Personal Knowledge: Its Nature and Varieties

Marek Podgórny / e-mail: m.podgorny@pedagogika.uni.wroc.pl
Institute of Pedagogy, University of Wrocław, Poland

Podgórny, M. (2020). Personal Knowledge: Its Nature and Varieties. *Czech-Polish Historical and Pedagogical Journal* 12/2, 17–29.
https://doi.org/10.5817/cphpj-2020-019

As a result of the rapid pace of economic and technological development, previously recognised competences have proved outdated and the demand for new competences has increased. In order to effectively function in the changing realities and to efficiently use both one's own resources and those of the environment, one needs access to information and knowledge. Contemporary concepts of knowledge emphasise that knowledge is abruptly expanding and, thus, that it is exigent to continually analyse, evaluate and organise knowledge. Therefore, the fostering of attitudes of commitment to knowledge not only among young learners but above all among adults is prerequisite for the further development of knowledge, its high quality and continued relevance. Given this, education, guidance and counselling facilities must dedicate themselves to supporting their clients in taking responsibility for their ow knowledge. Additionally, the role and significance of knowledge in the prosperity of individuals, organisations and entire societies are increasing, as knowledge is becoming a valuable resource (capital) which is subject to management processes. This position is adopted and developed by the modern concept of knowledge management (Nonaka & Konno, 1998) and its latest iteration, i.e. personal knowledge management. Replete with educational merits, the latter concept is explored in my paper in the context of changes in conceptualising what knowledge actually is.

Key words: *education; personal knowledge; knowledge management*

The concept of knowledge in management theory

Knowledge comprehended as a resource is a relatively new concept in management. While philosophical reflection on the nature of knowledge dates back to the beginnings of Western epistemology, the notion of knowledge as capital amenable to management only appeared in the 20th century as an expression of profound and multidirectional changes involved in the transition from the industrial age to the post-industrial era.

No universally endorsed definition of knowledge has yet been developed in management theory. Peter Drucker was the first theorist in the field to recognise the importance of knowledge in the economy, as he defined knowledge as a productive and effective application of information in practice.[1] Several other

[1] Drucker, P. F. (1993), *Post-Capitalist Society.* New York: HarperCollins Publishers, p. 8.

definitions similarly highlight the practical dimension of knowledge and its use in problem-solving and decision-making. This is how knowledge is understood, for example, by Wayne Applehans, Alden Globe and Greg Laugero, who consider knowledge to be information applied to resolve a particular problem.[2] Knowledge is regarded in a similar vein by Gilbert Probst, Steffen Raub and Kai Romhardt, who specify that knowledge is 'the whole body of cognitions and skills which individuals use to solve problems.'[3] Some definitions of knowledge focus on the notion of information. According to Kenneth Laudon knowledge can be comprehended as an organised stock of useful information[4] This resource is always bound up with a particular context and, besides information, is comprised of experiences and general rules for guiding the interpretation of the whole. Susan Elliot also identifies knowledge with valuable and relevant information.[5] Many approaches highlight the role of the context, as exemplified in the definition proposed by Amrit Tiwana, who views knowledge as 'a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluating, and incorporating new experiences and information.[6]

These elements are brought together in a synthetic formula coined by Bogdan Stefanowicz to capture knowledge: Knowledge = information + experience + context.[7] Stefanowicz underscores the utilitarian nature of thus-conceived knowledge and the crucial contribution of the human factor to the interpreting of it. The formula can be developed into the statement that that knowledge denotes a set of information which is considered through the lens of experience within a certain context.

In some frameworks, the fields of knowledge is combined with the realm of practice as exemplified in decision-making and problem-solving. Multiple definitions objectivise knowledge into a canonical ensemble of facts and rational principles.[8]

---

2 Applehans, W. – Globe, A. – Laugero, G. (2010). *Managing Knowledge. A Practical Web-Based Approach* (Addison-Wesley), p. 18.

3 Probst, G. – Raub S. – Romhardt, K. (2000). *Managing Knowledge: Building Blocks of Success*. Chichester: John Wiley and Sons Ltd), p. 24.

4 Laudon, K. C. – Starback, W. H. (1993). *Management Information Systems: Organization and Technology* (New York: Macmillan, 1993), p. 392.

5 Elliot, S. (1996). APQC conference attendees discover the value and enablers of a successful KM program, *Knowledge Management in Practice*, *5* (1), 1996, pp. 1–8.

6 Tiwana, A. (2000). *The Knowledge Management Toolkit: Practical Techniques for Building a Knowledge Management System* (Upper Saddle River: Prentice Hall PTR), p. 7.

7 Stefanowicz, B. (2011). *Wiedza: wybrane zagadnienia* [*Knowledge: Selected Issues*]. Warszawa: Szkoła Główna Handlowa, p. 14.

8 McAdam, R. – Reid, R. (2001). SME and large organisation perceptions of knowledge management: Comparisons and contrasts. *Journal of Knowledge Management*, *5*(3), pp. 231–41, on p. 233.

A similar position is espoused by Ikujiro Nonaka and Hirotaka Takeuchi, who found their model of organisational knowledge creation on the traditional definition of knowledge as 'justified true belief.'[9] However, unlike the Western epistemological tradition, which focuses on the aspect of justification (i.e. the categorically confirmed and static nature of knowledge), Nonaka and Takeuchi underscore the other component of the definition, that is, belief. Specifically, they approach knowledge as a 'dynamic human process of justifying personal belief toward the "truth."' [10] As a result, justification is not understood as a single act performed in and through logical reasoning. Rather, it can be construed as a person's ongoing activity which makes this person repeatedly revise his or her own ideas of what reality is.

In the framework put forward by Nonaka and Takeuchi, knowledge is grounded on human beliefs and commitment, whereby it encompasses individuals' mindsets, perspectives and intentions. Comprehended in this way, knowledge is intimately interwoven with the human factor, since it depends on subjective aspects, such as beliefs and values. The researchers insist that this is a pivotal element of their model of knowledge conversion: 'As a fundamental basis for the theory of organizational knowledge creation, we focus attention on the active, subjective nature of knowledge represented by such terms as "commitment" and "belief" that are deeply rooted in individuals' value systems.' [11]

Nonaka and Takeuchi also emphasise the interrelatedness of knowledge and action. Similarly to some of the Western definitions cited above, knowledge becomes relevant in the performance of some activities, when it can be used to solve problems and make decisions.

Knowledge vs. information

The relationship between knowledge and information tends to be notoriously difficult to grasp, because the two notions are commonly used interchangeably in colloquial language. In Stefanowicz's formula, information forms an important component in the structure of knowledge.[12] Marcin Kłak explains: 'Knowledge is information, anchored in a proper context, which enables a company and its employees to operate effectively and efficiently.'[13]

---

9 Nonaka, I. – Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation* (New York & Oxford: Oxford University Press, 1995), p. 21.

10 Ibid., p. 58.

11 Ibid., p. 59.

12 Stefanowicz, (2011). *Wiedza* [*Knowledge*], p. 14.

13 Kłak, M. (2010). *Zarządzanie wiedzą we współczesnym przedsiębiorstwie* [*Managing knowledge in a modern company*] (Kielce: Wydawnictwo Wydawnictwo Wyższej Szkoły Ekonomii i Prawa), p. 18.

These insights point to a close link between knowledge and information, with knowledge sometimes being even identified with usable and applied information. In trying to capture how the two notions are interrelated, Nonaka and Takeuchi explain that '[i]nformation provides a new point of view for interpreting events or objects, which makes visible previously invisible meanings or sheds light on unexpected connections. Thus information is a necessary medium or material for eliciting and constructing knowledge.'[14] In this model, information is only a necessary tool of knowledge production. The Japanese researchers also list some essential differences between knowledge and information; for example, unlike the latter, the former concerns beliefs and commitment and is always inherently associated with action.[15]

In other words, information can be understood as a 'flow of messages,' while knowledge stands for representations generated on this basis and located in the realm of beliefs and commitment.[16] The American philosopher and epistemologist Fred Dretske subscribes to this view and defines knowledge as a belief triggered or sustained by information.[17] It can thus be inferred that information closely interacts with knowledge, as it can initiate the creation of knowledge, consolidate some beliefs or prompt their revision.

At the same time, knowledge and information are, without a doubt, two distinct notions, and conclusions resulting from their differences are relevant to thinking about knowledge conversion as an action upon an object which is a product intimately bound up with human beings – their beliefs and personal ideas of what reality is. Information should thus be treated as a requisite medium which makes it possible to initiate and formalise knowledge in the process of conversion.[18]

The concepts of explicit and tacit knowledge

The term tacit knowledge was introduced to knowledge management by Nonaka,[19] whose works are acknoweldged as the major framework of reference when addressing this issue in the field of management sciences. In *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Nonaka and Takeuchi adopted and developed the concept proposed by Michael

14 Nonaka & Takeuchi, (1995), *Knowledge-Creating Company,* p. 58.
15 Ibid., pp. 58–59.
16 Ibid., p. 59.
17 Dretske, F. I. (1983). Précis of Knowledge and the Flow of Information. *The Behavioral and Brain Sciences*, *6*, p. 58.
18 Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, 5(1), p. 16.
19 Gourlay, S. (2002). Tacit knowledge, tacit knowing, or behaving? (Athens: OKLC).

Polanyi, expanding its application beyond the purely philosophical context.[20] Additionally, they described how one kind of knowledge was converted into the other one within organisations. In this way, the division into explicit and tacit knowledge was ushered into the domain of practice.

Explicit knowledge largely corresponds to the popular understanding of knowledge as such, particularly in the broadly conceived Western culture. Explicit knowledge tends to be described by a range of other monikers, including available, objective, formal or externalised. It denotes systematised knowledge which is codifiable and transferable in and through language. Nonaka and Takeuchi observe that this kind of knowledge can be relatively easily expressed and disseminated in the form of scientific formulas, codified procedures, fixed rules, etc.[21] Elżbieta Karaś and Agnieszka Piasecka-Głuszak encapsulate the argument of the Japanese researchers in the following definition: 'Explicit knowledge is knowledge which is formalised, comprised of lucid facts and can be without much difficulty communicated to others by means of words, texts, numbers, signs, drawings and/or symbols.'[22] As already mentioned, explicit knowledge is often compared to, or even confounded with, data and information. All this suggests that explicit knowledge is easily amenable to processing and systematisation, and that first information and then data can be easily extracted from it, which as will be shown is one of the steps in creating new knowledge in an organisation. This explains why explicit knowledge tends to be defined in reference to these cognitive notions.

Nonaka and Takeuchi characterise tacit and explicit knowledge in opposition to each other, though at the same time they insist that the two types of knowledge are mutually complementary and affect each other[23] as epistemological dimensions of knowledge production. While Western researchers as a rule devote special attention to explicit knowledge, the Japanese approach to knowledge predominantly focuses on tacit knowledge.[24] Nonaka explains that tacit knowledge is deeply anchored in action and dedication and is inevitably context-specific.[25] He also describes tacit knowledge as ingrained in individuals' experiences as well as in people's beliefs, values and emotions.[26] Succinctly and

20 Nonaka – Takeuchi. (1995). *Knowledge-Creating Company*, pp. 59–60.

21 Ibid., p. 59.

22 Karaś, E. – Piasecka-Głuszak, A. (2013). Zarządzanie wiedzą – dlaczego tak ważne? ['Knowledge management: Why does it matter so much?], *Nauki o Zarządzaniu/Management Sciences*, *4*(17), p. 48.

23 Nonaka – Takeuchi. (1995). *Knowledge-Creating Company*, pp. 60–62.

24 Ibid. p. 61.

25 Nonaka (1994). Dynamic Theory. p. 16.

26 Nonaka, I. – Konno, N. (1998). The Concept of "Ba": Building a Foundation for Knowledge Creation. *California Management Review*, *40*(3), p. 42.

aptly summing up Nonaka's ideas, Stephen Gourlay defines tacit knowledge as 'a non-linguistic non-numerical form of knowledge that is highly personal and context specific and deeply rooted in individual experiences, ideas, values and emotions.'[27]

When exploring tacit knowledge, we should carefully take note of the adjectival modifier included in the phrase, that is, 'tacit.' Other descriptors of this feature are: silent, latent and implicit (as opposed to explicit knowledge). These attributes predominantly refer to the ways in which this kind of knowledge is acquired, possessed and transferred. Specifically, tacit knowledge is acquired in socialisation.[28] It is produced in human interactions, while performing everyday activities and through experience. Given these circumstances, the fact of knowledge acquisition may be overlooked by individuals and remain latent to them. Tacit knowledge is knowledge which individuals may be not aware of possessing and which is manifested in action and problem-solving. Consequently, tacit knowledge is neither easily communicable nor readily transferable,[29] especially because, as these properties imply, this kind of knowledge does not lend itself to verbal communication or recording in the written form.

Importantly, tacit knowledge can be analysed as composed of two dimensions – a cognitive one and a technical one. The cognitive element concerns first and foremost thought schemes which are also called mental models. The notion of mental models was introduced and described by Philip N. Johnson-Laird, who built on the work of the Scottish psychologist Kenneth Craik.[30] In Craik's approach, mental operations, such as using knowledge from the past to face up to and handle the present and the future or trying out solutions to problems even before the problems as such appear, are possible because we possess miniature representations of the external world, which Johnson-Laird labelled mental models. A metal model is an image of reality which includes objects, properties ascribed to them and their presupposed interrelations.[31]

Although tacit and explicit knowledges are complementary, Nonaka and Takeuchi highlight fundamental differences between them.[32] One of such differences is situated on the empiricism-rationalism axis and concerns cognition. Specifically, tacit knowledge, especially in its technical dimension, is more associated with sensory experience, whereas explicit knowledge is rational and

27 Gourlay, (2002). Tacit knowledge, p. 2.

28 Jemielniak, D. – Koźmiński, A. (2008). (Eds.), *Zarządzanie wiedzą* [*Knowledge management*]. Warszawa: Wydawnictwa Akademickie i Profesjonalne, p. 166.

29 Ibid., p. 21.

30 Johnson-Laird, P. N. (1980). Mental models in cognitive science. *Cognitive Science*, *4*, p. 73.

31 Wieczorek, K. A. (2007). Dlaczego wnioskujemy niepoprawnie: teoria modeli mentalnych P. N. Johnsona-Lairda ['Why do we infer incorrectly? P. N. Johnson-Laird's theory of mental models]. *Filozofia Nauki*, *15*(4), 2007, p. 113.

32 Nonaka – Takeuchi, (1995). *Knowledge-Creating Company*, p. 61–2.

objective. Explicit knowledge is closely associated with the mind and rational cognition. As such it can be assimilated in the form of concepts.

Another difference concerns the subject's relation to time and space. Tacit knowledge emerges from the experience of 'here and now,' which is embedded in a certain spatio-temporal setting. Besides, its acquisition is of simultaneous nature. For its part, explicit knowledge can be described as sequential and acquired in the symbolic 'then and there.'

The third fundamental difference is related to two modes of communication. Tacit knowledge is communicated in an analogue way, while explicit knowledge, in a digital way. The concept of analogue and digital communication types has been derived from the work of the British cultural anthropologist George Bateson, who defined analogue communication as the transfer of meanings by means of movement, gestures and physical properties, such as for example the louder or lower volume of the uttered messages.[33] Relying on motions and feelings, this communication type is capable of conveying the complexity and richness of human relationships, the qualities which are lost in attempts to express relations in digital messages. Digital communication relies on a system of finite discreet linguistic elements. Its typical feature is a greater semantic precision. Similarly to explicit and tacit knowledge, these two communication types are mutually complementary and should be viewed as equally important.

Table 1. Types of knowledge.

Tacit (subjective) knowledge	Explicit (objective) knowledge
Experiential knowledge (body)	Rational knowledge (mind)
Simultaneous knowledge (here and now)	Sequential knowledge (then and there)
Analogue knowledge (practice)	Digital knowledge (theory)

Based on Nonaka & Takeuchi, *Knowledge-Creating Company*, p. 63

Tacit and explicit knowledge types form two epistemological dimensions in which organisational knowledge is created. Despite their considerable differences and oppositional features, it is possible to convert one type of knowledge into the other, and such a conversion can be a source of innovation in an organisation.

[33] Buckley, J. (2014). Analog versus Digital. In Mary-Laure Ryan – Lori Emerson –Benjamin J. Robertson (Eds.). *The Johns Hopkins Guide to Digital Media*. Baltimore: Johns Hopkins University Press, p. 8.

Knowledge conversion in an organisation

Management theory emphatically recognises that an organisation's knowledge is continually processed and transformed. Four basic processes of knowledge conversion (processing) are identified. The first stage singled out in the theory of organisational knowledge creation is ***socialisation.*** The term is not an exact equivalent of the notion of socialisation as understood in sociology or education sciences. In management theory, socialisation denotes the process of experience-sharing.[34] The key activities in thus-conceived socialisation are observation, imitation and exercise, as a result of which empathised knowledge arises and individuals develop new mental models and master technical skills. At the stage of socialisation, shared experiences and analogue communication play the central role. For the unique, strongly personalised knowledge to become a source of innovation for an organisation as a whole, this knowledge must be expressed in language so as to become accessible to people who do not participate in the shared experiences of socialisation.

The process in which tacit knowledge is converted into explicit knowledge is referred to as ***externalisation***. This is the key stage in making innovation happen. Externalisation involves efforts to develop descriptions of intuitions, insights and specific ways of performing activities which have emerged in and through experience. At this stage, language may come across as inadequate to capture the core of such experiences. For this reason, externalisation does not focus on the logical precision of arising explicit knowledge, but rather on constructing approximate, general models. According to Nonaka and Takeuchi, externalisation is 'a quintessential knowledge-creation process in that tacit knowledge becomes explicit, taking the shapes of metaphors, analogies, concepts, hypotheses, or models.'[35] Dialogue and group thinking are key factors in this process. Externalisation is based on articulating and confronting often contradictory mental models, on juxtaposing divergent analytical perspectives on the problem and on employing metaphors as symbolic images of the communicated content.

If new knowledge is to be disseminated, contradictions must be removed from it and it must be rendered in an accurate (rather than metaphorical) language. The expression of new explicit knowledge in conformity with the rules of logic is known as ***combination***. Combination entails converting newly created explicit knowledge into another form of explicit knowledge – one that is systematised and purified of inconsistencies. This knowledge has a set of categories (key words) ascribed to it, which affords possibilities to employ information technologies in order to accumulate, classify and share knowledge in an organisation.

---

34 Nonaka – Takeuchi (1995). *Knowledge-Creating Company*, p. 63.

35 Ibid., p. 64.

However, the accessibility and dissemination of knowledge alone do not make an organisation innovative. For innovation to take place, knowledge must undergo ***internalisation***, that is, it must be assimilated by employees through active learning. This means integrating knowledge with new mental models and devising new procedures and action templates. As a result, the applications of knowledge in practice become automatic and routinised.[36]

In their discussion of the knowledge conversion stages, Nonaka and Noboru Konno identified four types of space that foster these processes[37]:

1/ Socialisation – the space of trust
2/ Externalisation – the space of dialogue
3/ Combination – the space of digital communication
4/ Internalisation – the space of active learning

Each of these types of space fosters conditions which promote the conversion of knowledge at the respective stages of the process as well as supplying a variety of both technical and emotional resources.

Sources of the personal knowledge concept

The history of Western philosophy has largely been marked by a conflict between two competing movements, i.e. rationalism and empiricism, and by attempts at synthesising them. For its own part, the Japanese intellectual tradition cherishes the view of human existence which is originally free from any dualism of cognition. This stance has had an obvious impact on the understanding and definition of knowledge – the fundamental concept in Nonaka and Takeuchi's theory of organisational knowledge creation. The researchers point to three essential ideas of the Japanese intellectual traditions which have had a formative influence on the Japanese approach to knowledge and management practice[38]:

- Oneness of man and nature
- Oneness of body and mind
- Oneness of self and other

In order to convey the unity of the human being and nature, Nonaka and Takeuchi draw on the work of the philosopher Yujiro Nakamura and his concept of 'emotional naturalism.'[39] As they observe, 'according to Nakamura, the Japanese have never produced a rational thought of universalist aspirations, because they

[36] Nonaka, I. – Toyama, R. (2003). The knowledge-creating theory revisited: knowledge creation as a synthesizing process. *Knowledge Management Research & Practice*, *1*, 5.

[37] Pachura, P. (2016). Ba jako przestrzeń kontekstu w procesie zarządzania wiedzą [Ba as a contextual space in knowledge management]. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu/Resarch Papers of Wrocław University of Economics,* p. *422,* 77.

[38] Nonaka – Takeuchi (1995). *Knowledge-Creating Company*, pp. 28*pass*.

[39] Ibid., p. 28.

have never either objectivised the self or severed it from surrounding nature. Moreover, there are scholars who claim that the 'ecological' world image in the tradition of Japanese thought is grounded on the non-dualist concept of personality as a relationship of the human being and nature.[40] This concept pervades several branches of Japanese Buddhism. It is explored, for example, by Bin Kimura, who highlights that, in Japanese, the words *onozukara*, i.e. nature, and *mizukara*, i.e. self, can be written as one and the same character. In Kimura's view, this attests to the unity of the two notions, which correspond to the subjective and objective aspects of one continuum that is 'pure experience.'[41]

The idea of the oneness of man and nature was taken up and developed by Kitaro Nishida. Nishida conveyed it in the notion of the *social self*. The notion reflects not only the unity of man and nature but also the unity of individual self with others and with the environment as such. According to Nishida, as the 'I' is established when it turns to face the 'you,' the individual becomes an individual by turning to and facing other individuals. Therefore the self is inevitably social.[42] As Nonaka and Takeuchi, explain, 'I' and 'you' are two sides of the same coin in Japanese culture.[43] Cultivated in Japanese philosophy, the sense of the unity of a person's self with other people determines the view of knowledge as a product of subjective cognition, which is co-shared within the common context.

Another idea central to the Japanese approach to knowledge, is the oneness of body and mind. It mainly brigs into relief the role of experience in the acquisition of knowledge. Unlike Western philosophy, which has been permeated by the dualism of mind and body since antiquity, with calls for bringing together the bodily and the rational viewed as attempts to merge two opposite tendencies, the Japanese intellectual tradition has embraced the mind-body oneness as originary and deeply entrenched in Zen-underpinned culture. According to Nonaka and Takeuchi, the Japanese regard knowledge as acquired by a personality as a whole, and Japanese epistemology emphasises personal, immediate and embodied experiences.[44] How much precedence is given to experience is vividly represented in Nishida's idea of 'pure experience.' Nishida describes 'pure experience' as an act in which corporeal impressions, sensory perceptions and mental phenomena are fused into one.[45] This idea is informed by the notion of the unity of the subject and the object: '[p]ure experience...must be thought of as that which includes infinite content […] Subjectively speaking this is the non-objectifiable self. Objectively speaking, it is the directly given that cannot be fully

40 Odin, S. (1996). *Social Self in Zen and American Pragmatism Albany*: SUNY Press, p. 393.
41 Ibid., pp. 69, 82*pass.*
42 Ibid., pp. 49*pass*.
43 Nonaka – Takeuchi, (1995). *Knowledge-Creating Company*, p. 29.
44 Ibid., pp. 28–30.
45 Nishida, K. (1990). *An Inquiry into the Good*. New Haven: Yale University Press, p. 4.

reflected on. The intuition of the object unity and the awareness of the pure activity are found there. The source of all knowledge is there.'[46] Practical implications of the orientation focused on experience as an important source of knowledge are perceivable in the Japanese practice of management, which favours the immediate conversion of individual experiences.[47]

Intrinsic to the tradition of Japanese thought, the ideas of the body-mind unity and the interdependence of the self, nature and other individuals shape the concept of knowledge as relational, contextual and experience-related. These influences are discernible in the definition of knowledge proposed by Nonaka and. Takeuchi.

The essence of personal knowledge

The ideas and concepts outlined above form the ground from which the notion of ***personal knowledge*** has emerged. Personal knowledge is located in a particular individual's mind and skills. Such knowledge cannot be documented in any way and is comprised both of elements of explicit knowledge and of a highly relevant share of tacit knowledge. It often arises as a result of unique experiences and situations, long years of practice in a given field and individually undertaken explorations. Personal knowledge is often inherently specialist and may easily be lost when the member leaves the organisation.

To retain personal knowledge within an organisation, this knowledge must first be shared. Its conversion can contribute to the individual sharing it and to it being transformed so that it becomes comprehensible to other people. What is initially individual tacit knowledge can be transmitted by means of socialisation and non-verbal experience sharing. This requires trust and dedication to one's responsibilities, as the person must not be afraid that his/her technical skills socialised by his/her co-workers will become their competitive advantage and thus reduce the role of the person who has disseminated these skills. Only under such circumstances is it possible to establish relations through which personal knowledge can first be transmitted from individual to individual and then become knowledge shared by groups, teams or entire organisations.

The consecutive stages of knowledge conversion involve various elements of educational processes. Some of these processes take place spontaneously as a result of unprompted interactions among organisation members and can go unnoticed both by the participants themselves and by the departments responsible for employee development and knowledge management. Yet the processes of learning and teaching which accompany knowledge conversion can also be planned by the organisation and implemented in a deliberate and monitored way, for example as

[46] Nishida, K. (2002). *Complete Works of Kitarō Nishida.* Tokyo: Iwanami shoten, vol. 3, p. 272.
[47] Nonaka – Takeuchi (1995). *Knowledge-Creating Company,* pp. 27–28.

training sessions or courses. Analysing organisation members' intentional and unintended learning can help identify the key educational needs/aspects the meeting of/tapping into which will support knowledge conversion at each stage and across them.

Table 2. Educational aspects of knowledge processing.

Aspect of knowledge conversion	**Stage of knowledge conversion**			
	SOCIALISATION	**EXTERNALISATION**	**COMBINATION**	**INTERNALISATION**
The course of knowledge conversion	tacit knowledge ↓ tacit knowledge	tacit knowledge ↓ explicit knowledge	explicit knowledge ↓ explicit knowledge	explicit knowledge ↓ tacit knowledge
The change of the kind of knowledge	**personal** knowledge ↓ **personal** knowledge	**personal** knowledge ↓ organisational knowledge	organisational knowledge ↓ organisational knowledge	organisational knowledge ↓ **personal** knowledge
The final character of knowledge	empathised	episodic	systematised	operational
The major mechanism	transfer of experience	problem modelling	classificatory analysis	active assimilation
The nature of space	space of trust	space of dialogue	space of digital communication	space of active learning
The level of knowledge	individual	group	organisational	functional
The major organisational requirement	trust-based organisation culture	procedural frameworks of group dialogue	use of information technologies	learning organisation culture
The major goal of conversion	knowledge transfer	knowledge sharing/	knowledge dissemination	knowledge application
The main stakeholder	individuals	teams	organisation	organisation's environment
The central procedure	experience sharing	reflection-sharing in group	connecting and ordering of knowledge	learning by doing
The main aim of education	development of beliefs about reality	analysis of experiences	knowledge assimilation	combining theory and practice

Methods of education	observation, imitation	discussion problem-based methods	document analysis, work with data	exercising
Methods of supporting conversion	mentoring	operational coaching	tutoring	training
Key competences	communicative and diagnostic competences	group processes moderation skills	language and tele-information competences	applicatory competences

As demonstrated in Table 2, the personal knowledge of organisation members is involved in most of the processes. Despite that, organisational knowledge was until recently the preferred form of knowledge addressed in scholarly investigations in the field of adult education and used in practical solutions. It appears that adopting the perspective of organisational knowledge conversion with a special focus on personal knowledge management will help the practitioners and theorists of andragogy identify and study the following aspects:

- The locatedness of the individual (his/her position and relations) in the organisation space;
- Indispensable predispositions and competences;
- Key kind of knowledge/information conversion;
- Criteria of the effectiveness/efficiency of work;
- Major allies and stakeholders.

The identification and analysis of these aspects will help adult-education professionals better understand the situation, needs and expectations of their clients. Consequently, it will supply new criteria for verifying the formulated educational goals and ensure the proper selection of intervention methods in work with clients.