

The importance of positive employee experience and its development through using predictive analytics

Positive
employee
experience

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Abstract

Purpose – The study aims to explore the organizational benefits of positive employee experience and to provide a framework for measuring it. The positive employee experience has a profound impact on employees' attitudes; thus, it is particularly important to what extent an organization can create the conditions supporting this.

Design/methodology/approach – The study is based on literature review and the framework needs to be empirically tested to draw final conclusions.

Findings – Organizational performance and success are influenced by employees' well-being, commitment, job satisfaction and the high level of individual performance. However, this grouping of variables is not exhaustive, but in practice, it is often not necessary to fully understand the complex and complicated relationships among the organizational variables. However, a positive employee experience has an impact on all of these variables. According to our understanding and experience, the task of management is not to strengthen the variables describing employee attitudes individually, based on the knowledge of specific relations presented in the management literature and selected for the sake of a single research, but to create an acceptable level of the positive employee experience, which is able to strengthen these variables in a way that is useful for the organization.

Originality/value – In this study, the authors introduce the concept of the positive employee experience and the ways and steps to measure it. The authors review the methodology of predictive analytics, the main principles of data collection and the types of data with their possible applications. Finally, the limitations of the framework and the risks of enhancing the positive employee experience are also discussed.

Keywords Positive employee experience, Employee commitment, Workplace attitudes, Predictive analytics

Paper type Conceptual paper

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1. Introduction

The perspective of positive employee experience is built on simple foundations: rather than taking specific measures to increase motivation, commitment, work effort, intention to stay with the organization, etc., in the scope of a project approach, it offers a holistic, all-encompassing perspective that views the stimuli that affect employees at the workplace not as one-off, isolated cases, but as a set of effects that create a complex subjective experience. The measures that an organization takes to foster positive employee experience can be seen as a means of increasing motivation, organizational commitment and job satisfaction. These variables form complex relationships with each other, with individual performance and turnover intentions, and also with high-performance work systems (Carmeli and Freund, 2003; Golden and Veiga, 2008; Rusbult *et al.*, 1998; Ramalho Luz *et al.*, 2018; Harley *et al.*, 2007).

This study presents how and in what ways the concept of positive employee experience has gone beyond the previous ideas and paradigms and why organizations should apply this concept. In addition, this article also presents predictive analytics, which is a methodology that has long been successfully used in other fields to enhance positive employee experience and assess potential behaviors. The application of this method in the field of human resource management is innovative and is well suited for the holistic perspective presented here. At the same time, such an approach can also provide an input for the preparation of strategic decisions.

Positive employee experience includes all the stimuli that impact employees at the workplace and influence their attitudes (Ho *et al.*, 2022). This ultimately affects motivation, job satisfaction, employee commitment and turnover intention as well. This model has very important practical implications, as conclusions and recommendations for practice established by the vast majority of empirical research focus on the relationship between only some of the variables. Nowadays, the majority of organizational psychological research examines the relationships between three or more variables, with special emphasis on possible mediating or moderating relationships and multilevel analyses that allow for deeper understanding (Song and Lim, 2015; Spector and Pindak, 2016). However, these studies also need to simplify their conclusions for practitioners and will provide clear guidance on what needs to be done to promote certain types of workplace attitudes of employees. In doing so, all the complex theories will again be reduced to bivariate relationships and advice will be given on the following: how a leader should motivate employees to increase their organizational commitment; what negative impacts the combination of transactional and transformational leadership styles will have on employee commitment; or what the impact of employee experience on career satisfaction in general will be (Loo-Zambrano *et al.*, 2022; Puni *et al.*, 2021; Ho *et al.*, 2022). This study looks at these relationships from a more distant perspective, accepts the mutually reinforcing nature of these factors and emphasizes the benefits of creating positive employee experience and also proposes a technique for measuring positive employee experience.

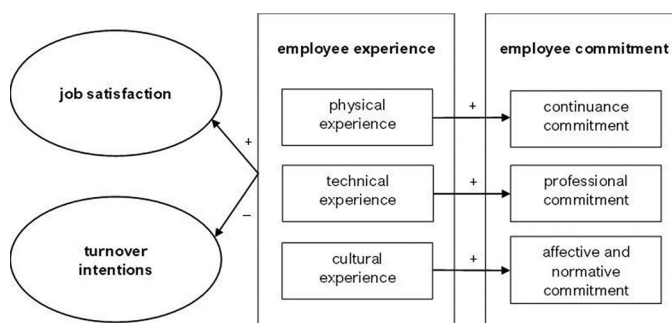
2. Need for a holistic approach

For creating and maintaining competitive advantage, it is crucial to manage human resources as efficiently as possible (Schaufeli and Salanova, 2008). Attracting and retaining employees can no longer be described as a task for HR alone: it is one of the biggest challenges and key risks for organizations globally. The biggest challenge for HR professionals is to develop such organizational strategies that make employees committed (Macey and Schneider, 2008). And even if workplaces find this important, Pendell (2018), for example, identifies in his survey that globally only 11.5% of employees are committed to their organizations.

According to [Caplan \(2014\)](#), employers need to focus on three key factors to ensure employees' high levels of job satisfaction: commitment, retention and innovation. In a comprehensive literature review, [Kular *et al.* \(2008\)](#) highlight that employee commitment has been a major research topic since the turn of the millennium as organizations recognized its impact on business performance. The confusion surrounding the concept has been greater than interest in it: for a long time there was no consistency in the definition, as employee commitment was operationalized and measured in many different ways. Some researchers have defined the concept of employee commitment as a cognitive, emotional and behavioral state of the individual that is directed toward desired organizational outcomes ([Shuck and Wollard, 2010](#)). Others argue that emotional involvement and job satisfaction are necessary conditions for commitment ([Shuck *et al.*, 2011](#)). From an organizational perspective, many researchers have defined a committed employee as one who always looks for opportunities to improve business performance, productivity and organizational profit ([Harter *et al.*, 2002](#); [Rich *et al.*, 2010](#); [Saks, 2006](#)).

Overall, we can state that employee commitment is a measure of employees' attitude toward their work and how they experience it is work stimulating, something employees really want to invest time and energy in (energy component); it is a significant and meaningful endeavor (vocational component); and engaging and interesting (flow component)? ([Bakker *et al.*, 2008](#)). And this attitude is based mostly on the experience that employees gain in the workplace. On the other hand, [Lee and Kim \(2023\)](#) have identified three dimensions of employee experience: physical experience, technical experience and cultural experience. Physical experience is basically measured through items related to the perception of the work environment ([Smaliukiene and Bekesiene, 2020](#)), technical experience measures satisfaction with the content of the job, whereas cultural experience shows how an employee relates to the hard and soft cultural elements of the organization in question. These dimensions are usually associated with organizational commitment ([Meyer *et al.*, 1990](#)), as shown in [Figure 1](#).

[Meyer *et al.* \(1990\)](#) suggest that emotional and normative commitment and cultural experience are related, as both reflect employees' self-perception of their relationship with the workplace climate, how deeply they see themselves embedded in the organization and how much they agree with the goals and norms of the organization. Professional commitment is most closely linked to technical experience as it provides an objective picture of the extent to which an individual considers the content and conditions of the job to be satisfactory. Finally, physical experience defines continuance commitment, as both are



Source: Authors' own

Figure 1.
Central role of
employee experience
in employees'
workplace attitude

quantitative and qualitative indicators of the work environment based on individuals' own subjective value judgments. In other words, we argue that employee experience in practice also includes employee commitment, but refers to job satisfaction, too, and can be used to assess turnover intention. This is important because any action that generally helps to enhance employees' positive workplace experiences has an additional benefit for all these variables. Unfortunately, however, this complex approach is rarely found in management literature despite the fact that in practice such efforts are identifiable in everyday life.

Therefore, it is not occasional managerial actions that are needed to increase specific dimensions of employee commitment, but, instead, a radical, holistic reframing of the relations between the organizations and employees is required (Plaskoff, 2017). According to the Deloitte Global Human Capital Trends survey, the concept of positive employee experience also constitutes the basis for mutual commitment between employer and employee (Deloitte, 2017). The concept of positive employee experience is far ahead of employee commitment practices of organizations, and positive employee experience is aimed at achieving the highest levels of employee commitment, job satisfaction and well-being through an ultimate experience that an organization provides to its employees (Itam and Ghosh, 2020).

Also, the transition has already started from Industry 4.0, where digitalization and cyber-physical systems have evolved to Industry 5.0, and personalization and cyber-physical cognitive systems are currently taking center stage (Skobelev and Borovik, 2017). The dynamics of work are rapidly changing due to fast changes in markets and innovation demands, thus a need arises for workers to interact with their workplaces in different ways. The complexity of services encourages managements to focus on attracting talented staff, keeping them happy, satisfied and motivated at all costs. In fact, positive employee experience is becoming the number one priority for organizations (Durai and King, 2018). Thus, organizations must strive not only to automate technology to make work more efficient but also to comprehensively understand positive employee experience, accurately assess and evaluate the needs of employees and increase the quality of work-related interactions (Başaran, 2021).

To gain a competitive edge and improve profitability, organizations need to focus on attracting new talent while retaining valuable existing human capital. Worldwide, interest in employee experience management is growing day by day and thanks to this new approach there has been a paradigm shift in human resource management theory and practice. It can be seen that organizations with a strong employer brand and employee experience management are better at attracting highly-skilled human capital and in increasing employee motivation and commitment. Employee experience can be defined as a multifaceted concept that encompasses employees' reactions to all the interactions they engage in within the organization (Plaskoff, 2017).

3. New paradigm in HR: focus on employee experience

The new organizational paradigm emphasizes the prioritization of holistic experience provided to employees rather than solely focusing on isolated HR practices and processes. Issues of remuneration, compensation, recognition, etc., determine an employee's intention to stay with a particular organization or to seek better opportunities, but research has confirmed that the rewards do not always lead to organizational commitment and subjective satisfaction (Singh and Jayashankar, 2002; Ramesh, 2004). Positive employee experience theory is based on customer experience management, which starts at the "heart" of the organization (Harris, 2007). From key milestones and personal relationships to the use of technology and the physical working environment related to employee lifecycle (recruitment, selection, onboarding, performing, development and exit), all activities and

factors – large and small – have an impact on employee experience. It is therefore essential for organizations to focus on the overall experience delivered to their employees and not just on individual HR practices (Haggerty and Wright, 2009). Consequently, organizations are urged to adopt a holistic approach and to prioritize comprehensive experience delivered to their employees, thereby transcending conventional HR practices.

Plaskoff (2017) makes a similar point: the concept of positive employee experience is based on the whole person and all his or her perceptions and experiences. Employee experience begins when the employee is considering a job search and starts researching possible options. Furthermore, it does not necessarily end when the employee leaves the organization, as the impact of the organization can extend far beyond the employee's time with the organization. What is critical is to thoroughly understand this life course from the employees' perspective including their specific feelings and thoughts during these phases, and it is likewise important to understand the interdependencies that influence positive and negative experiences.

The concept of a positive employee experience is based on a fully holistic approach and an “everything is connected with everything” approach. Nevertheless, we believe it is important to highlight the components that can have the highest impact on employee experience. It is worth emphasizing that, in the holistic sense, there are no completely irrelevant factors, but listing the most critical factors is essential to understanding the concept. These factors are listed according to the principles of Pareto's 80/20 rule.

The personal well-being of employees is in fact a mapping of their own functioning and the quality of their subjective experiences in the organization (Grant *et al.*, 2007, Pawar, 2016). This includes all factors that can influence mental health and the harmonious and balanced functioning of a person. These may include stress levels, work–life balance and the maturity of coping strategies (Grant *et al.*, 2007). The importance of employees' personal well-being in terms of employee experience is therefore paramount and is considered by many to be one of the biggest challenges facing managers (Fry and Slocum, 2008).

Job content satisfaction encompasses the characteristics of the actual work performed and the subjective experience of that work (Fairlie, 2010). People expect to have the capacity to influence themselves (e.g. growth, development) and the outside world through continuous progress toward desired goals and values (Nakamura and Csikszentmihalyi, 2003; Ryan and Deci, 2000). Significant and meaningful work is a characteristic feature that can bring workers closer to their own values, make them feel making an impact on the world and can often offer a meaning, motivation and purpose in life and for achieving personal growth (Fairlie, 2011). Therefore, work should not only be enjoyable, but should also be fulfilling and challenging enough – i.e. should not present an impossible challenge – to fulfil one's development potential (Rasca, 2018).

Satisfaction with the work environment includes impulses beyond the job that arise from the social and organizational environment. These impulses may be the organizational climate and atmosphere (Jussila *et al.*, 2020), the quality of co-workers' and social relationships (Shenoy and Uchil, 2018) or the general organizational appreciation of the employee, the most important factor of which is the recognition and appropriate rewarding of performance (Danish and Usman, 2010).

Satisfaction with the working environment, in addition to the previous factor, refers to the immediate, physical environment of work and its characteristics and ergonomics. As a hygiene factor, an aesthetically pleasing, well-designed and perfectly tailored workspace contributes to workers' performance and mental well-being, and often plays an important role in job selection (Grant *et al.*, 2007; Ronda and de Gracia, 2022). This may also include other benefits related to the workplace, such as free coffee, relaxation rooms, fruit day and aesthetic factors such as green walls covered with plants and waterfalls (Brown *et al.*, 2010).

Job satisfaction encompasses attitudes toward the organization's mission, approach, vision and values. For the employee, mission and vision are particularly important, as employee' ability to identify with these and to see their own roles in achieving them can greatly contribute to job satisfaction (Rasca, 2018). Furthermore, satisfaction with organizational values, ethical standards, nonprofit activities and social responsibilities can foster employees' identification as well as the development of corporate citizenship, which embodies a high level of commitment on the part of the employee (Davenport, 2000).

It can be seen that many complex factors impact final employee experience and the list presented above is not exhaustive. It would be difficult to establish a clear hierarchy, as there are back-and-forth impacts among almost all factors.

4. Special perspective on employee experience: the employee as internal customer

Every organization is different, every person is different and everyone should be treated differently; thus, it is impossible to keep making the same "product" over and over again as positive employee experience. Surveying, formulating hypotheses, collecting data, testing, committing mistakes and correcting are as much part of this process as that of in any academic research (Morgan, 2017). Similarly, Tucker (2020) argues that positive employee experience design requires primary data collection through surveys, interviews, observations and various teamwork methods. In his opinion, these methods can provide HR professionals and managers with sufficient input on the touchpoints that employees consider important and their possible corrective possibilities and needs.

The fact that each employee is looking for their own unique experience may have initially been difficult for HR professionals to process in contrast to the "one-size-fits-all" approach of previously widely used organization-wide programs and strategies (Goswami and Goswami, 2021). However, positive employee experience is based on a perspective that has long been active in almost every business sector: it is the customer experience (Plaskoff, 2017).

Considering the research conducted so far, it can be seen that the concept of positive employee experience is primarily influenced by the concept of "experience economy" (Pine and Gilmore, 1998) and then by customer or user experience methods and approaches used in the field of marketing. Employee experience management can be seen as an extension of customer or user experience concepts based on design-oriented thinking and a human-centered approach. Thus, by providing and delivering positive workplace experiences, organizations aim to engage and motivate employees, just as any manufacturing company aims to engage and motivate potential customers of its products (Başaran, 2021). Thus, the concept of employee experience requires HR professionals to view employees as quasi-internal customers. This perspective is also shared by Burrell (2018), who argues that employee experience is based on the concept that employees should essentially be treated as if they were customers.

5. Similarities between employee experience and customer experience

Customer experience is the intrinsic and subjective response that customers build up in themselves through direct or indirect contact with the organization. Direct contact is established during purchase or service provision and is usually initiated by the customer. Indirect contact most often consists of unplanned encounters with representations of an organization's products, services or brands and takes the form of word-of-mouth recommendations or reviews, advertisements, news, opinions, etc. (Schwager and Meyer, 2007). Marketing professionals are, therefore, not simply concerned with ensuring that the customer or buyer is satisfied with the product itself, as overall customer experience starts with the purchase process. Therefore, like customer experience, employee experience has a

360-degree approach, i.e. culture, beliefs, values, a sense of balance and resilience play a prominent role in shaping subjective experience.

Just as marketing and product development professionals no longer focus on customer satisfaction alone, but on overall customer experience, HR professionals are increasingly working to develop such strategies and plans as well as to form such teams that focus on improving overall employee experience. To achieve this, organizations need to take a strategic and integrated approach to their employee experience by aligning practices of the workplace, of HR and of leadership (Riz and Marek, 2019). The task of the management is to repeat the efforts aimed at strengthening customer experience with tools and methodology used in HR, or in certain cases, to reassess these tools and methodology it to create employee experience (Plaskoff, 2017). To do so, corporations need to undergo several fundamental changes. First, HR professionals need to embrace a data-driven operation mindset using primary data collection methods such as surveys, interviews and observations to gather insights into touchpoints of significance to employees. These insights can then be fed as information to the design of initiatives and interventions aimed at enhancing employee experience. Second, there needs to be a transition toward a design-oriented and human-centered approach to employee experience management, drawing inspiration from customer experience concepts used in marketing (e.g. journey mapping, design thinking). Finally, HR professionals need to foster a culture of continuous improvement and adaptation, recognizing that positive employee experience is an ongoing process requiring iteration, experimentation and adjustment based on feedback and evolving needs.

Overall, adopting the perspective of the internal customer necessitates a paradigm shift in how HR and corporations conceptualize, design, manage and measure employee experience, and in their attitudes to emphasizing customization, data-driven decision-making, human-centric design and continuous improvement.

6. Data-driven decision-making with predictive analytics

In today's business landscape, the importance of data-driven decision-making cannot be overstated. By harnessing the power afforded by data, organizations will gain invaluable insights into customer preferences, market trends and operational efficiencies, which enable them to make informed strategic choices. This paradigm shift toward data-driven decision-making underscores the necessity for organizations to adapt and leverage data as a critical asset in driving sustainable growth and gaining competitive advantage. To achieve the highest level of customer experience, marketing professionals use a variety of methodologies, whose main aim is to identify and respond to the characteristics and needs of the target group as much as possible. People are present almost everywhere as current or potential customers thus a successful organization has to reflect on people's needs with reference to its products and services. However, these characteristics do not disappear when someone goes to their workplace to do their jobs. If someone is fundamentally concerned about selective waste collection and is attracted to greener and more environmentally conscious brands, they will have similar expectations of their workplace. This means that if there is no way to separate paper waste in the office, this will decrease positive employee experience.

Therefore, often an inviting benefits package, or imitating Google's practice of putting games consoles in community spaces will not work as these do not reflect the real needs that really matter to employees (Plaskoff, 2017). For this reason, the following is a methodology that aims to address this key problem and has been successfully applied in marketing research for a long time: this is *data-driven predictive analytics*. Predictive analytics is a set of business intelligence (BI) technologies and solutions that reveals relationships and patterns within large amounts of data that can be used to predict behavior and events. Unlike other

BI technologies, predictive analytics is forward-looking and uses past events to predict the future (Eckerson, 2007).

Predictive analytics, as Eckerson (2007) describes it, is an inductive method as it does not assume anything about the data but lets the data reveal themselves. This method uses statistics, machine learning (ML), neural computing, robotics, mathematics and artificial intelligence to explore a large set of data rather than a narrow subset to reveal relationships and patterns. Predictive analytics is like an intelligent robot that rummages through the data until it finds something interesting to show us. Over the years, predictive analytics has become one of the most popular tools for future potential organizations to uncover and visualize trends, underlying relationships and correlations to predict various events and behavioral patterns (Nyce, 2007).

But predictive analytics is not a magic weapon or a magic wand. It is better to interpret it, in the words of its creator, as “statistics on steroids”, which can give us the most accurate and nuanced picture and answer to our questions. Building predictive models requires hard work and the results do not guarantee any business value. For example, a model may predict that 85% of potential customers of a new product are male, but if 85% of existing customers are male, this prediction will not help the business. Marketing programs targeting male customers will, in this context, not bring any added value (Eckerson, 2007). It is therefore very important that the organization should be able to manage its results properly, and that it has the tools and competences to turn the data to its advantage.

7. Predictive analytics’ fields of application

Section 6 established predictive analytics to be the cornerstone of data-driven decision-making. In this section, the focus shifts to predictive analytics’ versatile applications across crucial organizational domains. From shaping employer branding to reducing turnover and enhancing training programs, predictive analytics empowers organizations to optimize strategies and foster a thriving workplace culture. This section sheds light on how predictive analytics enables proactive decision-making, which leads to enhanced efficiency and effectiveness in managing human capital. By leveraging predictive analytics across various facets of organizational management, businesses can gain actionable insights, foster a culture of continuous improvement, and, ultimately, apply a more sustainable operation model.

7.1 Employer brand

Employer branding refers to an organization’s reputation as an employer and the value proposition it offers to its employees. Positive employer branding helps to attract and retain quality employees who are key to the success and growth of the business (Lievens and Slaughter, 2016). With the help of predictive analytics, we can easily optimize these activities. For example, we can use external data sources to map how a segment of the population of potential employees views an organization and what they want from employers, which can form the basis of marketing campaigns and targeted advertising. This also serves as great input for refining the organization’s communication strategy, compensation system and corporate social responsibility (CSR) activities. In short, these activities increase (potential) employee’s job satisfaction and identification with company values, thus making the organization more attractive. Predictive analytics can measure employees’ perception of company values and the effectiveness of communication through surveys, which allows for ongoing refinement of communication strategies. Similarly, comparing compensation packages with industry standards and gathering feedback on satisfaction help maintain competitiveness. Participation rates in CSR initiatives and

employee feedback on impact provide insights for enhancing CSR activities, which can be integrated into predictive analysis to optimize employer branding efforts over time.

7.2 Selection

In several ways, predictive analytics can also help find and hire the right employee during the selection process. Various tests and questions can be used to identify the profile of employees best suited to a particular position, gamified solutions can be used to assess a candidate's hard and soft-skill profile and suitability for a particular role, which can help managers in their selection process. In addition, it is also possible to predict whether the job will be mentally satisfying for a given employee and whether it will be challenging enough for the employee profile in question. The employee personas created this way, which may include both qualitative and quantitative elements (e.g. MBTI personality type, monotony tolerance, etc.), can be further refined through using an internal data source and through continuously monitoring the best performing colleagues in the given position for the purpose of improving forecasting. By measuring performance on skill assessments and by analyzing feedback from hiring managers, companies can refine their selection processes to align with job requirements. Predicting job satisfaction for candidates based on profiles and role requirements allows for better matching, and this can be coupled with ongoing analysis improving predictive accuracy. In addition, creating detailed employee personas based on successful incumbents helps in facilitating selection decisions and in integrating feedback and performance data for the purpose of continually refining candidate profiles.

7.3 Employee career planning

Just as for customers, journey mapping is becoming increasingly common in the case of employees. This includes all interfaces where a customer or an employee interacts with the organization or brand (Plaskoff, 2017). Employee career planning identifies all those key touchpoints from the recruitment process to the exit that have an impact on the employee. With the right quality of insider information from the employees, predictive analytics can ensure that every organizational interaction is the least inconvenient (e.g. in the case of an administrative process for an employment contract) or the most enjoyable (e.g. in the case of a Christmas party staged by the organization). Predictive analytics can measure recruitment efficiency by tracking time-to-hire metrics and candidate satisfaction, thereby enabling organizations to identify and address bottlenecks. Planning engaging events and activities requires monitoring attendance rates and gathering employee feedback, which allows for iterative improvements in event planning. Similarly, enhancing the exit process involves collecting feedback through exit interviews and postemployment surveys to identify areas for enhancement and to reduce turnover, and the integration of insights into predictive analysis aids the continual refinement of the employee career journey.

7.4 Training and development

In addition to identifying the above pain points and risk factors, it is also of paramount importance that managers and members of the organization are able to respond appropriately and effectively to such points and factors. With the help of predictive analytics, these situations can be identified, and thus key competencies that may be necessary for their management can be determined. Due to this fact, it will be much easier for the employees of an organization to define training and development programs and goals as well as to monitor them and analyze their effectiveness. In addition, predictive analytics can be used to improve the quality and efficiency with which such programs and goals are delivered. For example, if a large power distance is a pain point, then developing leaders'

emotional intelligence and communication skills as well as the continuous monitoring of the results of the related training program can make the leader–subordinate relationship more direct, thus making the organizational culture friendlier and bringing organizational culture closer to the employees (Morgan, 2017). By analyzing performance metrics and gathering feedback on training needs, organizations can pinpoint areas requiring development and can tailor training interventions accordingly. Evaluating the impact of training programs through pre- and posttraining performance metrics and employee feedback feeds into ongoing refinement of content and delivery methods. Moreover, leveraging training to drive cultural change involves monitoring organizational culture indicators and leadership feedback to track progress and adjust initiatives. Furthermore, integrating insights into predictive analysis supports continuous improvement in training and development efforts.

The above are only a few examples of how predictive analytics can be used to improve employee experience. For establishing the employee experience framework, the process has been broken down into five distinct subprocesses: these are separated in time and may involve different strategic decisions, operational activities and necessary tools to be used. The (Figure 2) framework is based on case studies (van Vulpen, 2019) and the works by Plaskoff (2017) and Başaran (2021).

8. Process of applying predictive analytics

8.1 Planning

The design phase focuses on creating a management and organizational climate that is receptive to the planned interventions, as well as is based on a detailed design of actions. It is important to ensure not only that key stakeholders are sufficiently open but also that the planned program is clear, understandable and inclusive for all, and can be clearly implemented in the organization's operations:

- (1) The initial step involves defining employee experience within the organization and its significance for operational effectiveness. This entails conducting interviews, surveys and focus groups to understand employee needs, pain points and expectations. In addition, analyses of turnover rates, engagement levels and satisfaction surveys are conducted to pinpoint areas for improvement.

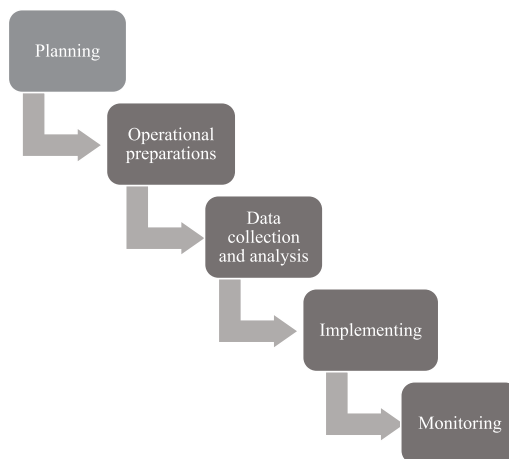


Figure 2.
A framework for building positive employee experience using predictive analytics

Source: Authors' own

- (2) Key stakeholders must be equipped with a comprehensive understanding of employee experience principles and methodologies at an early stage in the project. This is achieved through workshops, seminars and training sessions covering design thinking, journey mapping and sentiment analysis. Sharing online resources, case studies and best practices further enhances stakeholders' understanding and fosters a collective understanding of the organizational impact of employee experience.
- (3) Data analytics tools and intervention areas within the employee experience are identified with the help of the analysis of employee feedback, performance metrics and demographic data. Qualitative research methods, such as interviews and focus groups, are employed to pinpoint specific pain points and to create hypotheses for each intervention. Visualizing the employee experience across touchpoints through using heat maps or journey maps helps identify priority intervention areas.
- (4) It is likewise relevant to identify the following: the objectives that can be linked to the areas of intervention, the areas of use, the hypotheses to be tested and the expected results. Define SMART objectives for each intervention area and link them to organizational goals. Also, identify key performance indicators or KPIs (Bauer, 2004), such as engagement scores, retention rates and productivity metrics.
- (5) Risks associated with implementation are assessed, including potential challenges for employee adaptation. Legal and compliance teams are involved to ensure regulatory compliance. Contingency plans and mitigation strategies are developed to address identified risks.
- (6) Also, it is relevant to develop a strategic vision outlining how insights from interventions will be integrated into day-to-day operations during the planning phase. It is necessary to collaborate with cross-functional teams to outline a roadmap for incorporating potential predictive analytics insights into existing processes and systems. Also, it is important to explore opportunities for automating decision-making processes and personalizing experiences. Consider creating prototypes or proof-of-concept projects to demonstrate the potential value of predictive analytics in enhancing employee experience and driving desired business outcomes.
- (7) It is also necessary to assess and ensure that the organization or the relevant project team has appropriate data analysis skills, that internal team proficiency in data analysis techniques is ensured and that skill gaps are identified. Training or professional development is used to address skill deficiencies. A data governance framework should also be established to ensure accuracy and reliability and security of employee data should also be used for predictive analytics.

8.2 Operative preparations

As part of operative preparations, it will be necessary to take decisions on the technical and structural aspects of the survey, which will determine the results. It is necessary to examine how the previously defined objectives can be supported by a survey and what data provide the right basis for implementing interventions:

- (8) It is necessary to establish systematic and secure collection, storage and management of data, to set up a data analysis team, to assign responsibilities and to set up a framework for data governance. Creating protocols for data collection, ensuring compliance with data privacy regulations and establishing secure storage systems are essential steps in this phase.

- (9) What data are needed for the analysis? This strategic decision should be made clear at the beginning of the survey, as it constitutes the basis of the project. It needs to be determined whether it is external or internal data that support more extensively the strategic objectives, whether qualitative or quantitative data (or a combination of the two) provides the information that is needed.
- (10) How are data collected? The answer to this question is already decided by the previous decision, as the tools and techniques available for external and internal and qualitative–quantitative data are defined. These tools and techniques need to be refined and finalized (e.g. external, qualitative data are needed, which can be obtained through focus group discussions and interviews). In the light of the final decision, the technological background and the provision of a suitable platform (online questionnaire or free meeting room for interviews) are also connected to this step.

8.3 Data collection

- (11) In this phase, a structured approach is undertaken to gather relevant data from diverse channels for the purpose of aiming to delve into employee needs, perceptions and behaviors. Through a blend of quantitative and qualitative data collection methods, an effort is made to construct a holistic view of the intricacies shaping the employee experience landscape, which includes pinpointing areas ready for enhancement. Collecting the right amount of data. The appropriate technique and strategy are of little use if we do not have enough data to draw sound conclusions. Ensuring that this is the case, and that the subjects, respondents and interviewees are properly motivated is of paramount importance. For example, offering prizes to those who complete the questionnaire, a free lunch for internal focus group participants or an extra day off will all help to ensure the success of data collection. Monitoring data collection processes to ensure that enough data is gathered to support meaningful analyses and decision-making.
- (12) Developing a feedback platform for collecting immediate and continuous information on actions tested or actions already implemented from those most affected is necessary. Designing user-friendly interfaces and implementing communication channels that encourage open and honest feedback enhance the effectiveness of the feedback platform.

8.4 Data analysis and modeling

In this phase, collected data are structured, analyzed and interpreted to derive meaningful insights that feed to decision-making and intervention strategies, as demonstrated by [Pratt et al. \(2021\)](#) in their article, which describes that data modeling is used to train a prediction model, thereby enabling the identification of key factors influencing employee turnover and making predictions about future turnover events. The methodology applied by [Pratt et al. \(2021\)](#) will be introduced to further illustrate this phase:

- (13) Data processing: it involves exploring, sorting and analyzing a large volume of data extracted from raw datasets. Within data processing, tasks include handling missing values, comparing variables, testing correlation hypotheses, proposing hypotheses about the given dataset's causes, and – if needed – recommending additional data sources to enhance the understanding of the phenomenon explored.
- (14) Data training: ML algorithms are computational techniques that enable computers to learn from data and make predictions or decisions without being explicitly programmed ([Nithya and Ilango, 2017](#)). Such algorithms play a crucial role in

extracting meaningful insights from large data sets and automating complex tasks across various domains. This is also proven in HR practices, where data-driven decision-making and automation have become integral components of modern human resource management strategies (Akasheh *et al.*, 2024). Although there are numerous ML algorithms available, a set of selected few are mentioned here due to their widespread use and effectiveness in data training.

- *Support vector machine (SVM)* is as a supervised learning technique used predominantly for classification and regression tasks. Its primary objective is to pinpoint the hyperplane that optimally segregates classes within the feature space, thereby maximizing the margin. By demonstrating competitive efficacy across diverse domains, SVM is esteemed alongside models such as neural networks and Gaussian mixture models (Yang *et al.*, 2012).
- *Logistic regression* emerges as a ubiquitous multivariate analysis model, particularly in predictive modeling contexts. Predominantly tailored for binary classification quandaries, *logistic regression* extends its applicability to encompass multi-class classification scenarios. Fundamentally, logistic regression delineates the probability of a binary outcome grounded on one or more predictor variables (Gutiérrez *et al.*, 2011).
- *Random forest* represents an ensemble learning approach amalgamating forecasts from numerous decision trees. During training, it constructs an array of decision trees and yields modes of classes (classification) or mean predictions (regression) derived from individual trees. This methodology mitigates overfitting by averaging multiple decision trees trained on randomized subsets of data (Liu *et al.*, 2019).
- *K-nearest neighbors (KNN)* emerges as a supervised learning mechanism catering for classification and regression objectives. In KNN, the determination of a new data point's output hinges on the majority class or the average of its k-nearest data points within the feature space. Renowned for its simplicity and efficacy, KNN performs particularly well in scenarios marked by irregular decision boundaries or ill-defined data distributions (Lu *et al.*, 2015).

(15) Data testing and prediction: This section delves into the process of finalizing the model: this includes preparing the model for classification and regression tasks and using it to generate predictions that inform decision-making processes across various domains.

- *Finalizing the model:* The final model must be trained before predictions can be made. Techniques such as k-fold cross-validation or train/test splits may be used initially to estimate model performance. However, these intermediate models are now no longer needed and can be discarded. The next step involves training a finalized model using all available data that will be used for predictions.
- *Classification predictions* involve using a finalized model for mapping input features to output labels, such as “spam” or “not spam”. At this point, let us suppose a logistic regression model has been trained for a binary classification task. Once the model is prepared, it can be saved to a file. Subsequently, this saved model can be loaded to make predictions on new data instances. Whether they pertain to classifying e-mails or to identifying employee churn,

class predictions (e.g. “spam” or “not spam”) or probabilities associated with each class can be obtained from the finalized model.

- *Regression predictions:* in regression tasks, where a continuous numeric value (e.g. employee engagement score) is to be predicted, a similar process is followed. After the regression model has been finalized, the model can be used to make predictions on new data points. These predictions will provide estimated numeric values based on learned patterns emanating from the training data.

8.5 Implementation

Data collection and analysis are followed by action planning and the integration of actions into the organizational process:

- (16) Development of specific actions: these will reflect on results and outputs, which can be assigned to a specific department and person in charge. Collaboration with stakeholders to ensure alignment between actions and organizational goals, thereby fostering ownership and accountability.
- (17) Preparation of detailed implementation plans for the integration: these describe the steps to be taken to implement the actions in a sequential manner in the form of concrete tasks. Conducting thorough planning sessions involving cross-functional teams to anticipate potential challenges and to develop contingency plans.

8.6 Monitoring

For the implemented processes, monitoring is extremely important.

- (18) Each process in the action plan is assigned a KPI, which can track changes in business and other employee data as a result of the intervention.
- (19) Continuously monitoring and refinement of interventions using incoming data and feedback: this should be done on a cyclical basis until the desired objective is achieved. Analyzing performance against established KPIs and refining strategies as necessary. Fostering a culture of continuous improvement by actively soliciting feedback from stakeholders and using data-driven insights to make informed alterations to interventions.

9. Conclusions and limitations

When planning similar actions, it should be borne in mind that a number of factors could jeopardize success. Certainly, there may be several problematic factors at all points of the framework, so again we will only mention the ones with the highest general impact, according to the 80/20 rule. These can also be individual, technical or organizational factors. It is considered an individual risk if managers and key stakeholders do not understand, adopt or experience the main mindset and vision of positive employee experience. Individual lack of competence may be the reason for the situation when the members of the expert team collecting and analyzing the data do not have the appropriate level of professional knowledge. Technical risk can be posed by the lack of technological capabilities in the organization, or by bureaucratic culture and strict procedures, where entrenched management practices can create technical barriers for those implementing the process. At the organizational level, there can be a risk if the concept of a positive employee experience is met with mistrust and cynicism by members of the organization. In addition, it can also lead to failure if the organization is not open to overriding old traditions and to changes while communicating the opposite.

Finally, it is a common mistake for the organization to focus only on short-term business performance and most measures aimed at enhancing positive employee experience will only have an impact well in the future.

The potential risks and dangers of unfairness and decentralization should also be kept in mind when designing and implementing measures and action plans related to employee experience. Organizations may focus too much on new entrants by optimizing both the onboarding process and the early stages of employees' career lifecycle. This way employees who have been with the company for longer periods may feel that they are not given as much attention, time, reward or energy as other (Andiappan and Dufour, 2020). The feeling of inequity can also be reinforced if the organization paints an overly positive image in employer branding and if the survey results show that the company perfectly covers the needs of potential employees. This creates high expectations and a much greater risk of disappointment if the organization fails to live up to what they claim themselves to be. In organizations with a high level of positive employee experience, there is also a high degree of decentralization of decision-making, which is greatly desirable for employees. However, this largely increases the potential risk factors by taking sharp managerial control out of the system, which can ultimately lead to reputational and other unpleasant consequences (Felstead *et al.*, 2003).

However, the theoretical framework developed needs to be tested in empirical research and should be applied to a specific organizational situation. The information thus gained could be used to improve and drive forward the work already started and could be applied to add further valuable insights to the literature on employee experience, which is not very rich yet.

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