



Culture on construction objects

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ABSTRACT

Purpose: of this paper is to discuss the problem of culture in the workplace, which has been becoming increasingly popular recently.

Findings: Culture has many meanings and synonyms in the Polish language - we can talk about good manners, rules of savoir-vivre, social etiquette, or politeness. Most people intuitively know how to behave in situations outside of work. In recent years, discussions about culture in the workplace have appeared more often. It is particularly relevant in the construction industry at a time when new forms of employment are emerging and many organisations are undergoing restructuring processes.

Research limitations/implications: It results in, among others, high staff turnover, the employment of more contract workers, frequent changes in the working environment, and working on different construction sites. In such cases, the direct and long-term impact of supervision on maintaining safe and cultural working conditions is increasingly limited. The responsibility should be borne by all site personnel, who should adopt an attitude of active and continuous concern for the culture and safety of their own behaviour and that of others and be personally involved in the process of developing cultural and safe attitudes on construction sites. The article defines culture and suggests its application on construction sites.

Practical implications: Consequences include high rates of staff turnover, the need to bring in outside contractors, constant shifts in the workplace culture, and the need to work at many sites. The ability of supervision to provide a safe and satisfactory work environment, both now and in the future, is diminished under those circumstances. All construction workers should take responsibility and adopt an attitude of active and continuous concern for the culture and safety of their behaviour and that of others and be personally involved in the process of shaping cultural and safe attitudes on construction sites.

Originality/value: The paper defines culture and proposes its use on construction sites.

Keywords: Complementary roles of developed and developing nations in promoting a global industrial and economical infrastructure and requirements on common international research and teaching development in the field of safety, Construction, Culture, Construction sites



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EDUCATION AND RESEARCH TRENDS

1. Introduction

The Construction Law does not explicitly define the term 'construction'. Still, it counts construction, in addition to reconstruction, assembly, renovation, and demolition, among the construction works carried out during the execution of a structure, as well as reconstruction, reconstruction, extension, and superstructure of a structure [1].

From the point of view of civil engineering, a construction site is a space in which construction work is carried out. In contrast, from the point of view of organisational and management sciences, it is the

organisation that is formed by the combination of people, machines, and materials in order to carry out the construction work. The organisational efficiency of a construction site is determined by its structure. An example of a traditional construction site organisational structure is shown in Figure 1.

For each position in the organisational structure of the site, specific requirements in terms of tasks, qualifications and responsibilities should be assigned. A person working in a specific position should meet those requirements. Practically, the employee requirements should be included in the organisational regulations. At the same time, it should

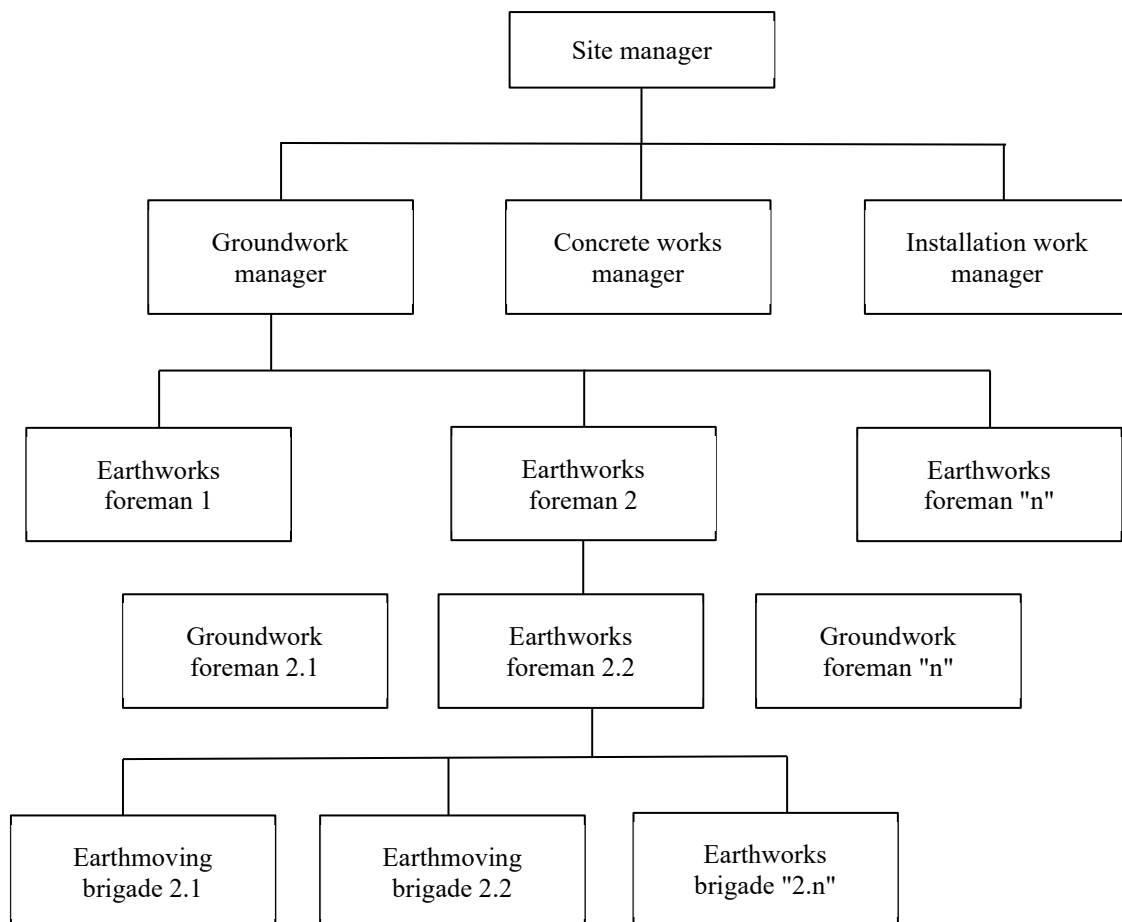


Fig. 1. Example of construction organisational structure

be borne in mind that such regulations are not obligatory; certain groups are required by law to create such documentation.

Construction personnel, considered as a set of people employed on a construction site, are a collection of workers representing companies performing specific construction work at a specific time and place in the construction process.

The staff of any construction site, regardless of its type and size, is characterised by multiculturalism. Thus, a construction site is an organisation created for a specific purpose and characterised by great cultural diversity.

Every construction worker, regardless of his or her position, behaves differently. Those behaviours are a result of his or her culture.

There are many interpretations of the concept of culture. One of them was developed by Hofstede [2], who stated that the mind of each person is programmed only for a particular person and sometimes common to a group of people, and he distinguished three main levels of mental programming, defined as:

- *the individual, unique level*, which includes the behaviour of the individual. The level is genetically determined.
- *collective level*, common to social groups, e.g., nations, inhabitants of a particular region, representatives of a particular profession or organisation. It is a learned programme passed on from generation to generation.
- *the universal level*, increasingly referred to as the *global level*, encompassing physiological, safety, recognition and self-fulfilment needs.

Site personnel representing different companies create the organisational culture.

2. The ambiguity of organisational culture

Many different definitions of organisational culture can be encountered in the literature [3]. According to Kożuch

Table 1.

Characteristics of cultural artefacts (Source: own elaboration based on [5])

No.	Type of artefacts	Characteristics of the artefacts
1	Linguistic artefacts	Linguistic artefacts consist of: <ul style="list-style-type: none"> • characteristic, figurative words and phrases used individually, collectively or universally; • consciously phrases and words developed, for example, by management; • myths, legends, and messages concerning important elements of an employee's or organisation's life.
2	Behavioural artefacts	Behavioural artefacts consist of: <ul style="list-style-type: none"> • people's behaviour, e.g., ceremonies, rituals, and customs, which can be recorded or passed on to each other; • things that should not be said or should not be done.
3	Physical artefacts	Physical artefacts are elements of the material. They are creations of a given culture, such as art, architecture, office décor, workplace furnishings, clothing or hairstyles.

and Cywoniuk, human behaviour results from the so-called *cultural programme* [4]. The cultural programme provides people with patterns of behaviour in many situations of private and professional life. Those patterns are transmitted in the form of various *assumptions, norms and values* and artificial creations of culture, so-called *artefacts*. They are elements of an organisation's culture and should interact with each other accordingly.

Assumptions form the core of a culture and provide the basis for its other components and answer the problems of the essence of existence, human nature, reality and truth.

Norms and values are more observable and noticeable than the basic assumptions of the cultural level. They are expressed in the views and attitudes of individuals and members of the organisation.

Artefacts are the most visible creations of culture. They are divided into linguistic, behavioural and physical artefacts. The characteristics of artefacts are shown in Table 1.

Treating construction as an organisation, it can be said that construction culture is made up of elements: assumptions, norms and values, and artefacts derived from individual, collective and universal culture (Fig. 2).

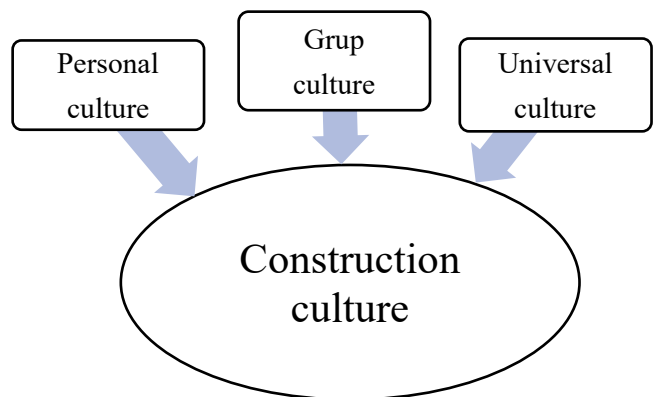


Fig. 2. Construction culture

3. Culture of site staff

The culture of construction personnel results from individual and collective values, attitudes, perceptions, competencies and behavioural patterns, as well as style and quality [6]. Pidgeon [7,8] distinguishes three basic aspects of culture that apply on a construction site:

- *standards and rules* for the work to be done;
- *attitudes* relating to job-related beliefs;
- *"reflexivity"* related to the ability to learn from actions taken and attentiveness to respond appropriately to emerging and previously unknown behaviours.

In doing so, it is important to remember that every construction site, considered an organisation, does not exist in a vacuum but in the specific reality in which it is realised. The reality interacts with the culture of the site personnel. By analysing the most important factors influencing the culture of an organisation from a management point of view [9], it is possible to identify the elements influencing construction culture, such as:

- *type of environment* – companies carrying out construction in a particular environment constantly interact with it. Construction workers are influenced by the norms and values developed by the regional, state or local culture.
- *type of construction* – depending on the type of work, the technology used and the organisation of the work, other material resources, other specialists (subcontractors) and other ways of carrying out the work will be required.
- *types of companies carrying out construction work* – depending on the age, history and size of the company, the culture of the organisation will depend. For traditional organisations, ritualism and conservatism will be typical traits, while young organisations will be assigned innovation and a focus on modernity.
- *characteristics of the site management and construction workers* – each participant of the construction work bring his or her own experiences, views, 'private' norms, and points of view, thus imposing certain behavioural styles that can influence the construction culture.

The 21st century has brought many political, economic and social changes. Today's construction sites are characterised by modernity and complexity; consequently, their execution requires new skills from people, the use of modern machinery and new materials. The construction workforce is made up of workers from different countries. Construction organisations are becoming more diverse and multicultural. Foreign companies that have opened branches (subsidiaries) in Poland, like Polish companies abroad, are often faced with different customs, norms or values. They

have to learn to function in new conditions. Three main models of intercultural interaction have developed in international construction practice [10,11]:

- *A model of cultural dominance* that involves imposing the norms and values of the parent culture on the whole site or partners (subcontractors). Other cultures must adapt to the dominant culture unilaterally, as they are otherwise discriminated against or ignored.
- *A model of cultural coexistence* that seeks a compromise between the partners' cultures (subcontractors), which focuses on solutions acceptable to all concerned.
- *A model of cultural cooperation* based on the assumption that intercultural interaction can contribute to maintaining or improving occupational safety and health levels on the construction site.

The professional experiences of the article's construction authors and organisational culture researchers may help shape construction culture [3,5, 12-24]. Experts identify these as essential to successfully developing and maintaining a high culture on site. Among the basic ones are:

- *site management commitment* – involves the expression of personal interest and concern by the site manager, site supervisors, supervisors and forepersons to maintain cultural principles when planning and implementing organisational, technological and personnel changes in the construction process;
- *improving interpersonal communication* – involves reliably and systematically informing all site employees, including subcontractors, of the rules in force at the workplace; informing "work culture" in the teaching, training and further training processes by establishing a social dialogue in this regard;
- *increasing site staff participation* – involves tapping into the knowledge, capabilities and experience of site staff; encouraging them to offer their own opinions and suggestions on culture; involving staff in the development of internal standards and documents on appropriate behaviour;
- *motivating and reinforcing correct behaviour* – involves giving approval and recognition to site staff who behave culturally and engage in activities to improve the culture on site;
- *increasing cooperation* – involves interaction between participants throughout the construction process and maintaining an atmosphere of understanding and trust, in particular between site management and subcontractor management and between the employees of subcontractors carrying out work on site;
- *taking into account the cultural achievements of other countries in solving one's problems* involves analysing

solutions, e.g., of the European Community member states, and using them in one's activities.

An interesting organisational solution increasingly used in construction practice, which is very helpful in maintaining a proper construction culture, is the development of *construction rules* and *regulations* that define the rights and obligations of contractors (subcontractors) in terms of cultural behaviour. Among the most important solutions, there are the following ones:

- one should identify a person within the company starting work on the site who is responsible for cultural behaviour on site;
- a company manager starting work on site should:
 - submit to the general contractor a declaration of no contraindications to work on the job, initial and periodic training carried out, possession of professional qualification certificates (if required) and information on familiarisation with the rules of the applicable culture on the construction site;
 - draw up an instruction on the safe execution of works on site, including the principles of organisational culture, approved by the Subcontractor's works manager and signed by the workers confirming that they have read it;
- the subcontractor shall be introduced onto the construction site by the general contractor on the basis of a written handover of the work front;
- the conditions for allowing people to work on the site should be defined with particular regard to the completion of compulsory organisational training in health and safety and in cultural behaviour for those starting work on the site, documented by the employee's signature, with regard to familiarisation with, in particular:
 - health and safety plan;
 - construction organisation plan;
 - occupational risk assessment;
 - building regulations, including the principles of organisational culture.

More and more people are discussing culture outside of the workplace, whether at home, on the road, or during free time [8]. At a time when traditional forms of employment are shifting, and many businesses are experiencing transformations, this is more important than ever. A number of negative outcomes stem from such a situation, including high employee turnover, the need to increase the number of contract employees, frequent shifts in the workplace setting, and the need to move construction projects to other locations. It is getting more difficult for supervisors to have a direct and lasting effect on ensuring a safe and respectful work environment in such settings. Everyone working on the

site has to be accountable. They should take an interest in the process of shaping cultural and safe attitudes on construction sites and maintain an attitude of active and ongoing concern for the culture and safety of their own behaviour and that of others.

4. Summary

Culture on construction sites is an integral pattern of individual and collective values, attitudes, perceptions, competencies and behavioural patterns, as well as the style and quality of personnel, which consists of language, ideas, beliefs, customs, norms, institutions, tools, techniques, rituals, ceremonies and many other phenomena typical of a construction site that make a worker employed by a company that has been contracted to carry out construction work on a particular site engage in the process of shaping the cultural and safe attitudes of the personnel and feel the satisfaction of being in the organisational structure of the site.

Literature

- [1] Act of 7 July 1994 – Construction Law (in Polish).
- [2] A.K. Koźmiński, W. Piotrowski, Management. Theory and practice, PWN, Warsaw, 1995 (in Polish).
- [3] Ł. Sułkowski, The ambiguity of organisational culture, *Entrepreneurship and Management* XII/12 (2012) 11-25 (in Polish).
- [4] B. Koźuch, M. Cywoniuk, Introduction to organization and management, Publishing House of the University of Economics in Białystok, Białystok, 2005 (in Polish).
- [5] G. Aniszewska, Genesis of the term "organisational culture", *Organisational Review* 10/765 (2003) 17-20 (in Polish).
DOI: <https://doi.org/10.33141/po.2003.10.02>
- [6] N. Adler, Cultural synergy: The management of cross-cultural organizations, in: G. Aniszewska (ed.), *Organizational culture in management*, PWE, Warsaw, 2007 (in Polish).
- [7] M. Owczarek, S. Owczarek, A. Baryłka, A. Grzebielec, Measurement method of thermal diffusivity of the building wall for summer and winter seasons in Poland, *Energies* 14/13 (2021) 3836.
DOI: <https://doi.org/10.3390/en14133836>
- [8] N. Pidgeon, Safety Culture and Risk Management in Organizations, *Journal of Cross-Cultural Psychology* 22/1 (1991) 129-140.
DOI: <https://doi.org/10.1177/0022022191221009>

- [9] R.W. Griffin, Fundamentals of organization management, PWN, Warsaw, 2004 (in Polish).
- [10] A.K. Koźmiński, D. Jemielniak, D. Latusek, A modern look at organizational culture, E-mentor 3/30 (2009) 4-14 (in Polish).
- [11] A.K. Koźmiński, W. Piotrowski, Management. Theory and practice, PWN, Warsaw, 2000 (in Polish).
- [12] M. Bratnicki, R. Kryś, J. Stachowicz, Organizational culture of the enterprise, Ossolineum, Wrocław, 1988 (in Polish).
- [13] M. Czerska, Cultural change in the organization. A challenge for the modern manager, Difin, Warsaw, 2003 (in Polish).
- [14] R. Chmielewski, A. Baryłka, J. Obolewicz, Analysis of design solutions for strengthening the load-bearing structure of a building for further safe use, Journal of Achievements in Materials and Manufacturing Engineering 104/1 (2021) 5-10.
DOI: <https://doi.org/10.5604/01.3001.0014.8481>
- [15] G.J. Hofstede, Cultures and Organizations: Software of the Mind, PWE, Warsaw, 2000 (in Polish).
- [16] M. Kostera, S. Kownacki, A. Szumski, Organizational behavior: motivation, leadership, organizational culture, in: A.K. Koźmiński, W. Piotrowski (eds), Management. Theory and practice, PWN, Warsaw, 2000 (in Polish).
- [17] J. Obolewicz, Culture of work safety in the implementation of anthropogenic, construction objects, Safety Engineering of Anthropogenic Objects 4 (2016) 10-14.
- [18] J. Obolewicz, Work safety culture and occupational health in organisations, in: Research of Wszechnica Mazurska in Olecko, Wszechnica Mazurska Publishing House, Episteme, 70, 2007 (in Polish).
- [19] R.A. Pilawska, Fashion for culture - between individuality and universality in contemporary culture, Gardens of Science and Arts 10 (2020) 23-35 (in Polish).
- [20] J. Szlendak, J. Obolewicz, Basics of Management and Organisational Behaviour, Wszechnica Mazurska Publishing House, Olecko, 2005 (in Polish).
- [21] B. Wiernek, organizational culture of the company, TEXT Publishing House, Cracow, 2000 (in Polish).
- [22] A. Wojtowicz, The essence and models of organizational culture - an overview of the concept, Scientific Papers of the Małopolska University of Economics in Tarnów 5 (2004) 159-171. DOI: <https://doi.org/10.25944/znmwse.2004.05.159171>
- [23] A. Woźniak, "Participatory culture" in the contemporary Polish countryside in the context of the latest media studies theories, Polish Ethnography 57/1-2 (2013) 85-103 (in Polish).
- [24] L. Zbiegień-Maciąg, Culture in organizations. Identification of cultures of well-known companies, PWN, Warsaw, 1999 (in Polish).



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