,7,50,33   |
| Five Patterns  | 1986.206 | 1897.497 | 1893.713 | 0.803   | 0.7519  | 0.7586  | 5                                      | 2,54,107,31,7 |

*BIC* Bayes Information Criteria, *ABIC* Adjusted Bayes Information Criteria, *AIC* Akaike Information Criteria, *pVLRM* Vuon-LO-Mendell-Rubin, *pLMRT* Lo-Mendell-Rubin

The first research question investigated public sector employees' job crafting profiles. Table 3 and Fig. 1 shows that all three profiles consisted of all four job crafting strategies, and the most used job crafting strategy in all profiles was increasing structural job resources. The first profile clearly had low values in all approach-oriented strategies and the highest value in decreasing hindering job demands. The profile was named *passive crafters* (25%). The second profile was the largest and consisted of employees who frequently used all job crafting strategies on average level. It was named *average crafters* (57%). In the third profile, employees reached the highest values in all approach-oriented job crafting and the lowest value in decreasing their hindering job demands. They were named *active crafters* (18%).

### Job Crafting Profiles, Work Engagement and Workaholism

The second research question was about how job crafting profiles differ in terms of work engagement and workaholism. Profiles differed between these well-being and ill-being factors. BCH analysis revealed significant differences between all job crafting profiles in work engagement. Table 4 shows that active crafters showed the

**Table 3** Profile Mean values in job crafting

| Profile                             | Passive crafters (25%) |          |           | Average crafters (57%) |          |           | Active crafters (18%) |          |           | Overall <i>M</i> |
|-------------------------------------|------------------------|----------|-----------|------------------------|----------|-----------|-----------------------|----------|-----------|------------------|
|                                     | <i>N</i>               | <i>M</i> | <i>SE</i> | <i>N</i>               | <i>M</i> | <i>SE</i> | <i>N</i>              | <i>M</i> | <i>SE</i> |                  |
| Increasing structural job resources | 50                     | 3.2      | .11       | 115                    | 4.4      | .07       | 36                    | 5.2      | .12       | 4.3              |
| Increasing social job resources     | 50                     | 2.8      | .10       | 115                    | 3.2      | .08       | 36                    | 3.9      | .20       | 3.3              |
| Increasing challenging job demands  | 50                     | 2.8      | .10       | 115                    | 3.8      | .09       | 36                    | 5.1      | .12       | 3.9              |
| Decreasing hindering job demands    | 50                     | 3.1      | .10       | 115                    | 2.8      | .08       | 36                    | 2.6      | .17       | 2.8              |

Six-point frequency scale for job crafting

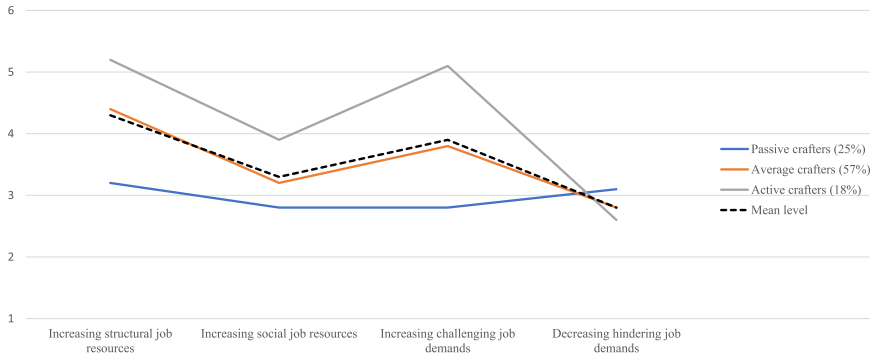


Fig. 1 Job crafting profiles

Table 4 Differences between job crafting profiles

| Variable                          | Passive crafters<br><i>M</i> (S.E) | Average crafters<br><i>M</i> (S.E) | Active crafters<br><i>M</i> (S.E.) | Overall test<br>Wald's<br>$X^2$ / <i>p</i> -value | Profile differences<br>Wald's<br>$X^2$ / <i>p</i> -value                  |
|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|---|---|
| Work engagement                   | 4.8 (.21)                          | 6.0 (.09)                          | 6.4 (.10)                          | 48.256 / .000                                     | 1 > 2**, 20.270 / .000<br>1 > 3**, 45.773 / .000<br>2 > 3**, 9.644 / .002 |
| Workaholism                       | 4.0 (.25)                          | 4.7 (.16)                          | 5.2 (.24)                          | 12.901 / .002                                     | 1 > 2**, 4.637 / .031<br>1 > 3**, 12.874 / .000<br>2 > 3, 3.086 / .079    |
| Reflective-collaborative approach | 4.8 (.09)                          | 5.2 (.06)                          | 5.4 (.08)                          | 25.595 / .000                                     | 1 > 2**, 12.353 / .000<br>1 > 3**, 25.084 / .000<br>2 > 3, 3.709 / .054   |

BCH analysis in Mplus (version 8.9)

\*\* *p* < .001

\* *p* < .05

highest work engagement, and passive crafters the lowest. Average crafters scored in the middle of these two profiles. Regarding workaholism, the scores of passive crafters were significantly lower than those of average crafters and active crafters, but there were no significant differences between the average and active crafters.

## Job Crafting Profiles and Reflective-Collaborative Approach

The third research question addressed the differences between job crafting profiles and reflective-collaborative approach to learning. Table 4 shows that passive crafters' reflective-collaborative approach was the lowest, the next lowest scores were among average crafters, and the highest scores were reported by active crafters. BCH analysis revealed significant differences between the passive job crafting profile and the other two profiles, but there were no significant differences between the average and active crafters.

## Discussion

The purpose of this study was to investigate public sector employees' job crafting. The first research question was answered by the LPA results. It revealed passive, average, and active job crafter profiles, which varied considerably. Passive crafters replicate previous research findings (Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021). Findings indicate that they perceived fewer developing opportunities in their jobs (van Wingerden & Poell, 2017) or as JD-R theory proposes, they may not have the energy or motivation required to increase their approach-oriented job crafting (Bakker & Demerouti, 2017; Mäkikangas, 2018). Findings show that passive crafters emphasized minimizing undesirable constraints that interfere with their work and they may have tried to simplify their work to make it easier or smarter (Demerouti & Peeters, 2018).

Study findings imply that average crafters implemented more familiar working ways and were not challenging themselves at work. However, this finding consisting of most participant, confirms that job crafting in practice is not necessarily polarized by approach-oriented and avoidance-oriented job crafting as it is in the theoretical hierarchy (Zhang & Parker, 2019). Findings among active crafters suggest that they may had such a workload and autonomy in their jobs, which motivated them to improve their person-job fit (Tims & Bakker, 2010) and job performance by learning new skills and developing their work and collaboration (Lazazzara et al., 2020). Active crafters may have found hindrance demands as acceptable part of their jobs (Hobfoll, 1989) and concentrated their energy more on learning and professional development (increasing structural job resources), social collaboration (increasing social job resources), and new challenges at work (increasing challenging job demands). This profile finding is consistent with the JD-R theory and implicates that employees who are motivated by their work will use job crafting leading to even higher levels of resources and motivation (Bakker & Demerouti, 2017).

Second, it appeared that employees who reported the highest work engagement and high workaholism, more often belonged to active crafters' than to average or passive crafters' profile. This finding is consistent with earlier research (Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021) and with the JD-R theory suggesting that the combination of challenging job demands and job resources facilitate work

engagement and the best job performance (Bakker et al., 2007). It is possible that this particular strategy combination (learning in the workplace, interacting with others, and challenging oneself) was beneficial in terms of work engagement, which may further protect active crafters from the consequences of high workaholism. Study findings imply that passive nor average level job crafting did not result in the highest work engagement. Employees can experience job demands as simultaneously challenging and hindering (Li et al., 2020). Findings among active crafters may indicate that they experienced job demands as being positively challenging, whereas passive crafters may have experienced job demands as hindering and showed the worst level of work engagement.

Both average and active crafters reported high workaholism which may manifest that they experienced a role overload or role conflict in their occupations (Clark et al., 2016). It may also imply to employees' high workload, tight deadlines, emotional exhaustion, complex tasks or that they were working excessively (Gillet et al., 2022), and particularly active crafters may have been inventing themselves more work. Passive crafters reported low workaholism, which may imply psychological detachment from work as they also scored highest in avoidance-oriented job crafting (Gillet et al., 2022).

Both work engagement and workaholism may relate to the same approach-oriented job crafting strategies (Hakanen et al., 2018). The current study findings suggest that active approach-oriented job crafting resulted in more positive rather than negative outcomes. This suggestion is supported by the JD-R theory, which states that job resources lead to positive outcomes (Schaufeli & Bakker, 2004). Nonetheless, if employees are constantly gaining new resources and challenging demands, and they are not able to detach from some demands, they may end up depleting their energy (Gillet et al., 2022). These profile differences suggest that job crafting strategy combinations and crafting frequency may have an important role regarding employees' well-being.

Third, employees who reported that it is important to understand own thinking about learning and knowledge, to self-assess own abilities at work, and to collaborate and utilize knowledge provided by colleagues typically belong to active or average crafters' profile. They crafted their jobs frequently, particularly by increasing structural job resources and challenging job demands. According to JD-R theory (Bakker & Demerouti, 2017) it is possible that reflective-collaborative approach acted as a personal resource, which made employees more self-efficacious and aware about developing their abilities in work, and further allowed them to perceive more job crafting opportunities (van Wingerden & Poell, 2017).

Employees emphasizing reflective-collaborative approach may typically learn new ways to craft their jobs and be active in metacognitive processes stimulating their personal growth and learning (i.e., professional development and autonomy) (Bakker & Demerouti, 2007). This may further help them to learn how to utilize different kinds of resources, e.g., time-spatial resources such as selecting work locations and working hours (Wessels et al., 2019). These overall study findings point out that reflective-collaborative approach and approach-oriented job crafting

strategies are intertwined and characterized by proactive behavior. Low reflective-collaborative approach to learning on the other hand may reciprocally manifest low work renewal intentions and low collaborative learning (Lammasaari et al., 2022). Current findings imply that employees who show low reflective-collaborative approach may see their work more from the perspective of getting the job done as easily as possible and according to given instructions, instead of initiatively and actively crafting their jobs.

The modest use of social job resources among average crafters was unexpected, because they also reported valuing collaboration with others. It is possible that constraining occupational or contextual conditions (e.g., frequently changing colleagues, organizational culture, working pace) (Lazazzara et al., 2020) made it difficult for average crafters to act according to their epistemic approach and increase their social resources in more extend.

### Limitations and Suggestions for Future Research

It should be noted that occupational differences in this study may play a role in job crafting behavior because employees with different jobs and job-related autonomy may utilize job crafting differently and for different reasons (Petrou et al., 2017). The first limitation of this study concerns generalizability, as the study was conducted in Finnish public sector organizations. It is not possible to generalize our findings, even though we made intentional efforts to prevent sample bias by sampling multi-professional organizations and managed to strengthen our study with data from a variety of professions. Second, we used self-report measurements. It is possible that participants perceived job crafting, work engagement, workaholism, and reflective-collaborative approach differently or responded in a socially desirable way, reflecting common method bias (Conway & Lance, 2010; Podsakoff et al., 2012). Third, the data were cross-sectional, which prevents us from drawing conclusions regarding causality or whether the profiles remain unchanged or estimating the effect of job crafting over time (Frederick & VanderWeele, 2020). Fourth, the slightly lower alpha values in two factors (increasing social job resources and decreasing hindering job demands) may have occurred because the scales consisted of extant items which measured social job crafting and work avoidance in many ways.

In workplace learning and job crafting theory development, it would be important in the future to investigate more different occupational groups and job roles in even deeper detail. Future research investigating employees' working tenure in terms of their job crafting and epistemic approach would benefit especially countries of low birth rate (e.g., Finland, South-Korea, Japan, China), as internal innovations in organizations may be one key source of productivity growth. A longitudinal design would allow to investigate profile changes, and whether job crafting profiles are predictors or outcomes of employees' work engagement, workaholism and epistemic approach (Frederick & VanderWeele, 2020). In the future, we would also encourage to develop job crafting scales to better bring out different occupational characteristics e.g., between remote- or hybrid workers and onsite workers.

## Theoretical and Practical Contributions

The present study makes theoretical contributions by extending the knowledge of different job crafting profiles and showing how they differ regarding employees' work engagement, workaholism, and epistemic approach to learning and knowing. We demonstrated that the highest work engagement was related to active approach-oriented job crafting. We also demonstrated that the lowest workaholism was related to profile including the highest avoidance-oriented job crafting. Therefore, we suggest that workplaces enhance active and diverse use of both approach-oriented and avoidance-oriented job crafting.

This study touched on the less investigated aspect of literature concerning the negative side (workaholism) that job crafting may have (Lazazzara et al., 2020). The results showed that high workaholism scores but also the significantly highest work engagement were present when approach-oriented job crafting strategies were highly utilized. Average level job crafting did not avoid workaholism, instead it resulted in high workaholism but lower work engagement than active crafting. This profile difference between average and active crafters may be significant by pointing out the role of proactive job crafting frequency regarding well-being and ill-being.

The present study contributes to the previous job crafting and workplace learning research by investigating and connecting job crafting and epistemic approach about learning and knowing. To our knowledge, this is the first study investigating these factors together. Overall study findings point out that employees' reflective-collaborative approach and approach-oriented job crafting strategies are intertwined and characterized by proactive behavior. Different kinds of workplaces would benefit from focusing on employees' learning approaches and how they may affect to their thinking and behavior at work. Enhancing reflective-collaborative approach might foster workplace learning and collaboration to gain the most benefits on both individual and organizational level. In practice, attending in discussions and activities concerning organizations' goals or required job renewals may develop individuals' epistemic approach because participation is important in workplace learning (Goodyear & Ellis, 2007). If employees share their personal approach about different issues, they become more likely to engage in discussion (Goodyear & Ellis, 2007), which may further develop their epistemic approach to workplace learning.

Extreme work life disruption during COVID-19 forced nearly all people to craft their jobs in unprecedented ways. One example of this is the remote and hybrid working that became the new norm almost overnight (Wang et al., 2021). Professionals in e.g., education and health care sector had to adjust their work with new health security practices and find ways to do their jobs (Demerouti & Bakker, 2022). There were also occupations in which the effect was opposite, and workload was drastically reduced or work totally vanished because of lockdowns. For example, restaurant- and cultural-sectors had to adjust their operating methods and employees crafted their jobs to meet the changed demands and new rules. This worldwide experience may have influenced to employees' epistemic beliefs about their ability to learn and develop their work. It may also have influenced their attitudes towards job crafting.

Lesson learned is that all employees should constantly pay attention to job demands they face and to detect job resources they have or gain. They would benefit from being able to decrease their job demands by buffering them with resources provided by job crafting strategies. Organizational practices could systematically support employees' reflection towards their own thinking about job crafting and epistemic approach by bringing up the discussion and sharing different kinds of volunteer examples from among the personnel. Supporting might also happen e.g., by encouraging employees to participate in organized job crafting induction when facing new demands or resources in work. Although job crafting is a bottom-up method, it is also a leadership matter to encourage and support employees to evolve or even transform their thinking and behavior to better balance their jobs.

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**Authors' Contributions** T.N. conceived the research project and conducted the data collection. T.N. and K.U. analyzed the data. T.N. reported the results, interpreted the findings, and wrote the manuscript. H.L. contributed the study regarding epistemic approach. K.U. and K.L. participated in interpreting the findings as well as revising and editing the manuscript. K.L. oversaw the research.

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**Availability of Data and Materials** The datasets generated and analysed during the current study are not publicly available due the fact that they constitute an excerpt of research in progress but are available from the corresponding author on reasonable request.

## Declarations

**Ethics Approval and Consent to Participate** Ethical review and approval were not required for the study on human participants in accordance with the local legislation and institutional requirements. Participating for the study was voluntary, and the participants provided their written informed consent to participate in this study. The study was conducted according to Finnish Advisory Board on Research Integrity guidelines (Finnish National Board on Research Integrity TENK, 2019).

**Competing Interests** The authors have no competing interests to declare.

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