
Theories of Organizational Learning as resources of Organizational Education

Michael Göhlich

The core subject of organizational education as theory, research, and practice, is organizational learning (OL). Therefore it is necessary to analyze the already existing organizational learning theories, to carve out their pros and cons from an educational perspective and against that background to identify the specific necessities of an organizational education theory of organizational learning. With this aim, the article is structured in four steps: first it looks for the internationally established theories of organizational learning by looking at citation rates; secondly it carves out the pros and cons of these organizational learning theories; the third part sums up an interim result; finally, in the fourth part, an organizational education theory of organizational learning is conceptualized, using the pros and cons of the existing OL theories as indications for the specification and enhancement of a philosophy-of-education-based, content-oriented theory of OL.

1 Established theories of Organizational Learning

In the scientific discourse on organizational learning, as well in business and management studies (e.g. Easterby-Smith/Lyles 2011; Argote 2013) as in organizational psychology (Kozlowski 2012; Argote 2013; Dierkes et.al. 2001) or in organizational education (Göhlich et.al. 2005; Göhlich et.al. 2009), there can be identified a certain ensemble of authors which are used as references for organizational learning theory all over: March/Olsen (1975), Argyris/Schön (1978, 1996), Weick (1995; Daft/Weick 1984), Senge (1990), Nonaka (1994; Nonaka/Takeuchi 1995), Lave/Wenger (1991; Wenger 2009), Engeström (1987, 2004).

If we check the citations by the combination of the term “organizational learning” and the name(s) of the author(s) we find that Argyris/Schön and Senge are

the most quoted, not only in Google but also in scientific online libraries and data bases as ERIC, PsycInfo, IBSS and BSC. Behind these authors, Lave/Wenger, Weick and Nonaka/Takeuchi are next often cited, Lave/Wenger mainly in Google and less in scientific online libraries and data bases, Weick and Nonaka/Takeuchi the other way around. Rather irritating is the observed citation rate of March/Olsen and Engeström. While the Google citation rate of March/Olsen is rather high, they are not at all quoted as linked to organizational learning in scientific data bases, Engeström is cited in combination with OL rather often in scientific data bases, but rarely in Google. In summary, we can state

- that the importance of Argyris/Schön and Senge for the discourse on OL is given in the sciences as well as in the public,
- that the importance of Lave/Wenger, Weick and Nonaka/Takeuchi for the discourse on OL is also given in the sciences as well as in the public, but – in comparison to Argyris/Schön and Senge – on a lower level and less balanced,
- that March/Olsen and Engeström are marginalized in different ways; Engeström seems scientifically relevant but not known in the public, while March/Olsen is in the Google memory but seems to be forgotten by the scientific discourse.

	Google	ERIC (Education Resources Informa- tion Center)	PsycInfo (von der American Psycholog. Associat.)	IBSS (In- ternational Bibliogr. of the Social Sciences)	BSC (Business Source Complete)
March+Olsen	48.900	0	0	1	0
Argyris+Schön/Schoen	41.500	10	17	9	27
	73.800	0	0	2	0
Weick	59.500	13	13	11	21
Senge	117.000	63	60	14	141
Nonaka+Takeuchi	56.000	6	9	5	17
Lave+Wenger	75.500	7	8	3	7
Engeström	17.100	16	12	10	5

Even if these ratings can be seen as proofs for the relevance of the named authors for theorizing or conceptualizing OL, we now – if we ask for theories of (organizational) learning as foundations of Organizational Education – have to carve out the pros and cons of their theories and conceptions from an educational perspective. To understand OL, of course we have to ask how OL is going on. This is discussed in

organizational psychology, management science and educational science as well. But from an educational perspective, we moreover have to ask what does the purpose, the subject, the matter of OL mean for its process as well as for the learning human entity (be it an individual or a community in an organization or be it an organization as a human entity) and therewith what OL does to humanity. With these questions in mind, we now look at the named theories in chronological order.

2 Established theories of Organizational Learning. Essentials, Pros and Cons

March/Olsen describe (organizational) learning as an (potentially disrupted) experiential circle: Some members of an organization state a mismatch between how the world is and how it should be. This stating of a mismatch leads to an individual behavior, which connects itself to collective behavior, which is mainly understood as collective decisioning. The outer world reacts to it which again is interpreted by the individual cognitions of the organization's members.

The pros of March/Olsen's (1975) model are, that it takes OL as a continuing process, that it indicates certain connections between the individuals and the organization in the learning process, and that it also addresses the issue of incomplete learning circles. The differentiation of phases in the continuing process of OL makes possible to focus certain barriers of OL, e.g. role-constraints which hinder a member of an organization to act as thought ("role-constrained experiential learning") or the lack of audience for the individual action which hinders its transmission into an organizational decision ("audience experiential learning").

On the other hand, if we look for cons, the model of March/Olsen implicates some theoretical lacks. One problem is that this theory reduces organization to decisions, neglecting other parts of the organization's practice. But the main problem is that – although March/Olsen name OL as experiential – this theory reduces experience to the perception of stimuli, instead of asking for experience as human act, as act of humanity. So the anthropological dimension of learning gets lost. And with the theory's bias towards the cognitive handling of experience, the corporal dimension of learning gets lost, the understanding of OL as a process of a collective or even corporate body.

The theory of Argyris/Schön (1978, 1996) certainly was the most influential organizational learning theory in the 1980s and 1990s and it still is very popular. As March/Olsen and even more than them, Argyris/Schön see the individual member of an organization as the initiator and central actor of organizational learning. "Or-

ganizational learning occurs when individuals within an organization experience a problematic situation and inquire it on the organization's behalf. (...) In order to become organizational, the learning that results from organizational inquiry must become embedded in the images of the organization held by its members' minds and/or in the epistemological artefacts (the maps, memories, and programs) embedded in the organizational environment." (Argyris/Schön 1996, 16)

Argyris/Schön's theory has a lot of pros. Certainly their differentiation between theories-in-use and espoused theories and their differentiation of single-loop-, double-loop- and deutero-learning is a theoretical perspective helpful for interventions. With this theory, it is possible to define the becoming organizational of OL, it is possible to differentiate between the latent and the explicit beliefs, between private images and public maps. Argyris/Schön's theoretical trick is to postulate the condition that the individual member is acting in the name of the organization. With this presupposition, Argyris/Schön can theorize OL in a cognitivist action theory way. They show this in their using of instruments like the left-column, the action diagram and the feedback-sessions with these reflective instruments.

But they neglect the non-cognitive aspects of learning. Their stick to a pure cognitivist perspective can be observed in their intervention program which consists of verbal explication and reflection of mental models (Argyris/Schön 1999, 159ff). This theory neglects the embodied patterns of practice. And there are more cons: Although it defines the becoming organizational of OL by anchoring organization's image in members' heads and in artifacts, the theory focusses the member's individual learning and private images and does neither look much to the collective learning nor to organizational maps as artifacts.

Daft and Weick (1995) take organizations as interpretation systems. They differentiate four organizational interpretation modes (undirected viewing, conditioned viewing, enacting, discovering), which differ by the criteria if the assumptions about environment are analyzable and if the organization is willing to look outside its boundaries. Their theory focusses the sensemaking in organizations which is theoretically constructed as a feedback loop of scanning (data collection), interpreting (giving meaning to data) and learning (taking action).

Theoretical earnings of this theory are that OL can be understood as developing knowledge about interrelations (between organization's actions and environment) and actions that are taken on the base of this knowledge.

As losses of Weick's theory can be seen that it focusses more on the conceptual than on the operational level. So it neglects practical routines, patterns of innerorganizational cooperation etcetera. It also focusses primarily the relation between the organization and its environment, and less the innerorganizational dynamics. Finally this theory substitutes OL by sensemaking, or more precisely, it constricts

learning to only a subordinate part of the sensemaking process while it primarily focusses the interpreting part of this process.

Senge postulates that “organizations learn only through individuals who learn” (Senge 1990, 139). He declares learning as the process by which the human is developing abilities over the time and calls as the basic level of a learning organization, if this process succeeds collectively inside a group (cf. Senge 1996, 501). From his sight, five disciplines make OL possible: personal mastery, mental models, shared visions, team-learning, and systems thinking.

The pros of Senge’s model are that it combines learning processes on individual (personal mastery, mental modeling), collective (shared visioning, team-learning) and organizational (systems thinking) level. It also can be seen as an advantage that it differentiates some levels of each discipline (essentials, principles, techniques).

But Senge’s model is more a normative prescription than a theory, and the categorical function of the essentials and principles of each discipline and their link to the techniques of it stay obscure.

Nonaka/Takeuchi understand OL as the creation of organizational knowledge. Referring to Polanyi’s term “tacit knowledge”, Nonaka differentiates and outlines four modes of knowledge creation: transferring tacit knowledge into tacit knowledge (socialization), transferring tacit knowledge into explicit knowledge (externalization), transferring explicit knowledge into tacit knowledge (internalization) and transferring explicit knowledge to explicit knowledge (combination). For Nonaka/Takeuchi, the process of OL takes place not only in this epistemological dimension (from tacit knowledge to explicit knowledge and viceversa) but also in the ontological dimension of the knowledge level (from individual to group to organization to inter-organization and viceversa). Within this model, organizational conditions for OL are: intention (the organization shows the intention to get to an aim which gives direction to uncertain innovation processes), autonomy (the organization allows its members to act widely autonomously, to get the same informations and to organize themselves), fluctuation and creative chaos (bringing change to status quo by irritating routines and assumptions), redundancy (in the sense of overlapping information and roles that make effective communication possible), and requisite variety.

As theoretical advantages of this theory can be seen, that it combines cognitive (reflection) and bodily (practice) aspects of OL, that it makes seeable OL as production cycle of explicit and tacit knowledge, and that it shows OL as a cycling process with the interplay of individuals, groups, organizations and even inter-organizational networks.

But even if it takes the bodily aspects of OL in account, it does not theorize their performativity. As a disadvantage may also be seen that it focusses more the

steps of (individual) socialization and (individual) externalization than the step of (collective) combination and (organizational) internalization. Finally by its lack of differentiation between tacit knowledge and skills, it neglects OL as production of organizational ability.

Lave/Wenger (1991) originally did not focus OL but situated learning. They understand learning as legitimate peripheral participation in communities-of-practice. Their theoretical focus is on learning as social participation. Participation here refers “to a more encompassing process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities. Participating in a playground clique or in a work team, for instance, is both a kind of action and a form of belonging. Such participation shapes not only what we do, but also who we are and how we interpret what we do.” (Wenger 2009, 210f) Organizations, for this theoretical approach, firstly came in sight as learning situations, but later on (cf. Wenger 2009) there is a link to OL as learning by organizations, as well. “Placing the focus on participation has broad implications for what it takes to understand and support learning: for individuals, it means that learning is an issue of engaging in and contributing to the practices of their communities; for communities, it means that learning is an issue of refining their practice and ensuring new generations of members; for organizations, it means that learning is an issue of sustaining the interconnected communities of practice through which an organization knows what it knows and thus becomes effective and valuable as an organization.” (Wenger 2009, 213)

Not only from an organizational education perspective, Lave/Wenger’s theory has a lot of pros. “The important contribution of the ‘practice turn’ in organizational learning and knowing literature is its methodological insight that practice is a system of activities in which knowing is not separate from doing, and learning is a social and not merely cognitive activity. (...) Wenger argues that organizations always participate in, and are constituted by, such social learning systems.” (Gherardi 2012, 30ff) Certainly, the theoretical recognition of the relevance of the practice is a big pro of Lave/Wenger’s approach.

However, in contrast to the situations and conditions of learning, the process of learning is not theoretically outlined. Another con of Lave/Wenger’s theory is that the harmony-suggesting term “community” is not accompanied by an analysis of power relations. Also the relations between the learning by a community-of-practice and the learning by an organization stay unclear. So, even if it is to note that Lave/Wenger’s theory brings a new – less cognitive more practical, less individual more collective – perspective into the discourse on OL, it also implicits new open questions. “On a very general level, there are two main understandings of organizational learning: whether organizational learning takes place as individuals’ learning in

an organization (Argyris/Schön, 1996) or whether it takes place as processes of 'legitimate peripheral participation' (Lave/Wenger, 1991) in the organizational communities of practice. (...) The first way understands organisations as systems and learning as individuals' learning 'on behalf of' the organization, leaving the essential question of transfer between individual and organizational learning. In the second way (...) learning happens by way of participation in the organizational practices. It is not possible to separate organisations and learning as learning is a ubiquitous part of organizational life and work. The open question we are left with in the second way of organizational learning are whether it is possible to account for diversity in e.g. outcome of participation in communities of practice, i.e. is agency at all possible in this understanding of organizational learning, and is it possible to differentiate participation and socialization from learning? Is learning, in other words, a process that it is possible to discriminate, and as such to support and enhance?" (Elkjaer 2005, 534)

Engeströms theory of expansive learning is focusing activity systems. It seems obvious that this can be used for the understanding of organizations and their learning, if organizations are seen as a kind of activity systems. The expansive learning cycle model (Engeström/Sannino 2010, 8) is not very inventive. The feedback loop of questioning, analysis, modeling the new solution, examining and testing the new model, implementing the new model, reflecting on the process, consolidating and generalizing the new practice, and if necessary questioning again, is a conception of learning as problem solving which existed in educational literature long before Engeström. New is the model of the activity system, a triangle of subject, object, and community, within a triangle of rules, instruments, and the division of labor. In this model, organizations and networks can be seen as cooperation of activity systems which are not linked by the subjects but by the objects, instruments, and division of labor. By such sight, OL can be understood not as learning of individuals in an organization neither as learning of communities-in-practice as collective members of an organization, but as an object-driven, instrument-driven and division-of-labor-driven, or to say co-configuration-driven process. "Co-configuration presents a twofold learning challenge to work organizations. First, co-configuration work itself needs to be learned (learning for co-configuration). In divided multi-activity terrains, expansive learning takes shape as renegotiation and reorganization of collaborative relations and practices, and as creation and implementation of corresponding concepts, tools, rules, and entire infrastructures. Second, within co-configuration work, the organisation and its members need to learn constantly from interactions between the user, the product/service, and the producers (learning in co-configuration). Even after the infrastructure is in place, the very nature of ongoing co-configuration work is expansive; the product/ser-

vice is never finished. These two aspects – learning for and learning in – merge in practice.” (Engeström 2004, 16)

It certainly can be seen as a great pro of Engeström’s theory of learning, that it focusses on the object (as part of the activity system), because it points a way out of the controverse between individual-based and community-based OL. As an advantage also can be seen, that it underlines the continuity of learning and its rootedness in social practice, especially in cooperation.

Otherwise the specificity of “organized activity systems” (Engeström/Sannino 2010, 14) in comparison to other activity systems is not cleared. The organization’s object and the object of OL keeps unclear. Thereby the theory risks to stay on a utility oriented description level. Ethical questions remain out of consideration.

3 Interim result

To summarize the pros and cons of the theories of learning which are mainly used in OL discourse, we can state that they offer to understand OL as continuing process (cycle) and as production of explicit and tacit knowledge as well as to understand some characteristic disruptions of OL, that they offer cognition- and practice-oriented understandings of OL, instrumental- and norm-oriented understandings of OL, interpretation- and (co)operation focused understandings of OL, individual- and community-based understandings of OL. Combining the cognition- and practice-based understandings as well as the individual- and collective- and the interpretation- and (co)operation-focused understandings, we can say, *that organizational learning is not only a reflection and transformation of mental models, but also and primarily a practical mimesis of collectively/organizationally embodied patterns of cooperational practice.*

But we also can state that the established theories discussed above neglect the relevance of the content of learning (for its mode) and, in consequence, neglect the question of responsibility as inherent in human learning, e.g. in learning by organizations as human entities.

4 Organizational Learning as an educational term. A content-oriented perspective

If we try to understand learning as an educational term, or to say it more specified, if we try to understand OL from an organizational education perspective, we have to look at the content of learning, primarily because the humanity of the learning depends on the humanity of the content of learning, secondly because the relationships of human learning – the relationships (with the content, with others, with itself) the learning entity is in while it is learning – brings with it specific learning modes and, above all, the responsibility of the learning entity for its learning and for the content its learning is related to.

Not only systematically but also historically (by the different periods and forms of the institutionalization of support for specific content dimensions), we differ four content-oriented dimensions of learning (cf. Göhlich 2001; Göhlich/Zirfas 2007): “Wissen-Lernen” (*learning to know*; institutionalized in schools since ancient times; the learning content “knowledge” seems to be explicable and separatable from the body, e.g. in written documents), “Können-Lernen” (*learning to be able to, learning to do*; institutionalized in apprenticeship workshops since medieval times; unseparatable connected with the body); “Leben-Lernen” (*learning to live*; institutionalized in counselling centers since the 20th century; securing identity even in uncertain contexts), “Lernen-Lernen” (*learning to learn*; institutionalized in schools and adult education since the enlightenment and even more in our times; takes part in each learning; aims multimodality of learning).

Although human learning implicits all of these dimensions, each single learning process may accentuate a specific one of them. If we use this content-oriented perspective to research organizational learning, in other words, if we take the content-specificity of OL into account, we find specific forms of OL. Focusing the dimension of learning to know, we may research the production or change of organizational knowledge or the inner-organizational knowledge transfer. Focusing the dimension of learning to do or to be able to, we may research collective simulations, scenario-learning, and the mimesis of the organization's patterns of cooperative practices. Focusing the dimension of learning to live, we may research the production or change of organizational identity or the development of an organization's life style. Focusing the dimension of learning to learn, we may research the development of the organizational learning culture.

The content-oriented perspective entails theoretical consequences for the view onto the modes of OL. Out of such content-oriented perspective, two modal aspects of learning get priority: Learning is to be seen as dialogic and as experience-based.

The term ‘dialogic’ specifies the modality of learning as a processing relation of the learning human entity with the content of its learning. Learning needs another. The other may be human or non-human, it may be a living-being or an artifact, it may be a certain knowledge, skill or procedure. But there always has to be another (beyond the actual learning human entity) that learning can take place. The dialogicity does not only require the recognition of the content as another, but it also implicates responsibility for the relation to this other. If a human entity learns something, it goes into a dialogic with this other, and it has to answer for it, it has to take responsibility for the dialogue as well as for its result.

The term “experience-based” as well specifies the modality of learning as a processing relation but it specifies it in a sense different to the above mentioned “dialogic”. While focusing the modal aspect “dialogic” we mainly ask what the learning entity does with the content, by focusing the modal aspect “experience-based” we ask what the learning does with the learning entity, what it does with the learning entity’s biographically earlier experience and what it does with the learning entity’s identity which is funded on this earlier experience. So, inquiring learning as experience-based means to look at the recognition and responsibility the learning entity has for itself while it is learning.

The outlined content-oriented perspective of organizational learning as an educational term still is a work in progress. Neither the inner logic of the outlined perspective nor its theoretical commonalities, differences and relations with the established theories of organizational learning are yet for sure. Therefore here it is too early for a conclusion. The theoretical work goes on.

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