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Zusammenfassung:

Zum Ende der vierziger Jahre propagierte die UNESCO die ‚informelle Bildung‘. Inzwischen ist vom ‚informellen Lernen‘ die Rede, das gegenwärtig in der europäischen und nationalen Bildungspolitik einen hohen Stellenwert annimmt. Unter ‚informellem Lernen‘ wird jedoch äußerst Unterschiedliches verstanden, sodass zur Strukturierung ein allgemeiner Lernbegriff eingeführt wird. Er geht vom Individuum als dem Dreh- und Angelpunkt des Lernens aus und berücksichtigt systematisch die sozio-kulturell geformten Umgebungsbedingungen. Aus dieser Perspektive sind ‚Formalität‘ und ‚Informalität‘ in den Bedingungen außerhalb des Individuums zu verorten, die gekennzeichnet sind durch: ‚Ausmaß pädagogischen Arrangements‘, ‚Zertifizierung‘ und ‚öffentlich-rechtliche Regulierungen‘. Diese Sichtweise wird gestützt, wenn diese drei Kennzeichen mit explizitem, implizitem und zufälligem Lernen in Beziehung gesetzt werden. Informelles Lernen ist insofern eine Metapher, die ein gravierendes Problem in sich birgt: der Mangel an systematischen empirischen Befunden, die valide belegen, warum, wo, wann, wie und was unter informellen Bedingungen gelernt wird.

Abstract:

Starting with ‘informal education’ promoted by UNESCO at the end of the 1940’s, the term became ‘informal learning’ linked recently with increasing attention to education policy at European and national levels. However, there are different meanings associated with ‘informal learning’. To map the field, a general learning concept is introduced, focussing on the individual and her/his socio-culturally shaped environment. From that perspective ‘informality’ and ‘formality’ have to be located in conditions external to the learner, characterised by the ‘extent of educational arrangement’, ‘certification’ and ‘approved by public regulations’. This view is supported by combining the three criteria with explicit, implicit and incidental learning, none of which are exclusively related to the characteristics of informality. Therefore, ‘informal learning’ is a metaphor with a severe problem, namely the lack of systematically and empirically grounded valid evidence on why, where, when, how and what is learned under ‘informal conditions’.

Informal learning: genealogy, concepts, antagonisms and questions¹

Informal and non-formal learning are receiving increasing attention world wide. ‘Learning: the treasure within’² and ‘Lifelong learning for all’³ have drawn attention to learning outside formal educational institutions. On a European level, non-formal learning has been a central issue in education policy since the 1995 White Paper on Education and Training⁴ followed by the European Year of Lifelong Learning in 1996. A further impulse came from the conclusions of the Lisbon European Council in March 2000. They emphasised that lifelong learning, “is no longer just one aspect of education and training; it must become the guiding principle for provision and participation across the full continuum of learning contexts”⁵. This was emphasised further by the action plan and pushed forward by the Copenhagen Declaration calling for “a set of common principles regarding validation of non-formal and informal learning”⁶. This agreement should be seen as an expression of willingness in Europe to trust and develop confidence in each others education and training.

The above may indicate that the term ‘learning’ is used differently: ‘learning a treasure’, ‘lifelong learning for all’, ‘lifelong learning as a guiding principle’, ‘the full continuing of learning contexts’ or ‘validation of non-formal and informal learning’. However, these formulations do not specify learning itself and the general and provisional definition of learning used in this article is: “Learning is the process by which an activity originates or is changed through reaction to an encountered situation (...)”⁷. Such a view of learning expresses that learning (1) is a specific activity and (2) is bonded to a situation which might have an impact on this process. For further specification, reference is made to Bronfenbrenner’s (1979) ecological system’s concept. It divides the environmental aspect of learning into the four levels macro, exo, meso, and micro each having an effect on human learning and development and each level influencing the others.

The outer layer of the ecological system, the macro level, relates to the dominant ideologies and cultural patterns that organise all other social institutions. The innermost layer – the micro level – is the setting in which the learner directly interacts in the home, workplace, religious institutions or neighbourhood. Using the two poles of Bronfenbrenner’s ecological system to classify the statements above, one can conclude that some are, broadly speaking, located on the micro level, like validation of ‘non-formal and informal learning’, ‘full continuum of learning contexts’, others are on the macro level like ‘lifelong learning for all’ or ‘lifelong learning – a guiding principle’.

¹ The author is grateful to Graham Attwell, Steve Bainbridge, Markus Böhner, and Danielle Colardyn for their critical and constructive reviews of this article.

² UNESCO (1996).

³ OECD (1996).

⁴ European Commission (1995).

⁵ European Commission (2000), p. 3.

⁶ European Commission (2002).

⁷ Hilgard (1956), p. 3.

When learning is connected with ‘an encountered situation’⁸ the assumption is that the features on the micro level are of primary importance for personal development. For this reason, the focus of this paper will be on the micro level. Before that, a ‘tour d’horizon’ will be given for the macro level in a chronological order.

1 A short genealogy of informal learning

The term ‘informal learning’ and particularly ‘non-formal learning’ have only recently come into common usage. They derive from the term ‘non-formal education’ as Colley, Hodkinson & Malcom (2003) point out in their report about ‘Informality and formality in learning’. Reconstructing the political dimension of non-formal education and learning, they identify five phases of development since the end of World War II.

The first phase of ‘non-formal education’ (1947-1958) was laid down in the UNESCO (1947) report on education in the underdeveloped world. It was underpinned by ‘modernisation’ theories, resting on social-democratic, reformist ideology and Keynesian economic principles. The aspired complementary twin goals were to increase economic growth and enhance social equity and democratic participation for all. Non-formal education was thought to offer less costly educational provision of high relevance and flexibility that formal education could not achieve. However, reformist approaches to non-formal education were ultimately disappointing and after just ten years non-formal education was abandoned in favour of a massive expansion of formal schooling⁹.

The second phase from non-formal education to non-formal learning (around 1970) was inspired by educators like Freire’s movement for literacy and ‘conscientisation’, i.e. a combination of consciousness raising and politicising in the slums of Brazil. According to Colley, Hodkinson & Malcom (2003), the second phase encapsulates two highly significant shifts. One represents radical social-democratic models of non-formal education in the southern hemisphere that became popular in the North through various (feminist, anti-racist, working class) radical educational projects and activities emerging within ‘new social movements’. The second was in the intellectual domain, developing on the basis of socio-cultural and situated theories of learning, a concept of non-formal/informal learning distinct from that of non-formal education. Non-formal learning is regarded as emancipatory because it assumes learners exercise control over their learning when it takes place outside formal educational institutions.

The third phase of formalisation of non-formal education as well as non-formalisation of formal education (from the 1980s and onwards) was symbolized with the introduction of the National Vocational Qualification (NVQ) system in 1987 in England and Wales and, at the same time, Lauren Resnick’s presidential address ‘Learning in school and out’ at the annual meeting of the American Educational Research Association (AERA). Characteristics of the NVQ system are the emphasis on assessing essentially non-academic learning outcomes by accredited agencies decoupled from particular institutions or learning programmes¹⁰. Resnick criticized

⁸ Cp. Hilgard (1956), p. 3.

⁹ Smith (2002).

¹⁰ Wolf (1998).

schools focussing “mainly on individual forms of competence, on tool-free performance, and on decontextualised skills, educating people to be good learners in school settings alone”¹¹ which may not be sufficient to become good out-of-school learners. From this angle, she advocated revising schooling and incorporating civic and cultural functions of education, e.g. integrating components like out-of-school cognitive performances and elements of apprenticeship¹².

The fourth phase (of the 1990s) is driven by populist theories of development, based on perspectives such as feminism, environmentalism and ethno-culturalism advanced primarily by non-governmental organisations. “They focused on supporting and promoting ‘authentic’ experiences of non-formal learning, localised knowledge grounded in communities, and sustainable practices”¹³.

At the turn of the millennium the fifth phase of non-formal learning could be identified in connection with lifelong learning promoted at European level. The aim is not only to support informal and non-formal learning but to audit the results of these learning efforts. Symptomatic of this trend is Jens Bjørnåvold’s (2000) publication “Making learning visible – identification, assessment and recognition of non-formal learning in Europe” published by the European Centre for the Development of Vocational Training (Cedefop).

The policy of the European Commission focuses upon two major issues: The need for increased social cohesion and engagement and the need to improve economic competitiveness by increasing skills and employability of workers through better education and training. As a consequence, the European Commission’s focus is overwhelmingly workplace oriented. In addition, there are movements in European countries to assess qualifications acquired in other sectors, especially in NGOs¹⁴. But what is generally missing in the European Commission’s documents are theoretical or methodological specifications for example on learning, pedagogy, and assessment¹⁵. Some of these concepts on the micro level will be introduced and discussed next.

2 Criteria for informality and formality related to learning

In their analysis of literature, Colley, Hodkinson & Malcom (2003, p. 28) extract 20 main criteria that writers have used to differentiate between informality and formality in learning: (1) education or non-education, (2) location (e.g. educational or community premises), (3) learner/teacher intentionality/activity (voluntarism), (4) extent of planning or intentional structuring, (5) nature and extent of assessment and accreditation, (6) timeframes of learning, (7) extent to which learning is tacit or explicit, (8) extent to which learning is context-specific or generalisable/transferable, externally determined or not, (9) whether learning is seen as embodied or just ‘head stuff’, (10) part of a course or not, (11) whether outcome is measured, (12) whether learning is collective/collaborative or individual, (13) status of knowledge and learning, (14) nature of knowledge, (15) teacher-learner relations, (16) pedagogical

¹¹ Resnick (1987), p. 18.

¹² Collins, Brown & Newman (1989).

¹³ Colley, Hodkinson & Malcolm (2003), p. 13.

¹⁴ Straka (2003).

¹⁵ Colley, Hodkinson & Malcolm (2003), Straka (2004).

approaches, (17) mediation of learning by whom and how, (18) purposes and interests to meet needs of dominant or marginalised groups, (19) location within wider power relations, and (20) locus of control.

To classify these criteria, Hilgard's (1956) learning definition and Bronfenbrenner's (1979) ecological macro and micro level will be combined. In addition, the micro-level is split into conditions external to the learner¹⁶ and activities of the learning person. Assigning the 20 'main criteria' to these three levels, an additional category, differentiating ambiguous and unambiguous classification, has been introduced with the following result:

Level	Number of criteria to differentiate informality from non-formality in learning	
	unambiguous	ambiguous
Macro level	(1) (2) (5) (18)	(6a: frames, i.e. school years) (17a: mediation)
Micro level		
External conditions	(4) (10) (11) (16)	(3a: teacher) (6b: frames, i.e. school lessons) (8a: external determination) (12a: collective) (17b: mediation)
Activities of the learner	(7) (9) (12) (14) (20)	(3b: learner) (6c: frames, i.e. time management) (8b: context-specific etc.) (12b: individual)

Table 1: Criteria for informality and formality related to macro- and micro-level

The majority of criteria could be unambiguously located on the micro level contrasted with the macro-level. This tendency is supported by adding the criteria classified as ambiguous. Five out of 20 criteria – a quarter – could not be assigned to one category, a problem pointed out and discussed by Colley, Hodkinson & Malcom (2003) as well. On the micro level, there are more criteria related to the learner than to the environment. However, within the category 'learner activities', some elements might not be located on the same level e.g. 'explicit learning', 'tacit learning' compared with 'nature of knowledge'. There is no doubt that learning – explicit or tacit – is an activity. Nevertheless the question arises, whether knowledge is an activity as well. Is the learning definition of Hilgard referred to earlier still appropriate to cover all these concepts?

2.1 A conceptualisation of learning on the micro-level

Hilgard's (1956) definition of learning, italicized terms like '*viewing* a picture', '*comprehending* a statement', or '*handling* a piece of work' express personal activities. In these expressions, activities are directed toward 'something' (a picture, a statement or a piece of work). From a cognitive perspective, such a 'something' – e.g. a piece of work – is not in the head of the acting person as an object but as *information* about that object, generated by the individual her/himself. A consequence is that 'activities' are linked to information. To distinguish this view from Hilgard's activity, the terms *action* and *information* will be used from now on.

¹⁶ Gagné (1973).

Another important feature is to be considered is that action and information are inseparably connected; i.e. there is no action without information and no information without action¹⁷. This dynamic interplay is an action episode.

The socio-culturally shaped physical and social environments are parts of the micro level in Bronfenbrenner's ecological system. From the perspective of an acting person examples for this level are other persons (supervisor, colleagues, peers, friends), tasks and requirements on the shop floor, technical equipment, organisational and instructional structures, teaching objectives, social norms and values as part of a culture. According to the notion of Gagné (1973) these features are assigned to the concept of external conditions.

With external conditions the environmental impact on an action episode is located. But an additional condition – indispensable for action – is still missing. It is the concept of *internal conditions* introduced by Gagné (1973). These conditions enable a person to act on the basis of her/his qualities like abilities, skills, knowledge, motives, or emotional dispositions. Giving this conception a change of actions is 'only' an indicator of learning.

When asked why an individual realises, maintains, discontinues or avoids a particular behaviour, or what reasons (conscious or unconscious) are behind the actions, the motivational part of the individual-environment relation is focussed. *Motivation* relates actions to something (e.g. information) which has a certain intensity either for or against it. *Emotion* is another dimension of an action. It embraces the subjective experience from an affective and non-rational angle (which can be pleasant or unpleasant). Emotion is connected with impressions such as joy or anger, or physical processes like sweating or shuddering, and expressional behaviour such as facial expressions or gestures¹⁸.

All four dimensions (information, action, motivation, emotion) presuppose one another. They do not exist separately but come into being only by mutual interplay, generating each other. However, this does not mean that one or the other of the dimensions cannot be at the forefront during certain phases of an episode¹⁹. For example, although reading a text considered highly important and interesting, someone in a bad mood may retain nothing. Later, when feeling better, the individual may read the text attentively, compares what has been read with what is already known, and so adds to her/his previous knowledge. This was not surprising, as people more easily understand and retain information when motivated (cf. figure 1, page 8).

¹⁷ Straka & Macke (2002).

¹⁸ Pekrun (1992), Pekrun & Schiefele (1996), Boekaerts (1999).

¹⁹ Becker, Oldenbürger & Piehl (1987).

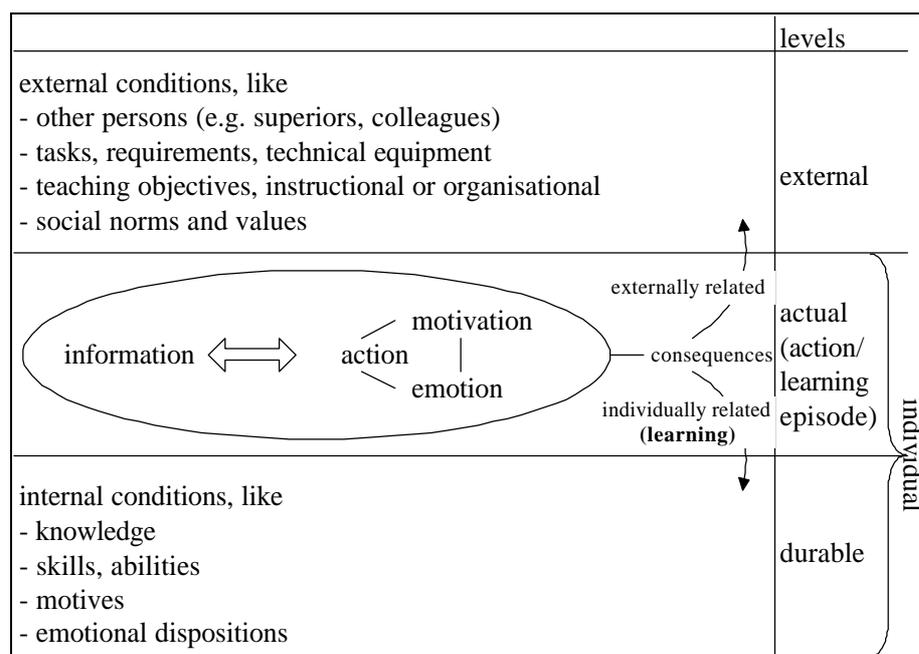


Fig. 1: Learning concept

An action episode may have consequences for external and/or internal conditions. *External-related consequences* arise, for example, from handling and transforming a piece of work or giving verbal expressions to transmit potential information. *Individual-related consequences* exist for example when a person's knowledge and abilities have durably changed, and therefore learning has taken place. Accordingly, *learning* has taken place if – and only if – the *individual-related* consequences of the interaction between information, action, motivation and emotion lead to a durable change in the internal conditions of the acting individual²⁰.

2.2 An exemplary European concept on formality in learning

In the Cedefop glossary of Bjørnåvold's (2000) synopsis "Making learning visible", informal learning is defined in relation to non-formal and formal learning. An analysis against the background of the 'learning concept' described above shows that these definitions do not comprise all levels – especially regarding internal conditions constitutive for learning²¹.

Recently, Colardyn & Bjørnåvold (2004) made a new effort to define formal, non-formal and informal learning based on the *intention to learn* (centrality of the learner in the learning process) and the *structure in which learning takes place* (the context in which learning takes place) (cp. table 2, page 9):

²⁰ Straka & Schaefer (2002), Straka & Macke (2004).

²¹ Cp. Straka (2002).

<p>Formal learning consists of learning that occurs within an organised and structured context (formal education, in-company training), and that is designed as learning. It may lead to a formal recognition (diploma, certificate). Formal learning is intentional from the learner's perspective.</p>	<p>Non-formal learning consists of learning embedded in planned activities that are not explicitly designated as learning, but which contain an important learning element. Non-formal learning is intentional from the learner's point of view.</p>	<p>Informal learning is defined as learning resulting from daily life activities related to work, family, or leisure. It is often referred to as experiential learning and can to a certain degree be understood as accidental learning. It is not structured in terms of learning objectives, learning time and/or learning support. Typically, it does not lead to certification. Informal learning may be intentional but in most cases, it is non-intentional (or 'incidental'/random).</p>
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Table 2: *Formal, non-formal and informal learning*²²

Considering these definitions in the light of the learning concept outlined above, one can state:

- 'Internal conditions' as the constitutive feature for learning to take place are still missing. Learning is an episode – intended or not – whatever the result might be. However, 'internal conditions' might be more implicitly than explicitly addressed with terms like 'learning outcomes or results'.
- 'Intention' may have considerable overlapping with the concept of 'motivation' at first glance. But this link weakens with the formulation 'intention to learn explains the centrality of the learner in the learning process'. Considering that only vivid persons can learn, one can regard such an expression as redundant. But if this statement sets boundaries to definitions referring exclusively to external conditions (like instructional objectives, time admitted for learning), the notion may contribute to the differentiation between education and learning.
- Apart from some tautological tendencies in these definitions – e.g. 'learning consists of learning' – an interpretation might also be that it is not learning itself that distinguishes informality from formality. Indications for this conclusion are terms like 'organised and structured context', 'formal recognition' or no 'certification'.
- Given the phrases 'incidental from the learner's perspective', 'accidental learning', or 'incidental/random learning' bridges might be built to different learning types which are discussed below.

2.2.1 Features of formality

Learning is connected with a person acting on the micro level and there is no learning episode per se. Even an episode dedicated to learning gets the attribute 'learning' if, and only if, a durable change of internal conditions occurred. To carry the argumentation to extremes, we state that most parts of the learning episode and the learning result in total are – up to now – not directly accessible for outsiders. As a

²² Colardyn & Bjørnåvold (2004), p. 71.

consequence, ‘formality’ cannot be grounded in the individual. The key has to be found in the context or the external conditions in which the person’s learning took place. This consideration is supported by Colardyn’s and Bjørnåvold’s (2004, p. 71) formulations, e.g. ‘learning that occurs within an organised and structured context’ (a), ‘learning imbedded in planned activities (...) not explicitly designated as learning’ (b), or ‘learning resulting from daily life activities related to work, family, or leisure’ (c).

‘Work’ and ‘family’ represent contexts which tend to be not organised for educational purposes. In relation to ‘leisure’ this difference between educational and non-educational is blurred. When educational materials – on the internet, a CD, a book or educational television – are used,²³ the term ‘education’ is appropriate.

Assigning non-educational external settings to ‘informality’ poses a new problem, namely: What is different about ‘non-formality’ of learning? Are ‘daily life activities related to work, family, or leisure’ – i.e. informal settings – exclusively ‘unplanned’ and non-formal ones ‘planned’? The answer is that planned and unplanned activities may take place in both settings. A solution for this dilemma might be to use the criterion ‘degree of educational arrangement of external conditions’.

The criterion ‘degree of educational arrangement of external conditions’ does not exclude the inconsistency that when people spend their leisure time on a history course in an adult evening class, or a volunteer evening history group meeting in their homes. In both settings, arrangements are dedicated to support learning which is a core function of education. Which criterion is met in these cases: formal, non-formal or informal? If the criterion ‘organised and structured context’ is used, the volunteer evening history group could be a ‘formal’ environment. Therefore the additional criterion ‘certification’ is proposed to differentiate them according to Colardyn & Bjørnåvold (2004) who state that “experiential and accidental learning is typically not leading to certification”.

The criterion ‘certification’ may still not be sufficient for differentiating the external conditions of learning. One reason is that there are certificates of different range of public and non-public regulation and approval. Some have beautifully ornamented formats with probably little acceptance beyond the meeting room. In contrast, some certificates have a high reputation in the world of work like those for example from large IT-companies. But they still lack a guaranteed acceptance as a legal status. An Abitur (cp. A-level) in Germany or a passed ‘Externenprüfung’ (examination for employed persons beyond the German VET system) have different attributes. Compared with certificates of high reputation, the Abitur guarantees the admission to higher education in Germany – till today. The Externenprüfung – if successfully passed – guarantees the employed the craft or employee certificate in a defined domain, which makes her/him eligible for specified salary levels. Both entitlements are valid all over Germany and perhaps across Europe in future. Considering these aspects the criterion ‘certification’ has to be subsetting into ‘approved by public regulation’ which might be the core idea of ‘formal recognition’ in Colardyn’s and Bjørnåvold’s (2004) contribution.

²³ Straka (1986).

2.2.2 Explicit, implicit, and incidental learning

To differentiate their learning types, Colardyn and Bjørnåvold (2004, p. 71) introduce some additional aspects like ‘intentional from the learner’s perspective’ or ‘non-intentional (or incidental/random)’. They argue that their ‘informal learning’ may be intentional, but in most cases it is non-intentional whereas their ‘formal and non-formal learning’ is intentional from the learner’s perspective.

Compared with the introduced learning concept these formulations focus on the learner. The question is whether the ‘intention of the learner’ is differentiating exclusively between formality and informality in this context. A learning result by be achieved intentionally or non-intentionally in both contexts. Self-directed learning, the prototype of intentional learning, occurs under informal and formal arrangements²⁴. Knowles (1975) – the originator of self-directed learning in the US adult education – defines self-directed learning “as a process in which individuals take the initiative, *with or without the help of others (...)*” (italics by Straka). Such other typical representatives of formal environments are for example teachers. Another approach is Tough’s (1971) ‘adult learning-project’ concept whose short version is “a sustained, highly deliberate effort to learn”²⁵. Such kind of learning is intentional but takes place in formal and informal contexts. On the other side, in a formal context characterised by learning objectives learning time and/or learning support, non-intended learning results may occur – such as a creative solution not foreseen or planned by the student and/or the coach. Such activity and result are unintended but still to a large degree explicit to the learner. In addition, there are also learning results possible which are neither aware nor intended by the student. Such issues are for example discussed under the concept of ‘hidden curriculum’ or the creeping acquisition of values during the life-long socialisation process.

Considering that the terms intentional and non-intentional are ambiguous, the suggestion is to introduce the concepts of explicit and implicit learning²⁶. But there is another learning type used in this field. It is the incidental learning which can be integrated between explicit and implicit learning, but not on the same dimension, as both explicit and implicit learning may be incidental.

The focus of the concepts explicit, implicit and incidental learning is on the person and not the attributes of external conditions. A typical example is the ‘peer group’. It cannot exist without a formal institution like school, but peer groups are organised informally. Interactions in such settings may be accompanied by explicit, incidental and ‘en passant’²⁷ but above all with implicit learning, results of which may not always support the official goals of institutions. The same situation may take place in organisations with formal and informal communication patterns – of which the informal might be most successful.

Therefore, the key to distinguish ‘formality’ from ‘non- or informality’ is to be found in the features of the external conditions differentiated according to ‘degree of educational arrangement’, ‘certification’ and ‘approved public regulations’. Combining

²⁴ Cp. Straka (1997, 2000).

²⁵ Tough (1979), p. 7.

²⁶ Anderson (1995), Oerter (1997).

²⁷ Reischmann (1995).

the introduced types of formality of external conditions with the types of learning and referring to Colardyn's and Bjørnåvold's (2004) argumentation one finds the following result:

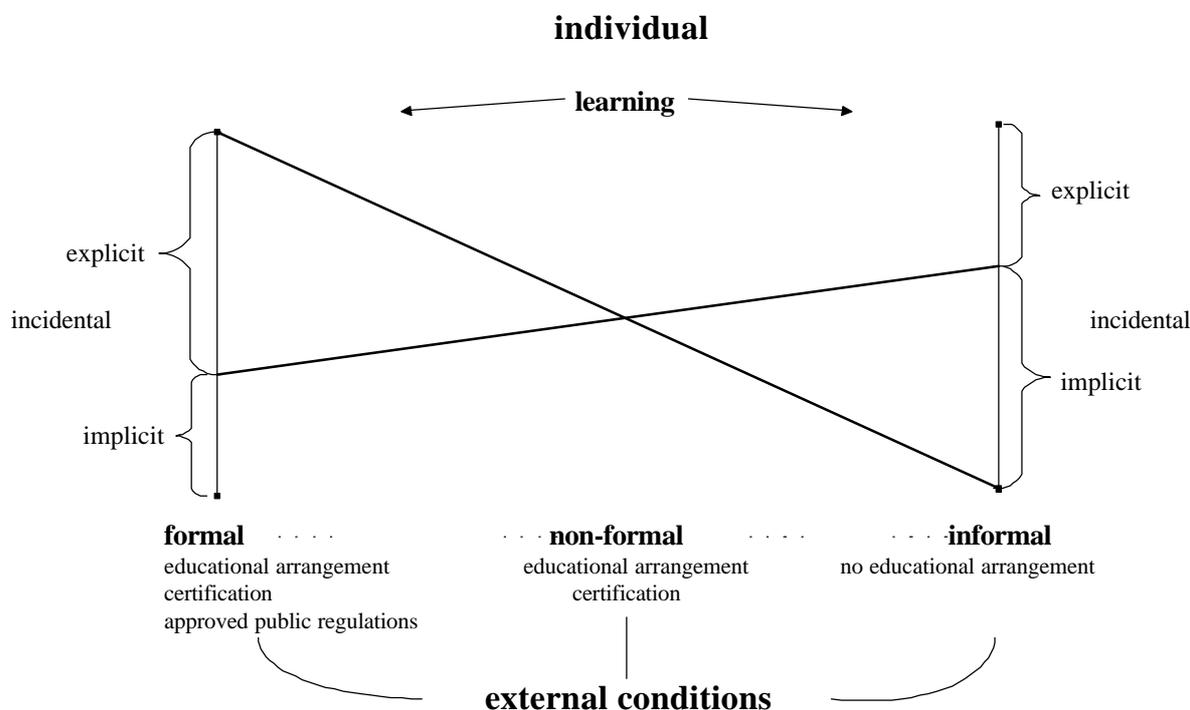


Figure 2: Types of learning combined with formality of external conditions

The figure shows that explicit and implicit learning takes place in all types of external conditions but tends to be different when it comes to importance. Incidental learning may occur anywhere – even under formal conditions.

The focus on the external conditions is supported by current conceptualisations²⁸. The special interest group of the AERA for research in this domain for learning is titled 'Informal learning environments research'. According to Livingstone (2001, p. 5) "informal learning is activity involving the pursuit of understanding, knowledge or skill which occurs without the presences of externally imposed curricular criteria". Because 'the pursuit of understanding etc.' can also take place in educational institutions, the demarcation line is located in the external conditions. In the same line argues Eraut (2000): "Informal learning is often treated as a residual category to describe any type of learning which does not take place within, (...) a formally organised learning programme or event. However, for those who believe that the majority of human learning does not occur in formal contexts, the utility of such a catch-all label is not very great"²⁹. He recommends differentiation only with respect to formal and non-formal environmental conditions, of which 'formality' can be characterized as a prescribed framework for learning (e.g. school syllabus, training regulations for companies), an organized event or package, the presence of a

²⁸ Cp. Garrick (1998), p. 38.

²⁹ Eraut (2000), p. 12.

designated teacher or trainer, the external specification of the outcomes, the award of a designated qualification, credit or certificate, accreditation or recognition of the qualification, credit or certificate, affiliated with the right of access to further education³⁰. These attributes indicate that between formal, non-formal and informal external conditions of learning additional graduations are possible.

2.2.3 Conclusion, antagonisms and questions

The results of this analysis are that informal and non-formal learning are metaphors. Formality is not a feature of an individual's learning but the socio-culturally shaped conditions external to the individual. Thus the term 'non-formal education' used at the starting point was the appropriate one.

Learning types are not exclusively connected to certain types of formality, i.e. implicit, explicit, and incidental learning takes place in any context. Nevertheless, informal and non-formal learning are given high esteem in the domain of adult education research and practice and in educational policy as well. Indicators for that are e.g. Houle's (1961) 'inquiring mind' to Tough's (1971) 'learning projects', Marsick's and Watkins' (1990) 'informal and incidental learning in the workplace', Livingstone's (1999) investigations on 'informal learning in the knowledge society', Dohmen's (2001) review on 'informal learning' for the Federal Ministry of Education and Research and decisions and recommendations of the European Commission and organisations like the UNESCO or the OECD on validating informal and non-formal learning.

From a political point of view but also in adult education, the focus is on persons with low education and occupational status or 'non-traditional learners'³¹. Research findings show that this target group is not the one who will gain most from such a policy. A representative survey of the employed aged 19 to 64 years in Germany found that learning in non-formal and informal settings is important according to their ratings. In 2000, two out of three employed expressed that they practised this type of self-education. However, people who failed to complete a dual education and training scheme, blue-collar workers and immigrants were underrepresented (Kuwan et al. 2003, p. 185). As a consequence, valuing learning outcomes acquired in non-formal and informal settings might support the Biblical principle – giving more to those who already have.

The data of Kuwan et al. (2003) and of others – like Eraut et al. (2004), Livingstone (1999) or Tough (1971) are based on personal assessments. The core problem of such assessment is that the process of generating, storing and recalling is not accessible to outsiders. Therefore, the self-assessment may be biased³² in their validity and even their range of validity is not calculable. The problem is worsened because explicitly learned knowledge and skills may become implicit via routine. What happens to implicitly acquired knowledge and skills? In case of questioning, both types of internal conditions may not be recordable by the interviewed.

Does participatory monitoring solve problems of self-assessment? Indeed the observable parts of the action/learning episode are recordable. However, such

³⁰ Eraut (2000).

³¹ European Commission (2000).

³² Kuwan et al. (2003).

observations catch only the tip of the iceberg. Most learning takes place below surface. To make them imaginable, one needs to introduce assumptions about learning and classifications of learning outcomes.

Criticizing learning in schools and advocating learning out of school with comparatively broad concepts³³ is only one step forward in this direction. But there are further steps to be added. Examples are investigations on learning potentials of the workplace for apprentices in banks and administrations in factories with structured personal working diaries³⁴. However, these projects recorded and interpreted activities are potentially relevant for learning outcomes. Perhaps the project ‘the learning potential of the workplace’³⁵ may shed some light on the darkness of learning under non-formal and informal external conditions. Up to now we do not know much about the quantity and quality of learning outcomes in informal and non-formal settings. Therefore, we have to conclude: Everybody learns under non- and informal external conditions within ones lifespan – but why, where, when, how and what has still to be investigated.

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