

Learning and Education in Organizational Theories: From Rationality to Metaphors

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Abstract: The current world of work is changing and its current form also requires a change in the competence framework that an adult individual needs for their work performance. We are moving away from clearly defined qualification education as the only possible indicator of the ability to succeed in the labor market. For some time now, a clear indicator of this has been the shift of educational goals to abilities and competences, such as the ability to work in a team, flexibility or willingness to communicate. In the post-industrial organizational environment, individuality, which until recently was the addressee and actor of education and training, is being suspended. However, the expansion of the number of necessary competencies also requires that part of the competence framework be completely unique in something, so that we can succeed in a work environment overwhelmed by a large number of competent people. The space for andragogic action in the area of formal organizations is so enormous. This chapter is devoted to the still current theories of organizations, their principles of learning and education, with an emphasis on the reference to the current social context of the world of work. Organization is understood here not as a static application of organizational principles, but as a process. Theorists such as Niklas Luhmann, Bruno Latour, Karl Weick and James March have made significant contributions to the process view of organization. The chapter provides a basic analysis of these theoretical approaches in the context of learning and education in companies. The interpretation is based on three basic dimensions of organization theory. (1) The basic dimension is the principle of the organization of the world and its organization. (2) A general explanation of social relations and mutual relations between individuals, groups and entities. (3) What are the possibilities of predicting future developments and possible expectations of people, groups and organizations. These conclusions are related in the chapter to the main principles of andragogic work, learning and education in organizational environments.

Keywords: Organizational Theory; Organizational Learning; Education in Organizations; Socio-technical Systems; Organizational Processes; Enrollment; Material Mediation.

1. Introduction

In recent decades, corporate learning has transformed from a mechanical transfer of knowledge to a complex process of shaping meaning, identity, and capabilities within changing organizational contexts. This text develops a process-oriented approach to learning in organizations, drawing on the theoretical frameworks of prominent representatives of organizational theory – Bruno Latour, Niklas Luhmann, James March and Karl Weick – and above all the analytical scheme of process organizational analysis, as systematically developed by Tor Hernes in his work *Understanding Organization as Process* (2007). The aim is to show how these approaches can be used for a deeper understanding, design and implementation of educational strategies in companies and institutions.

2. Theoretical Background of Selected Theorists in the Context of Organizational Learning

2.1 Bruno Latour and Organization as a Process

Bruno Latour, best known for his work in the sociology of science, transcends the traditional dichotomy between the technical and the social world. His key claim is that the world is not composed of fixed entities, but of interconnected actors—human and nonhuman—who come together in more permanent groupings through networks. Latour criticizes classical sociology for neglecting the role of material objects and technologies in maintaining social structures. Like Whitehead, Latour sees relations and processes as primary, not subjects or objects in themselves. Latour's Actor-network theory (ANT) shows how social and technical elements are inextricably intertwined. Actors are not stable entities, but products of relationships that are constantly renewed. Technologies do not arise only as a result of human activity – they themselves also shape human actions. Latour refers to these elements as “actants”, emphasizing their role in shaping permanent socio-technical configurations. In his concept, organizations are not fixed structures, but temporary stabilizations of processes that take place between people, things, texts and technologies. A key mechanism in Latour's thinking is the process of translation – the way in which various elements of a network are translated into new contexts and their meaning is stabilized through material records (e.g. graphs, devices, or documents). Such translations enable organizations to persist over time because they remove dependence on individuals. Here, Latour builds

on Weber's idea of rationalization and shows how human activity gradually becomes technically mediated and less personal.

In practice, Latour's theory can be applied, for example, to the analysis of corporate mergers: they are not just rational decisions resulting from the market, but a complex network of decisions, technologies and discourses that shape each other. Organizing is seen here as a form of experimentation, where results are never guaranteed, but are based on constant testing, improvisation and adaptation. Latour also rejects the classic levels of analysis – micro vs. macro – and instead proposes to monitor connections and interactions regardless of predetermined scales. According to him, even large institutions are formed by local interactions, the stability of which depends on the strength of associations, often mediated by artifacts. Stabilization is then not the result of some external force, but arises from reproduced relationships that can be materialized, for example, in technologies or standardized procedures.

Another important concept is enrollment, the incorporation of actors into a network. This occurs when their interests align with those of others and can thus be “enrolled” into more permanent structures. This process is not one-sided – even non-human elements such as machines can “recruit” people and shape their actions. Latour's work offers an alternative to traditional sociological thinking – instead of abstract structures and universal theories, he emphasizes concrete connections, translations and material mediations. According to him, organizations are constantly evolving networks, where stability is the result of efforts to connect and transfer meanings. His approach brings a new way of thinking about organizations as a continuous process of “becoming” and at the same time a challenge to methodological modesty – no theory can capture the whole tangle of reality.

2.2 Niklas Luhmann – Autopoiesis, Recursion and Organization as a Communication System

Niklas Luhmann (1927–1998) is one of the most important social theorists of the 20th century. In his theory of autopoietic systems, he combines inspiration from biology (autopoiesis Maturana and Varela), philosophy (especially Husserl and Spencer Brown) and systems thinking. Unlike Parsons, from whom he learned, but from whom he significantly distinguished himself, Luhmann understands social systems as operationally closed communication units that reproduce themselves on the basis of their own internal rules. He does not deal with the behavior of individuals, but exclusively with communication – that is how systems exist. The fundamental concepts of his theory are autopoiesis (self-creation), recursion (self-referential reproduction) and distinction (delimitation of system boundaries). Social systems are not determined by the external environment, but create their own meanings through internal operations – especially communication. This communication is not only the bearer of meaning, but also the main mechanism of the existence and change of the system.

2.2.1 Autopoiesis and Closedness of the System

Luhmann borrows the term autopoiesis from biology, where it refers to the ability of a system to create and renew itself. In the social realm, this means that social systems – such as organizations – are not “open” in the sense that they directly absorb influences from the outside. Instead, they are cognitively open, meaning that they perceive their environment through their own meaning structures. Any input from the outside must first be interpreted by the system according to its internal logic, otherwise it has no effect.

For example, an organization does not respond directly to the “reality of the market”, but to how it defines this reality in its decision-making and communication structures. This creates structural selection – the system accepts only those stimuli that correspond to its internal logic and current codes of meaning.

2.2.2 Communication as the Basic Unit of the System

Luhmann's fundamental contribution is the change of the analytical unit from the individual to the act of communication. In his concept, communication is composed of three moments: information, utterance and understanding. It is not important who speaks, but whether the utterance enters the communication chain of the system. Individuals are not part of the system – they are its environment. In this way, Luhmann disrupts the classical concept of social action as individual intentional action.

2.2.3 Structure and Process: Stability and Change

Social systems are both stable and changeable. Stability is provided by a structure that maintains continuity between the past, present, and future. Structure in Luhmann's view is not a set of roles or functions, but rather patterns of communication, such as repeated meetings, decision-making procedures, or values embedded in

corporate texts. This stability allows systems to “return to themselves” and evolve in the form of feedback (recursion). Change is made possible through events that the system links into a trajectory. Events are unique and irreversible (such as decisions), but if the system is able to integrate them meaningfully, they contribute to its development. The key is that change is only possible if it is interpretable—if it “fits” into existing codes. Otherwise, the system ignores the event.

2.2.4 *Expectations as Anticipatory Structures*

In addition to communication, the category of expectations is also an important element. It allows the system to anticipate the future, choose from options and orient its actions. Expectations are structures of meaning – they allow us to decide what is important, what can be assumed, what can be considered a failure or a success. However, with high accuracy of expectations, there is a risk of disappointment and closure towards the unexpected. Luhmann draws attention to a paradox: the more accurate the expectations, the less adaptable the system.

2.2.5 *Identity, Complexity and Texts*

In his concept of identity, Luhmann follows his theory of communication: an organization is what it says about itself. Identity is the product of the texts that an organization creates about itself – annual reports, codes, strategies. These texts do not reflect the “true essence”, but stabilize certain meanings and thus enable decision-making. Identity is thus recursive – it arises as a result of its own messages and serves as the basis for further decisions. The system cannot express all its complexity, so it creates simplified self-images .

2.2.6 *Critique of the Absence of the Subject*

One of the most common objections to Luhmann is his rejection of the role of the individual subject. Individuals enter the system as an environment, but they are not part of it. This can be reductive, especially in organizational studies that examine the role of managers, leadership, or human decision-making. Luhmann's theory is more of an analytical tool than a description of everyday life. At the same time, however, it opens up space for analyzing organizations as dynamic systems of meaning reproduction, not as a collection of acting individuals.

2.3 James March and the Logic of Organizational Processes: From Organizations as Structures to Organizations as Decision Streams

James March is considered one of the founders of modern organization theory. His early collaboration with Herbert Simon led to the seminal publication *Organizations* (1958), which attempted the first systematic study of organizational behavior. Later, with Richard Cyert , he published *A Behavioural Theory of the Firm* (1963), which represented an early version of the process approach in the economic theory of organizations. A characteristic feature of March's approach is that it does not start from preconceived ideas about what organizations “are” but focuses on what organized action enables and sustains in an often volatile and ambiguous world. Organizations are not rigidly bounded entities, but rather dynamic, open-ended systems of decision-making that cannot be easily reduced to a set of norms or predictable structures.

March, organizations are not fixed and logical structures, but patterns of formalized decision-making processes that can acquire varying degrees of stability. While an organization—for example, the Red Cross—may appear consistent from the outside, its internal decision-making processes may be chaotic and incoherent. Such an organization may appear coherent only because of the way it is viewed from the outside—for example, by the media, funding agencies, or the public. In reality, the set of decisions and actions may be very inconsistent. This inconsistency is not only present, but is also key to the survival of organizations in an ambiguous world. March understands organizations as “loosely coupled systems” (loosely coupled systems) coupled systems), which means that the individual components of an organization (decisions, people, problems, technology) do not have to be tightly coupled. In his famous “garbage can” decision-making model (can model), which he developed with Cohen and Olsen , decisions are the result of the random connection of four elements: problems, solutions, participants and decision-making opportunities. The organization is therefore not a predetermined framework, but the result of a process in which the individual elements meet. March compares this dynamic to the sharing of fire: only some decisions (for example, a “dry log”) are able to ignite other, less flammable parts (for example, “wet branches”), thus creating a self-sustaining process. According to March , symbolism is an important part of organizational life . Decision-making in modern society often serves more to create an impression of rationality and control than to actually produce functional results. The fact that people believe in rational decision-making

has value in itself - it strengthens trust in structures and enables collective action. March recalls the story of a military unit that survived a snowstorm thanks to a map – although it was a map of the Pyrenees, not the Alps. The power of the symbol (the map as a guarantee of orientation) therefore played a more important role than factual accuracy. Many organizational decisions also operate in this spirit – they are rituals that maintain the appearance of order.

This is also related to March's criticism of the rationalist concept of learning in organizations. In his concept, the organization is not a rational unit that learns on the basis of fixed truths, but a system that creates its own certainties in conditions of uncertainty. Learning is a means of connecting the past, present and future - through experience and collective memory, expectations and goals are formed. Failure is often simplistically associated with the failure to meet expectations, while success is the reward for fulfilling them. This emotional interpretation of past events has a fundamental influence on future decision-making.

Another key element of March's theory is routines. Organizations as systems are neither completely controlled nor completely random - their stability is the result of provisional connections that are constantly reshaped. Overall, March's approach shifts our idea of how organizations work. He shows that organizations are not fixed entities with a clear structure and hierarchy, but rather fluid networks of processes in which decisions, symbols, routines, and learning interact. His emphasis on ambiguity, symbolism, and the spatiotemporal dynamics of decision-making makes a fundamental contribution not only to organizational theory but also to the understanding of institutional and collective action in modern society.

2.4 Karl Weick and Organizing as a Process: The Verbal World of Meaningfulness in Organizations

Karl Weick is one of the most influential authors in the field of organizational theory, particularly due to his emphasis on processes rather than static entities. Instead of studying organizations as objectively given structures, he focuses on organizing – that is, the dynamic, ongoing activities through which people create social order. In his concept, an organization is not something that can be directly grasped or located; rather, it is a network of interconnected events that exists through the meaningful interconnection of the actions of actors in time and space.

Weick builds on the pragmatist tradition and approaches the paradigms of social constructivism. The key concept in his theory is sensemaking – the process by which people actively create meaning for the situations they find themselves in. In this sense, he differs from the more traditional concept of interpretation, which may suggest that meaning is something that is already present in reality and waiting to be recognized. For Weick, however, reality is actively shaped – through language acts, interactions and reflections. In their actions, actors draw imaginary boundaries, create categories and label situations, thereby giving rise to environments that did not exist before.

Weick, not only norms or institutions have a fundamental influence on the organization, but also how individuals coordinate with each other in a given context. This coordination takes place through interactions, linguistic exchanges and immediate decisions – for example, in crisis situations, where it is shown how organizational processes emerge from the verbal world. Weick classifies the intersubjective (personal, contextual) and generically subjective (structural, routinization) dimensions as two key levels of organizing. Organizational life oscillates between these two poles – between spontaneous sharing of meaning and institutionalized forms such as budgets, roles or strategies.

Weick, organizing as a process consists of three phases: enactment (the initiated activity that creates the environment), selection (the selection of interpretations and models), and retention (the storage of successful schemes and their reproduction). Here, he replaces the traditional biological model of variation-selection-retention with his own version that emphasizes the active role of man more. Meaning therefore does not emerge from objective reality, but from the way in which actors react to a given situation through action, how they “anchor” it using language and shared labels. This phase of “labeling” becomes a key moment of stabilization – the verbal act constitutes a reality to which one can further relate. In this context, Weick draws attention to the importance of the linguistic tension between verbs and nouns. The verbal form is an expression of movement, flow, relationships – that is, of what is fleeting, changeable, and contextual. On the contrary, nouns denote what is stable, nameable, that which can be standardized and transferred across situations. According to him, organizing takes place precisely in the space between these two levels: between the live interaction of people (the verbal side) and the structures that allow the generalization and institutionalization of experience (the nominal side). Stability in an organization does not arise from predetermined structures, but from the repetition of processes that have proven successful in a given context – even though they were

originally the result of improvisation or intuition. In his empirical studies (e.g. on aircraft landings on aircraft carriers or on the interventions of firefighting teams), Weick shows how in extreme situations we rely on nonverbal signals, shared intuitions and immediate collective decision-making. From these cases, he derives concepts such as heedfulness (attention to others in the team) or collective mind – a concept that shows how team consciousness transcends individual actors. He points out that while everyone may feel in danger, the collective context (e.g. one person keeps the tools, others decide the situation is safe) can lead to a dangerous interpretation of reality.

When Weick considers the role of structures in organizing, he acknowledges that stability and routines (i.e., “nouns”) have a function. Stability is not neglected—it is rather understood as the result of previous processes of meaning-making. For example, the introduction of a new technological device can disrupt existing scripts (scenarios of common behavior) and create tension between the old intersubjective plane and the new generic structure. This moment is crucial for understanding how institutions change—through the tension, dissonance, and subsequent recalibration between the verbal and nominal worlds.

The significance of Weick's work lies in its connection of immediate experience (e.g. intuition) with organizational structures. He points out that the process of organizing is a continuous “moving balance” between the emergent and the stabilized, between what is happening now and what was previously recognized as functional. This view is in line with Whitehead's process philosophy, which understands reality as a stream of events, not as a set of fixed entities. Both authors agree that “organization” is not a static object, but a constantly renewing dynamic between the past, the present, and the possibilities of the future.

3. Organizing as Connecting: Connect, not Just Contextualize

While traditional approaches to education assume that learning takes place “within” the organization as a context, the process approach emphasizes learning as an organizing act – that is, as the creation of new connections between people, tools, discourses, and knowledge. Hernes (2007) builds on Whitehead's philosophy of “becoming” and argues that organizations are not fixed entities, but fluid configurations of relationships that need to be constantly renewed through connections.

Latour's concept of networks of actors (Latour, 2005) allows us to understand education as a process in which heterogeneous elements – people, technologies, rules, values – are connected into temporary but functional relationships. Luhmann (1995) adds that each connection is the result of the communicative operations of the system, not the mechanical connection of objects. Thus, the organization is not created “from above”, but through repeated interactions that give individual actors the opportunity to become part of a meaningful whole.

3.1 Decision-making, Meaning and Uncertainty: Education as Meaningful Action

James March (1994) viewed organizations as places of decision-making flows where we learn through trial and error. Learning here is associated with the search for a “logic of appropriateness” and expectations. Hernes (2007) extends this framework with a process logic of decision-making, in which not only the decision itself is important, but also its repetition, reinterpretation and connection with other decisions. Karel Weick (1995) adds the concept of sensemaking – the process in which people create meaning in an environment of ambiguity. Hernes (2007) understands meaning as the result of activity over time – that is, as part of how the organization becomes itself in the process. In an educational context, this means that it is not just about transferring knowledge, but about creating a context in which individuals can understand their role, goals and value in the organization.

3.2 Stability and Change: Reiteration and Novelty in the Educational Process

Hernes's (2007) key concepts is reiteration – repetition as a form of temporary stabilization in an unstable world. Corporate learning is reiterative in the sense that it stabilizes knowledge, norms, and behavior through their regular re-introduction into practice. However, this stability is only apparent – each repetition takes place in a new context and opens up new possibilities. As Hernes says, “nothing organized starts completely from scratch, but neither is it ever repeated in the same way” (Hernes, 2007, p. 133).

3.3 The Organizational Plot: Education as a Storyline

In Hernes's conception of the organization, each structure has its own “plot” (plot) – a theme around which individual activities cluster. This plot is not given in advance, but is constantly created and reproduced through

activities and interactions. Education in organizations does not arise “from the outside”, but as part of this plot – it thematizes meaning, shared orientation and goals. According to Hernes, it is the plot that makes it possible to distinguish one organization from another, not only structurally, but also in terms of meaning (Hernes , 2007, pp. 134–136).

3.4 Potentiality and Actuality: Education Between Possibilities and Reality

The process approach, inspired by Whitehead and elaborated by Hernes , operates with the dichotomy of potential and actual reality. Education is a mechanism for transforming potential into actual skill, knowledge, or ability. All education actualizes certain possibilities and at the same time generates new ones – not as a linear plan, but as an emergent process of “ verbs ” and “ nouns ” (Weick , 1995; Hernes , 2007, p. 137).

4. Current Examples of Research in the Field of Process-oriented Education

4.1 Effectiveness of Process-based Management in Public Higher Education

A study conducted at a Brazilian public university analyzed factors influencing the effectiveness of process-based management. The results showed that understanding and commitment, user value, process standardization, continuous improvement, and identification of non-value-added activities significantly influence process effectiveness. This study provides quantitative evidence on how process-oriented management can improve governance and decision-making in educational institutions.

4.2 Using Process Data Mining for Curriculum Analysis

A systematic review of studies on the use of process data mining (process mining) in curriculum analysis shows that this method allows identifying students' educational trajectories, revealing deviations in their behavior, analyzing bottlenecks, and preventing early dropout. This technique provides valuable information for making decisions about curriculum adjustments and improving the quality of education.

4.3 Professional Learning Communities and Their Impact on Teaching

Research focused on professional learning communities (PLCs) shows that collaboration between teachers supports deeper and continuous student learning. Organizing teaching through these teams allows for flexible grouping of students and collective responsibility of teachers for their education, which leads to more effective planning, implementation and evaluation of teaching.

5. Conclusion

Incorporating current research into a process-oriented approach to corporate learning confirms its relevance and practical applicability. Empirical studies show that process management and collaboration within training teams lead to more effective decision-making, better learning outcomes, and higher organizational adaptability (Dirani et al., 2019; Poell et al., 2021). The use of modern analytical tools such as process data mining (process mining), further strengthens the ability of organizations to respond to dynamic changes and continuously improve their learning processes (Calegari & Delgado , 2024).

The process-oriented approach is based on the assumption that organizations are not static structures, but constantly evolving configurations of actors, practices, rules and technologies. In this context, education has a key role: not as a one-time transfer of knowledge, but as a continuous, distributed and interactive process of creating meaning and capabilities (Weick , 1995). The process perspective emphasizes the importance of time, the sequence of events and the narrative framework in which learning activities take place. This means that effective education must be situated, reflective and capable of adaptation in real time.

Recent research also shows that successful educational interventions are closely linked to organizational goals and are co-created by participants. For example, studies focused on professional learning communities (Professional Learning Communities (PLCs)) demonstrate that collective responsibility for learning and sharing experiences among colleagues leads to increased learning effectiveness and transferability of knowledge to practice (Shand & Batts , 2023). It is this ability to connect individual and collective learning that is a fundamental element of process effectiveness.

From a technological perspective, the digitalization of education plays a significant role, enabling the tracking and analysis of learning trajectories. Methods as a process Data mining allows us to visualize how participants navigate through learning programs, where bottlenecks or deviations occur in the processes, and how processes can be optimized (Calegari & Delgado, 2024). This approach opens up new possibilities for the design of personalized and data-driven learning.

Moreover, contemporary organizations are faced with the necessity of frequent and profound transformations. Research shows that the ability of an organization to learn and adapt – the so-called organizational agility – is conditioned not only by technological innovations, but also by the ability to reflect on its own processes and structures (Dirani et al., 2019). The process approach thus allows us to understand education not only as a tool for developing competencies, but also as a key organizing mechanism that allows us to question existing schemes and create new possibilities.

It follows from the above that a process-oriented approach to corporate learning not only better responds to the challenges of the current turbulent environment, but also provides a framework for deeper integration of learning into the everyday functioning of organizations. Thus, learning becomes not a supporting but a constitutive part of organizing.

Ethics Declaration

The submitted text of the paper is not the result of research, but of scientific research. It is a theoretical text, therefore it was not necessary to ask the ethics committee for approval.

Declaration on Artificial Intelligence

In my contribution, I used the AI tool for the formal editing of APA citations. The code of ethics is not relevant for the content of the text itself.

References

- Bornstein, D. (1996). *The Price of a Dream : The Story of the Grameen Bank*. University of Chicago Press.
- Calegari, D., & Delgado, A. (2024). *And Systematic Review on Process Mining for Curriculum Analysis*. arXiv preprint.
- Dirani, KM, Abadi, M., Alizadeh, A., Barhate, B., Garza, RC, Gunasekara, N., ... & Majzun, Z. (2019). Leadership competencies and the essential role of human resources development in times of crisis : A response to the COVID-19 pandemic. *Humane Resources Development International*, 23(4), 380–394.
- Feldman, MS, & Pentland, BT (2003). Reconceptualizing Organizational Routines as a Source of Flexibility and Change. *Administrative Science Quarterly*, 48(1), 94–118.
- Hernes, T. (2007). *Understanding Organization as Process : Theory for a Tangled World*. Routledge.
- Klein, LL, Schwantz, PI, & Dorion, ECH (2024). Process-based management effectiveness in a public Higher Education Institution : quantitative insights from a pilot project. *Revista Ciencias Administrativas*, 30: e13967.
https://www.researchgate.net/publication/381343274_Process-based_management_effectiveness_in_a_public_Higher_Education_Institution_quantitative_insights_from_a_pilot_p roject
- Latour, B. (2005). *Reassembling the Social: An Introduction to Actor -Network- Theory*. Oxford University Press.
- Luhmann, N. (1995). *Social Systems*. Stanford University Press.
- March, JG (1994). *A Primer on Decision Making: How Decisions Happen*. Free Press.
- Poell, R. F., Berings, M. G., & Simons, P. J. (2021). Learning strategies of workers in the knowledge economy : A systematic review. *Human Resources Development Review*, 20(2), 141–173.
- Shand, R., & Batts, J. (2023). Professional Learning Communities and Teachers Outcomes. *Journal of Education Human Resources*, 41(2), 155–177.
- Weick, K. E. (1995). *Sensemaking in Organizations*. Thousand Oaks: Sage.

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