



Digital Organizational Culture: A Qualitative Study on the Identification and Impact of the Characteristics of a Digital Culture in the Craft Sector

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Abstract

The organizational culture of craft enterprises shows that the average corporate culture is currently characterized by a hierarchical organizational culture that does not do justice to increasing competition. Digital corporate culture in the craft sector is essential for maximizing Digital Transformation opportunities. A semi-structured interview was conducted with employees and managers from various craft sectors to determine the specific characteristics and possible effects of Digital Organizational Culture in the craft sector. The results show that digital skills, attitudes, communication, proactivity, entrepreneurial orientation, and personal skills are essential. It is found that many factors positively influence the Digital Organizational Culture in the craft sector. However, some factors can also have a negative influence on the culture. Guilds and chambers of skilled crafts should also help sensitize employees and managers to Digital Transformation to establish an explicit Digital Organizational Culture.

Keywords Digital organizational culture · Organizational culture · Digital transformation · Craft sector

Introduction

Craft enterprises influence the economy, as they are production, service, repair, and trade enterprises and will determine public life in different ways in the future [5].

From the research on the organizational culture of craft enterprises, a hierarchical organizational culture currently characterizes the common business culture, which is unsuitable for the increasingly competitive environment. Moreover, it was found that clan is the preferred culture type in construction companies [6, 31, 48]. Organizational culture has a significant shaping effect on an organization.

Regardless of the employees' personalities, organizational culture collectively binds their actions [43]. A literature review on this topic shows that numerous models of organizational culture [19, 43, 51] have been developed. However, they apply mainly to public enterprises, while more needs to be designed for craft enterprises [10].

For Digital Transformation to succeed in companies, it requires a suitable IT infrastructure, a digitization strategy [9], and a cultural shift toward a digital corporate culture. The introduction of Digital Transformation is crucial for developing the craft industry [37] and represents an opportunity for the transformation and optimization of the company [27].

Digital transformation requires fundamental organizational changes, including structure, processes, strategy, and culture [50]. Successful development of organizational culture in companies is only possible once leaders have driven the formation of a strong 'digital culture' by breaking down communication barriers between all organizations and establishing effective communication between departments at different levels [48].

As leadership approaches can influence employee motivation and performance, organizational culture, and action implementation, leadership approaches are expected to

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impact digital transformation initiatives in construction companies [55]. In this context, organizational culture impacts job satisfaction, job performance, employee engagement and collaboration, and organizational decision-making [35]. Companies considering culture in digital transformation are five times more likely to succeed than organizations that neglect cultural influence [49]. Müller et al. [30] also investigated the influence of a company's organizational culture on its ability to drive digital innovation in a study. The study results show that results- and control-oriented culture can negatively impact an organization's innovation processes, as it limits the company's ability to manage between control and flexibility in the innovation processes.

Because of organizational and cultural barriers, it has yet to realize digital transformation opportunities [38]. Organizational and cultural barriers are the main obstacles to implementing digital transformation in the craft sector [23, 25]. Adherence to traditional roles/principles, lack of clear vision/strategy, resistance, risk aversion, and lack of time [23, 25] are absent in most craft enterprises.

For this reason, organizations are challenged to consider new digitization-relevant elements of their culture and to transform their structures, values, and assumptions in the context of Digital Transformation [50], which can be achieved via a Digital Organizational Culture. While there is research on organizational cultures, there needs to be research related to the factors and effects of Digital Organizational Culture in the skilled trades [31, 47]. The craft sector receives less research attention than other industries or the service sector regarding Digital Transformation than its economic importance [15].

Most articles report on the gap in the digital organizational culture of craft businesses. However, there needs to be concrete research on the characteristics of this Digital Organizational Culture for the craft sector [20]. In addition, the literature shows that no research has been conducted on the impact of these factors on the craft industry. Therefore, this study addresses the following research question:

Which characteristics of the Digital Organizational Culture for craft enterprises are crucial for driving forward Digital Transformation?

Which characteristics of the digital organizational culture impact craft enterprises in driving forward the digital transformation?

Initially, the theory part explains the aspects of Digital Organizational Culture and craft enterprises. To answer the research questions, a semi-structured interview was used [26] to concretize the existing characteristics of craft enterprises. For this purpose, a guideline was created. In addition, the framework of Kocak and Pawlowski [23, 25] was used, because it includes a variety of Digital Organization Culture characteristics. In the last part, the discussion part, the results obtained from the study are compiled and interpreted.

Furthermore, critical considerations are made, and finally, the conclusion of the entire work is drawn.

Digital Organizational Culture and Craft Sector

For an organization, the organizational culture is significantly decisive in developing its personality. Despite the individual characteristics of employees, their actions are collectively determined by the organizational culture [10]. Organizational culture is multifaceted, comes from different disciplines, and has different definitions [8, 21, 29, 39]. The most well-known scholar in the research field of an organization defines organizational culture as the fundamental assumption and belief shared by organizational members that determine how the organization perceives itself and its environment [43]. To identify the organizational culture in the company, different models help to understand it and initiate change processes. In the literature, different organizational culture models [19, 43, 51] from different scientific domains offer extensive possibilities to analyze and describe organizational cultures.

Some studies in the literature on organizational culture in the craft sector need to cover digital organizational culture [10]. Most studies show that craft enterprises have a mix of clan, market, and hierarchical cultures [32, 33, 47].

Craft enterprises have a significant economic benefit in this context, as they are production, service, repair, and commercial enterprises and will affect everyday life in many ways in the future [5].

Craft is understood to be an independent activity in working and processing materials, oriented toward fulfilling individual needs. This results from the craftsman's personality, comprehensive professional training, and the regular use of his strength and means [53]. In the building trade, the work processes are still strongly linked to the craft [7]. For this reason, construction can be classified as a craft, which this study attempts to do. For this reason, it is significant to research the organizational culture of craft enterprises.

Research on the organizational culture of craft enterprises shows that the average enterprise culture is currently characterized by a hierarchical organizational culture, which is inappropriate for the increasingly competitive environment. The study also found that the clan is the preferred culture type in construction companies [6, 31, 47].

Craft companies prefer a culture with clear goals and stability in this context. They must be more externally oriented, emphasize innovation, and still have a local mentality [10]. Thus, the current organizational culture emphasizes the aspects of internal focus and involvement, while companies seek more flexibility and discretion for individual employees [47].

Through a factor analysis, the most critical factors of organizational culture in the craft sector were identified and compiled. The factors are 'goal setting and accomplishment,' 'team orientation,' 'coordination and integration,' 'performance orientation,' 'innovation orientation,' 'member participation,' and 'reward orientation' [10]. However, these factors must be more specific and fully contribute to Digital Transformation in craft enterprises. At the same time, incorporating Digital Transformation is crucial to developing the craft sector and enables the transformation and optimization of business processes [37].

Digital transformation is a comprehensive process of rapid technology-enabled progress in organizations in this context [27]. It requires a complete transformation of business processes to achieve improvements [17].

Therefore, organizations must consider new aspects of their culture relevant to digitalization and change their structures, values, and assumptions in the context of Digital Transformation [50], which can be achieved through a Digital Organizational Culture.

In this context, a Digital Organizational Culture is "the set of shared assumptions and common understandings of organizational practices in the digital context" pursued in this study [12]. Organizational culture deals with values, norms, and attitudes that determine decisions and behavior within an organization [43]. Digital organizational culture, on the other hand, is characterized by many specific features, including complete acceptance of innovation, the ability to collaborate, the ability to process large amounts of data and information quickly, the competence to work in complex environments, and the ability to take risks [44].

Digital technologies and digitized processes, customer orientation, agility, entrepreneurship, autonomous working conditions, innovation and learning, collaboration, and digital leadership emerged as success-determining culture dimensions [42].

To identify the values of Digital Organizational Culture critical to the success of Digital Transformation, Kocak and Pawlowski [23, 25], Duerr et al. [13], and Hartl and Hess [18] examine the fundamental values (e.g., collaboration, innovation, and risk-taking) of Digital Organizational Culture. The work [23, 25] identified the characteristics and classified them into four dimensions that create an overview. Another study established dimensions in three mindset categories that make up the Digital Organizational Culture in the company. These are Innovation Mindset (agility, trust, and flexibility), Performance Mindset (result orientation, performance orientation, and customer orientation), and Social Mindset (stability, employee satisfaction, and fairness) [41]. Some attitudes, such as risk avoidance, competition, and entrepreneurship, are common in the construction industry [2].

In addition, it has been proven that companies with a digital corporate culture are better at exploiting the potential of Digital Transformation and better-guiding employees through this change process [52]. In addition to characteristics, traits, and values, the literature examined the impact of each factor. It was found that the factors of participation [3, 22], teamwork, and Agile mindset [22, 54], Digital skills [22, 54], Fault tolerance and culture, learning to fail [3, 13], Risk-taking [3], Innovation [54], Openness to change, [3] Organizational and dual structures and Willingness to learn continuous learning, and development [3] have a positive impact on Digital Organizational Culture. The factors of collaboration [14], communication [14], and making decisions quickly and collectively [14] harm Digital Organizational Culture. The concept of Kocak and Pawlowski [23, 25] has identified various characteristics of digital organizational culture and sorted them into dimensions. They have also determined the effects of the individual factors with the help of content analysis. The concept is a reasonable basis for determining the concrete characteristics of a digital organizational culture in the skilled crafts sector. However, these characteristics were not studied in craft companies but provided a general overview of the impact of Digital Organizational Culture.

A Digital Organizational Culture is an essential prerequisite for exploiting the potential of Digital Transformation [36]. One of the most significant barriers to digitization in the craft sector is the organizational and cultural challenges that have been identified [23, 25]. These are also confirmed [20], which proves that the biggest challenge in achieving the goals of digitalization and automation in the construction industry is the need for digital culture and training. Aghimien et al. [4] have a similar opinion, reporting a need for more digital culture in construction companies. Above all, the day-to-day business for the craft business cannot be planned, so the company has to act flexibly, and the customer focus is vital in the company culture. The use of digital tools needs to be more present [36]. Most organizational and cultural challenges in the craft business need more financial resources, No apparent vision/strategy resistance, and Open Innovation [23, 25]. In this context, autonomous working conditions can only be realized to a limited extent in craft enterprises. Work is characterized by inflexible standard working hours and few opportunities for location-independent activity [36]. It states that companies must ensure that employees understand and participate in the company's dynamic changes [4].

In summary, there must be more Digital Organizational Culture in the craft business. Initial research has been found about the digitalization barriers and lack of different characteristics that show a lack of Digital Organizational Culture in the craft sector. Concrete characteristics and the impact of these characteristics in the craft sector are still open. For

this reason, it is essential to identify this characteristic and determine the positive and negative factors.

Method

Digital Organizational Culture in the craft sector is a topic with a research gap, and only a few concrete characteristics are known. Research on the impact of Digital Organizational Culture in the craft sector also needs to be revised in the literature in this way.

Models and concepts were analyzed to determine the concrete characteristics of a digital organizational culture. Research has been conducted in the literature on possible values, characteristics, and traits, but directed at general industry [13, 18, 23, 25]. The work of Kocak and Pawlowski [23, 25] identified various characteristics and divided them into different categories.

For this reason, the framework of Kocak and Pawlowski [23, 25] was taken as the basis for this study to identify the concrete factors of Digital Organizational Culture in the craft sector. The framework consists of four main dimensions (proactivity, digital skills and mindset, digital communication, entrepreneurial orientation, and personal competencies) and a variety of factors. Participants were asked about each factor's positive or negative effects to determine their impact.

The research approach is that at the beginning, concepts and models have been searched and analyzed among each other. After that, an approach was taken for the present study. Based on this, it was decided to conduct qualitative semi-structured interviews with participants from the craft industry. Guiding questions were created for the interviews, and the appropriate sample was selected. The interviews were recorded and later transcribed, and the previously defined categories were entered.

A semi-structured interview was chosen for the study [26]. It is also called a semi-structured or semi-structured interview [1]. The semi-structured interview is one of the methods of qualitative research. In a semi-structured interview, also called a semi-structured interview, the interviewer specifies the part of the questions asked. A significant advantage of this open data collection method is that the interviewee can talk freely and naturally. This way, topics can be introduced, and a truly comprehensive survey can be conducted [26]. Therefore, the narrative interview is particularly well suited in the explorative phase for exploring a research area. The qualitative interview was chosen to ensure the correct completion of online questionnaires, multiple participation, and the dropout rate. The questions are asked in a flexible order, and the interviewees can answer quite freely [1].

A guide was prepared for the interview, and the respondents answered the questions freely. A qualitative research methodology [40] based on expert interviews is used to answer the open questions to identify the specific factors of digital organizational culture in the skilled trades, measures to build a digital organizational culture, other characteristics of digital organizational culture in the skilled trades, the effects of the factors, and the essential characteristics of digital culture in the craft sector.

The expert interview is not characterized by a particular method but by the specificity of the target group. In this context, an expert is defined as "the specific role of the interview partner as a source of specialized knowledge about the social issues to be researched. Expert interviews are a method of tapping this knowledge" [16]. External validity refers to the quality of the results obtained from the literature [40]. The expert interview elicits a specific type of experiential or role knowledge. It is often used in practice to generate specific operational knowledge [40].

Sample

A homogenous sampling method was chosen to achieve the objectives associated with the research question, and experts were selected to be particularly informative in answering the research question [46]. The study was conducted in 2022 between September and December. The participants were employees and managers from the plumbing and heating (PH) industry and craft in the construction (C) and automotive sectors (A). The participants from the Plumbing and Heating sector are the managers and employees. The participants from the automotive sector are also managers and employees. The participant from the construction sector is employees.

The sample size is set according to Onwuegbuzie and Collins [34]. It is based on a phenomenological approach. The experiences are described without referring to theories, derivations, or presuppositions of other disciplines. This approach was taken, since the participants are from the craft sector and have the same or similar experience and knowledge [34]. The sample was $N = 10$, as experts were selected based on their experience and expertise in digitization.

The participants were between 24 and 52 years old. All participants were male. The study lasted approximately 1 h, and the work experience of the experts ranged from 1 and 5 years to more than 30 years. Most of the participants have work experience between 1 and 5 years. Three participants have work experience between 6 and 15 years, and one has more than 26 years of work experience. The interview was recorded with an audio device and later transcribed manually. Before the interview, participants were informed about

privacy and anonymity and asked for their consent to be recorded via audio (see Table 1).

Procedure of Study

In the beginning, the factors that had previously been listed in five dimensions were assigned to the respective dimensions. In other words, factors essential for a digital organizational culture in the skilled trades were assigned to the previously defined dimensions. This procedure was carried out using a virtual Miro Board. After the assignment, open questions were asked about the respective dimensions and the impact of the factors. Finally, questions were asked about the most critical factors for digital organizational culture in the skilled trades. Finally, interventions were asked about how to build a digital organizational culture in the skilled trades. The list of questions was as follows (see Table 2).

The DOC characteristics for sorting were taken from the study by Kocak and Pawlowski [23, 25], as they identified several factors in the literature and sorted them into dimensions. Interviews were recorded with an audio device and transcribed manually. The study lasted approximately 30 min per participant. After transcription, the most important statements were assigned to the categories defined beforehand.

Data Analysis

Data analysis is based on content analysis, representing a structured text-based data method [28]. Qualitative content analysis is used to evaluate texts and other communication material in detail to answer a research interest. The purpose is to establish new theoretical considerations in the current

research question based on a few texts [28], for the coding analysis was chosen for the analysis. It is used to assign the data material into categories. In this study, the deductive system is used, which is derived from the categories and the data material. The construct validity check includes interpretations by experts from the craft industry. The study's reliability was checked using the same coding guide and category system for all texts [11]. In addition, the three quality criteria: Transparency, Coverage, and Intersubjectivity. That is, we measure what is intended to be captured.

Moreover, when performed again, the content analysis is comparable and subjective influences are excluded [28]. Semantic validity is ensured by using expert judgments, i.e., text passages with the same meaning are assigned to the same category [11]. The presentation of the results follows the procedures of Tambling and Lee [45], which use continuous text to indicate that the expectations of their experts sometimes need to be more consistent.

Results

Impact and Main Factors for the Craft Sector

The interviews show that a variety of factors can have a positive impact on the Digital Organizational Culture. The factors of the dimension proactivity show that support of change initiatives with 8 out of 10 participants, trust building (7 out of 10), and ensuring transparency with 7 out of 10 participants positively impacted the Digital Organizational Culture for the craft. The factors of the digital mindset and skills dimension were also seen as having a positive impact

Table 1 Sample of the participants [Managing Director (MD) and Employee (E)]

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
Type of company	(PH)	(C)	(C)	(PH)	(PH)	(PH)	(A)	(A)	(PH)	(C)
Gender	M	M	M	M	M	M	M	M	M	M
Age	42	26	27	29	52	26	26	27	26	24
Position in the company	MD	E	E	E	E	E	MD	E	E	E
Work experience (years)	6–15	1–5	1–5	6–15	+26	1–5	1–5	6–15	1–5	1–5

Table 2 Guidelines for the questions

Questions	Categories
Which of the following characteristics belong to the DOC for craft enterprises?	Sorting of the features
Should the dimensions be left as they are, or should some be considered separately?	Improvement of the framework
Which of them belong to the respective dimensions?	
Are there any features that should be added?	
Which features have a positive/negative impact?	Missing features
Which of the following characteristics are of great importance in developing a DOC?	Impact of the factors
How could you build a DOC?	Most important factors
What measures would you suggest?	

Table 3 Possible positive impacts of the factors

Dimension	Factors	Positive impact
Proactivity	Support of change initiative	8 out 10
	Trust	7 out 10
	Transparency	7 out 10
Digital competencies and attitudes	Agile mindset	7 out 10
Digital communication	Collaboration	6 out 10
	Participation	6 out 10
Entrepreneurial orientation and personal competencies	Strategic orientation	7 out 10

by the participant. However, 7 (7 out of 10) saw the agile mindset as positive. The factors of the dimension of digital communication were rated as positive by the participant. Except for collaboration (6 out of 10) and participation (6 out of 10), all other factors positively impact Digital Organizational Culture. Finally, 7 out of 10 participants see the strategic orientation factor as positively impacting the Digital Organizational Culture in the craft sector (see Table 3, Fig. 1).

In addition to the positive factors, participants indicated the different factors' harmful effects. Power imbalance (3 out of 10) (proactivity dimension), flexibility (1 out of 10), risk-taking (3 out of 10), experimentation (2 out of 10), and digital mindset (1 out of 10) (digital attitude and competencies) are seen as unfavorable by the participants. These factors may harm the Digital Organizational Culture in the craft sector. The participants did not express comments about the possible negative impact (see Table 4).

In addition to the impact of the factors, the importance of the factors was also determined. Here, most participants said autonomy, creativity, making decisions quickly and collectively, and an entrepreneurial mindset (5 out of 10 participants each) (dimension digital attitude and skills) are essential for a Digital Organizational Culture. In the digital communication dimension, the factors of collaboration (5 out of 10), establishing interfaces with partners (5 out of 10), and cooperation (6 out of 10) were rated as necessary. After summarizing, it became apparent that innovation (5 of 10) and responsiveness (5 of 10) of entrepreneurial orientation and personal competence are the most critical factors for developing a Digital Organizational Culture in the craft sector (see Table 5).

Interventions and Measures for a Digital Organizational Culture

The participants were asked about measures, interventions, and other dimensions and factors to improve the Digital Organizational Culture model. The participants think that the framework is good (I3, I7, I8, and I9). However, some also need to learn how to improve the framework and could

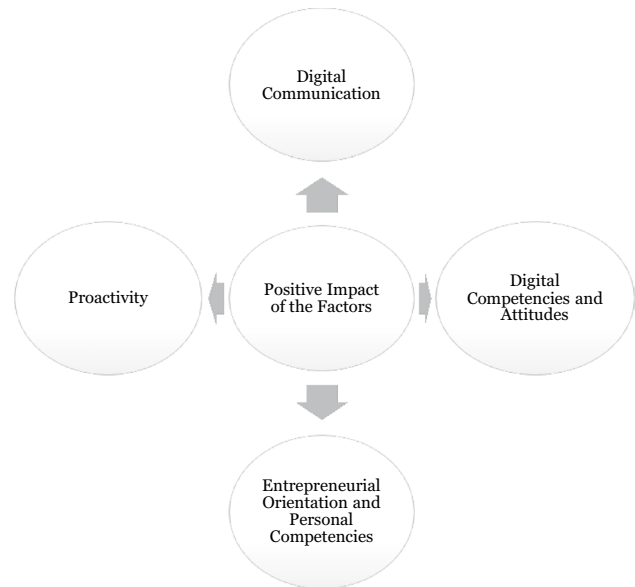


Fig. 1 Possible positive impacts of the factors

not identify any missing features (I2, I3, and I4). Here, it was found that the participants needed a more profound knowledge of digitization. However, one participant expressed that digital skills and attitudes should be considered separately. Also, entrepreneurial orientation and personal competence should be considered separately (I1).

To identify measures and interventions for building a digital organizational culture, participants were asked for

Table 4 Possible negative impacts of the factors

Dimension	Factors	Possible negative impact
Proactivity	Equality of power	3 out 10
Digital competencies and attitudes	Flexibility	1 out 10
	Risk-taking	3 out 10
	Experimentation	2 out 10
	Digital mindset	1 out 10

Table 5 Most important factors of digital organizational culture in the craft sector

Dimension	Factor	Importance
Digital competencies and attitudes	Autonomy	5 out of 10 participants
	Creativity	5 out of 10 participants
	Making a decision quickly and collectivity	5 out of 10 participants
Digital communication	Entrepreneurial Mindset	5 out of 10 participants
	Collaboration	5 out of 10 participants
	Cooperation	6 out of 10 participants
	Teamwork	5 out of 10 participants
Entrepreneurial orientation and personal competencies	Establishing interfaces with partners and competitors	5 out of 10 participants
	Innovation	5 out of 10 participants
	Responsiveness	5 out of 10 participants

their comments. Some participants needed to learn how to build a digital organizational culture in the craft sector. One participant said, "you have to train employees on digitalization" (I9). Another argued as follows:

"First of all, of course, it would be important within the company for collaboration and precise planning to create a digital plan to allocate work reasonably so that each employee knows when and where to do if necessary, and you can coordinate among themselves" (I8).

The participant (I1) gave a different intervention:

"There, I think that we include the chambers of handicrafts and the guilds and those not only against money. That is also mostly, which make only against payment, although we pay there our contributions, that the also times free offers, not necessarily free however such offers offer. How to, how they can promote our employees" (I1).

In summary, the craft sector must be made aware of digitalization and the Digital Organizational Culture that builds on it at the beginning.

Digital Organizational Culture Model for the Craft Sector

The identified Digital Organizational Culture characteristics in the craft sector were summarized and presented as one figure to create an overall view. The participants added the factors that make up a Digital Organizational Culture to the previously defined dimensions to identify the specific characteristics of the Digital Organizational Culture in the craft sector (see Table 6, Fig. 2).

The most frequently mentioned factors relate to digital skills and attitudes. A large number of factors were added here. The participants also consider the dimensions of entrepreneurial orientation and personal competence necessary, so many factors have been added to this dimension. The entrepreneurial orientation and personal competencies dimensions were separated based on the participant's

statements. The dimensions of digital attitude and skills were also separated. Six dimensions are crucial for a Digital Organizational Culture in the craft sector. The factors of the separated dimensions were classified as [24] conducted in their study.

Discussion

The present study deals with the identification and impact of the Digital Organizational Culture in the craft sector. To drive Digital Transformation for the craft sector, an organization's culture should be changed in addition to the change in processes. We have identified the specific characteristics of a Digital Organizational Culture for the skilled trades sector. To that, we identified the positive and negative effects of different factors.

The evaluation revealed that various factors are considered core factors of a Digital Organizational Culture. Collaboration, innovation, risk-taking [13, 14, 23, 25], agility, trust, and flexibility [41] are also considered core factors for a Digital Organizational Culture in the craft sector. These factors have also been identified as core factors in the literature. We have also identified the importance of crucial factors for craftsmen. Above all, teamwork, cooperation, entrepreneurial thinking, creativity, and innovation are at the top of the list for craftspeople. Building a digital corporate culture is only possible with these skills and attitudes.

Another contribution is the influence of the factors of the identified concrete characteristics for a Digital Organizational Culture. A literature review was conducted in the literature [23, 25] but did not focus on a specific sector. Our study identified the factors' most significant positive and negative impacts on the craft sector. In addition to the characteristics, we created a list of factors that could positively and negatively impact Digital Organizational Culture. A large number of factors are considered positive. In particular,

Table 6 Digital organizational culture factors of the craft sector

Dimension	Factors
Digital communication	Collaboration Communication Corporate social responsibility Cooperation Establishing interfaces with patterns and competitors Participation
Digital competencies	Autonomy Creativity Digital skills Experimentation Making decisions quickly and collectively Risk-taking
Digital attitudes	Agile mindset Security awareness Digital mindset Empowerment Entrepreneurial mindset Fault tolerance, culture, and learning to fail Flexibility Overcoming resistance
Entrepreneurial orientation	Customer centricity and integration and market orientation Innovation Organizational and dual structures Strategic orientation
Personal competencies	Openness to change Responsiveness Willingness to learn, continuous learning and development
Proactivity	Involvement of staff Equality of power Motivation and promotion of employee Support of change initiatives Trust Transparency

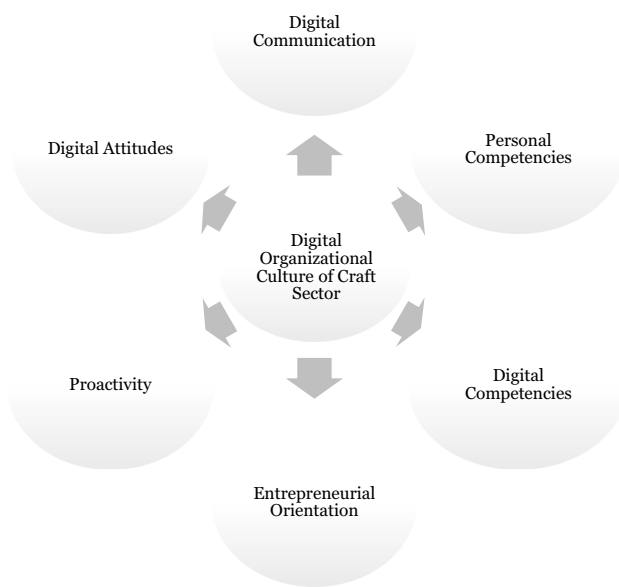


Fig. 2 Digital organizational culture of craft sector

the dimensions of digital communication and proactivity are at the top. Studies in the literature refer to companies in general but not specifically to the craft sector. Participation [3, 22], teamwork [22, 54], agile mindset [22, 54], willingness to learn, continuous learning, and development [3] are also considered positive in the literature.

Besides the positive effects, adverse effects have also been found. Power imbalance and risk-taking can harm Digital Organizational Culture. These effects have yet to be identified in the literature [14].

In the open questions on improvements and measures, it also became clear that the participants should have commented more. It shows that the participants still have little digitization experience and must be sensitized. Many participants argued that they could not make any statements about it. Some pointed out that two dimensions (entrepreneurial orientation and personal competence, digital attitudes, and skills) should be considered separately, as they involve different aspects. In general, it became clear that the participants from the craft enterprises still needed to improve their understanding of the terminology. They also needed to

understand why a Digital Organizational Culture is essential for the business.

For this reason, craftsmen should be made aware of digitalization from the beginning and acquire digital skills during their work. Previous research identified the same gaps [23, 25] from the open-ended questions. Although many participants were under 30, they needed help with different digital competencies or attitudes.

Our framework differs from the other models or concepts in that it is developed for the craft. In the literature, models are developed for the general sector [19, 43, 51], which are not directed at the craft sector. Selecting the sample from areas of the craft sector has led to the present concept being applied to various craft enterprises.

As a practical contribution, our framework can be used to develop new strategies for developing a digital culture for the craft sector. An approach for other models could also be derived from it. It could lie primarily in the area of digital mindset. Here, a model could be developed for craftsmen to identify digital competencies and attitudes, formulate measures, and best prepare them for Digital Transformation.

After conducting, the following limitations were identified. The sample was too small, as many craft businesses are not accessible due to a large number of orders. In addition, other technical craft businesses should be studied in addition to the plumbing, heating, construction, and automotive sectors. In addition, training courses should be offered to sensitize craftsmen in all sectors to Digital Transformation. It includes digital skills, communication, understanding, and using digital tools and devices.

It would also be beneficial to survey employees still in training to determine which characteristics of Digital Organizational Culture are essential. Thus, one would have a different view from young employees.

Summary

This study aims to identify the specific aspects and possible effects of a Digital Organizational Culture in the craft trades' sector. For the identification, an existing model was used to determine the decisive factors for the craft sector. The qualitative methodology was conducted for the study with participants from different craft sectors. Factors were queried at the outset, and interventions and measures were queried as the study progressed. The results show that various factors are essential for a Digital Organizational Culture in the skilled crafts' sector. In particular, digital communication, attitude, and competencies are essential. The factors that make up a Digital Organizational Culture in the craft sector are a first approach for the other sectors. The model can be used to establish new hierarchies in the company and to focus on digitization. Competencies and attitudes can also

be derived from the results and a model developed for the skilled trades. It provides an overview of the digital attitudes and competencies that employees and managers in the craft sector need for Digital Transformation.

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Declarations

Conflict of Interest We have no conflicts of interest to disclose. All authors declare that they have no conflicts of interest.

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