



5P Competences

Conceptual frame of reference

Sustainability Skills in Adult Education | Competency Framework



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The United Nations for more than three decades is promoting sustainable development. Only recently 17 sustainability goals have been formulated to reach until 2030¹. The subsequent Incheon-Declaration² pays special attention to education and training, which has been assigned a key role for the endeavour.

To reach these goals not only changes in the educational system are necessary concerning a fair distribution of education or concerning the results of learning. It is also important to reach relevant educational goals and to achieve relevant competences. To support that a competence framework was established in 2022 (EU-Commission, 2022) and learning objectives were published in 2017 (UNESCO, 2017). These two publications (and similar publications, too) have in common, that they start their argumentation from the sustainable development as such. From this they are asking for learning objectives that can be deduced (e.g. the understanding of concepts of poverty and a critical discussion of their normative and cultural assumptions) or for relevant competences to be able to engage for a sustainable development (respect of sustainability and critical discussions with it).

The focus on lifelong learning

In this project we are focussing on a lifelong-learning perspective and before starting to describe the design of the project it is important to describe the consequences of this perspective:

In spite (or because) of we are using the phrases ‘lifelong-learning’ or ‘informal learning’ in our every-day-language there are quite substantial differences in what we are meaning with them. Recent publications (e.g. Rohs, 2015) show for example that the phrase ‘informal learning’ can be understood as every learning that is not formal learning. Informal learning then is something like a rest-category: Learning that is not happening in organized contexts. Other definitions see the origin of the phrase in

¹ <https://sdgs.un.org/goals>

² <https://www.fachportal-paedagogik.de/literatur/vollanzeige.html?FId=1188525>

the field of vocational occupation and training – thus it happens on the job and it focusses on the difference between general and vocational education. In this context informal learning is also an important part of organizational learning (Senge, 1990). A third origin of a definition of ‘informal learning’ can be the European Project ‘Learning Regions’ or ‘Learning in Place’ where informal learning is put into the context of regional development. Here ‘informal learning’ is one important element of regional task-orientation (Kuper & Kaufmann, 2010). All in all the understanding of ‘informal learning’ depends on the political background where the phrase is coming from and thus is also different in European countries

In order to follow a broadly accepted definition we follow the recent empirical studies of lifelong learning and informal learning, especially the Adult Education Survey. On the web-sites of EUROSTAT the following definitions can be found³:

“**Lifelong learning** encompasses all learning activities undertaken throughout life with the aim of improving knowledge, skills and competences, within personal, civic, social or employment-related perspectives. The intention or aim to learn is the critical point that distinguishes these activities from non-learning activities, such as cultural or sporting activities.”

Following this definition ‘Lifelong learning’ is lasting throughout the whole life of a person and it is undertaken to improve knowledge, skills and competences. So it is intentional. This means that learning that is happening by chance is not relevant for ‘Lifelong Learning’. Learning activities are subdivided into three categories: formal, non-formal and informal. These categories are defined as follows:

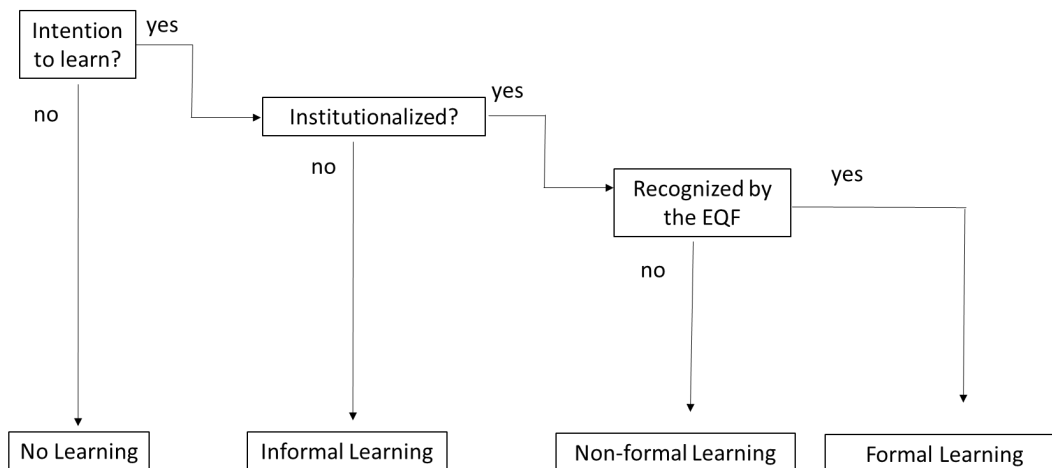
- “**Formal education and training** is defined as “education that is *institutionalised, intentional* and *planned through* public organisations and recognised private bodies and – in their totality – constitute *the*

³ https://ec.europa.eu/eurostat/cache/metadata/en/trng_aes_12m0_esms.htm

formal education system of a country. Formal education programmes are thus recognised as such by the relevant national education authorities or equivalent authorities, e.g. any other institution in cooperation with the national or sub-national education authorities. Formal education consists mostly of initial education. Vocational education, special needs education and some parts of adult education are often recognised as being part of the formal education system.” (ISCED 2011)

- **Non-formal education and training** is defined as “education that is *institutionalised, intentional and planned by an education provider*. The defining characteristic of non-formal education is that it is an addition, alternative and/or complement to formal education within the process of the lifelong learning of individuals. It is often provided to guarantee the right of access to education for all. It caters to people of all ages but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low-intensity, and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognised as formal or equivalent to formal qualifications by the relevant national or sub-national education authorities or to no qualifications at all. Non-formal education can cover programmes contributing to adult and youth literacy and education for out-of-school children, as well as programmes on life skills, work skills, and social or cultural development.” (ISCED 2011) In short, non-formal education and training covers *institutionalised taught learning activities outside the formal education system*.
- **Informal learning** is defined as “forms of learning that are *intentional* or deliberate, but are *not institutionalised*. It is consequently less organized and less structured than either formal or non-formal education. Informal learning may include learning activities that occur in the family, workplace, local community and daily life, on a self-directed, family-directed or socially-directed basis”. (ISCED 2011)“

For a better understanding of the central differences between formal, non-formal and informal Learning the definitions can be described in a graphical way. Following Bilger et al. (2013, p. 19) the following flow sheet can be drawn (see also the Classification of Learning Activities (CLA) by Eurostat (2016, p. 21)) to facilitate getting a common understanding of the different types of learning:



This understanding can be applied to define the term **‘Education for sustainable development’** (ESD). In the words of the UNESCO (2014, p. 12), “ESD empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity. It is about lifelong learning, and is an integral part of quality education. ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment. It achieves its purpose by transforming society.” The definition also implies a) that ESD can be done by formal, non-formal and informal learning and b) that it has to have an intention: to take informed decisions and responsible actions for environmental integrity, economic viability and a just society. This understanding of ESD is also in line with recent publications such as Wals & Mochizuki, 2017 or Rieckmann& Barth, 2022. Wals & Mochuzuki state, that there is relatively little knowledge about ESD in the domain of non-formal education.

From this follows that the intention of the project to build a competency framework for ESD is entering a field with little research. Since informal learning is closely connected with practical actions in our daily life (occupational, private or societal) the competence framework has to focus on knowledge that is a precondition for these actions and not on a knowledge that is a consequence of these actions, because this would not belong to informal learning since it is not intentional.

Consequences on learning objectives from the lifelong learning perspective and the concept of developmental tasks

From the perspective of lifelong learning as described above the learning objectives formulated for formal learning are not adequate for informal learning. And this for several reasons:

- ... because the learning objectives and the competences are formulated in a very general manner. That means that the justification of their relevance does not necessarily need the concept of sustainability e.g. like 'systems-thinking competency', strategic competency' or 'self-awareness competency (UNESCO, 2017, p. 10). From this the argument is evident, that educational innovations are not necessary, because the objectives always were relevant.

- ... because the educational objectives are primarily connected to formal learning at schools and universities. They can be integrated into a catalogue describing skills and competences, which are generally important, but this catalogue then will not be connected to problems or situations out of the everyday life. But it is the everyday life that is the reason for informal learning.
- ... because it is (nearly) impossible to deduce hints for pedagogical actions out of analytical categories which are giving reasons for weighting the educational objectives (or competences) for single persons or which are giving reasons for the order in which the parts of the competences can or should be taught.

From a Lifelong Learning perspective it is necessary to add the existing competence frameworks (or lists of educational objectives) by a concept that is orientated on situations of everyday life and on a professional perspective. It is the purpose of this project to establish a competence framework, which is connected to the publications of the UNO and the UNESCO and which is referring to actual developments in each country of our partners and on activities of the communities. The framework should be open and adaptive for new developments and it will primarily be orientated on informal learning.

To reach this goal we will start from the concept of developmental tasks which is prominently used in developmental psychology. Originally this concept means culturally or societally determined requirements or expectations at a certain point in time dedicated to persons of a certain age. Havighurst (1972), one of the prominent representatives of that concept, referred it to adolescents and addressed e.g. the following tasks to them: preparation for a professional career, preparation for marriage and having a family, adaption of sex roles, acceptance of one's own body and person or the (emotional) independence from parents and other adults.

Havighurst by himself points out, that this concept can be adapted to early adulthood (choosing a life partner, establishing a family, take care of home, establish a career), middle age (maintain a standard of living, perform civic and social responsibilities, maintain a relationship with spouse, adapt to physiological changes) or later maturity (adjust to deteriorating health, adjust to retirement, meet social and civil obligations, adjust to loss of spouse). Hurrelmann (1998) further developed that concept and argued from a perspective of socialisation which is better connected to informal learning. He speaks of four developmental tasks:

- Training of discipline and intellectual and social competences, to actively overtake tasks and duties which are personally satisfying and useful for the public welfare.
- Design of a self-image of body and soul, to gain a personal identity, to get a close connection to beloved persons and to maintain satisfying contacts to other persons.
- Skills to productively use offers from economic, leisure and media and to develop strategies to relax and regenerate.
- Design of a value orientation and the ability to participate actively in the political design of the conditions for living.

In developmental psychology and in the theory of socialization the question about consequences for adolescents that happen if they do not successfully master the developmental tasks is raised. Here we adapt the concept of developmental tasks to Lifelong learning (similar to Hericks, 2009, who is using the concept for his theory of professionalization of teachers). In this context we are talking about tasks, which have to be acquired and updated over the whole life span and which are connected to the perspective of sustainability. If this does not happen (sufficiently), it is not the person, who is taking harm, it is the sustainability.

Looking at the literature cited there are three concepts standing in the foreground that are relevant for the competences for sustainability and the learning objectives: Generation, justice and responsibility.

1. The topic ,generation‘ is closely connected to sustainability and is explicitly mentioned in the competence framework GreenComp (supporting fairness, p. 14). The idea is, that every generation is living in a world (or learning to live in a world) that was influenced and designed be previous generations. She overtakes the world from these generations, is continuing some things and changing others so that she can give the world to the next generation(s). One of the conditions for sustainable development is to be conscious about this aspect and to cope with it critically and responsible. This is concerning the history of mankind, of the nation, the family and also one’s own history. Norms and values have to be questioned and made conscious. People have to ask themselves what they want to leave behind for their children, the children of their friends, the community, they are living in their country and the world. This aspect is especially addressed in SDG 8 (Decent Work and Economic Growth). Also relevant are SDG 1-3, SDG 5-12 and SDG 16.
2. Justice is directly mentioned in some competences of the Green-Comp. It is referred to in some sustainable development goals (SDG 5: Gender Equality or SDG 10: Reduced Inequality) and it is implicitly referred to in some other goals (SDG 1: No Poverty or SDG 2: Zero Hunger). Justice is discussed as justice between nations, between regions and between persons. Closely connected to this are questions about equality and inequality. Those questions are connected with the distribution of natural resources or the organization of power or domination.

3. Feeling responsible was already addressed by Havighurst and Hurrelman. Sustainability just is another aspect of responsibility. It means being responsible for one's own actions, for one's own values and one's engagement for sustainability. This is addressed in the competence-framework, too (Valuing Sustainability or Political agency and Collective action), but it is also expressed in the Sustainable Development Goals. It is about being and feeling responsible for others and the conditions for having a ,good life'. So it is also connected with the question of generations.

Out of these topics three developmental goals can be drawn that are described in the following paragraphs:

1. The first developmental task is aiming at the existence and the continuance of the world. That means the future of one's own, the future of the society and the future of the forthcoming generations. The main question that is raised is: on what (material) basis can this future be designed? This means our management of resources. The developmental task is, to learn how to handle our material resources in order to give us as persons, other persons and other societies a worthwhile and sustainable future.
2. The second developmental task is focussing on the social cohesion of a society, on the social contact of persons among themselves and on the results of a comparison between a person and other persons. It is about fairness and values around it. The developmental task is to develop social values and a concept of social fairness.

3. The third developmental task is connected to one's own position in the world. This is not ascribed as it might have been the case in former times, it is earned and it can be assured by one's own efforts. Therefore it is important to be convinced of one's own self-efficacy and to be engaged in sustainability as far as one's own abilities and interests allow that.

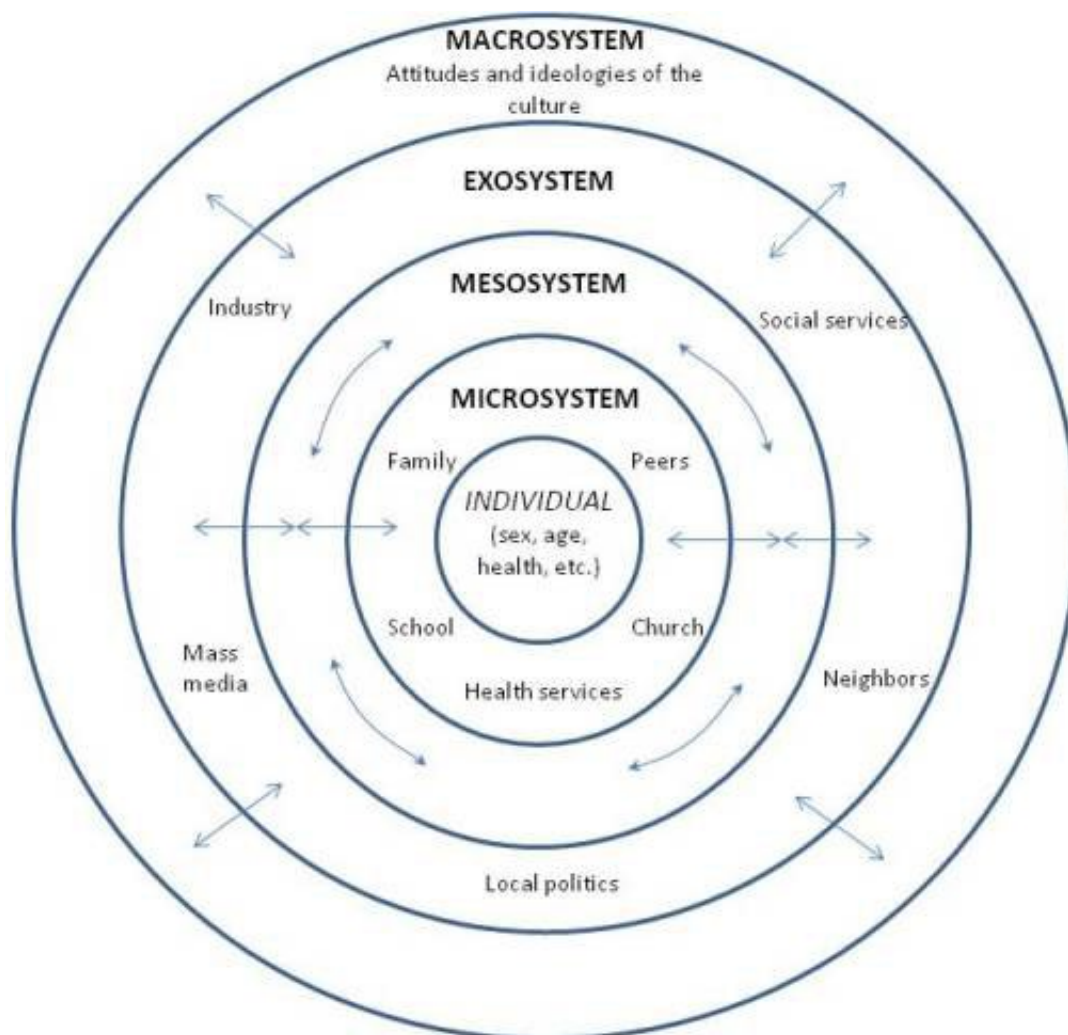
The three developmental tasks have in common, that they cannot be achieved finally. They have to be thought over the whole lifetime, they have to be modified and updated and some competences have to be learnt newly. Concerning the aspect of lifelong learning this does not happen independently from one's own life. The opposite is true: it happens enclosed in one's own life. This is the reason why in this project initiatives and projects are collected and analysed which are undertaken in connection with these developmental tasks on a national and on a regional level.

Consequences for the project and the reference to the social ecological model of Uri Bronfenbrenner

In the application of the project it was intended to analyse international, national and regional publications on ESD to find concrete goals for the competence framework which should be differentiated between regional levels. Looking at different regional levels is a consequence following the roadmap for implementing ESD by the UNESCO (2020). There it is stated that the efforts on ESD should be taken especially on local levels using a whole-institution approach (p. 16, see also p. 22).

But soon it became clear that this intention could not be implemented because the publications on national and regional level are all referring to the central publications of the UNESCO. So it was decided to analyse concrete projects undertaken in the countries of the project members.

The analysis of the developmental tasks could also be done using the descriptions of the projects. But – as the projects could act on regional, national or international levels – it was not possible to follow the regional level directly from the project. Since the regional level was regarded as important as stated by the UNESCO (2020) we referred to Bronfenbrenner’s social ecological model (1981). This model is categorizing different ecological systems with different influence on the cognitive and social development of persons (especially children). Here is one of the many graphical illustrations of the model:



Source: [https://en.wikipedia.org/wiki/Ecological_systems_theory#/media/File:Bronfenbrenner's Ecological Theory of Development \(English\).jpg](https://en.wikipedia.org/wiki/Ecological_systems_theory#/media/File:Bronfenbrenner's_Ecological_Theory_of_Development_(English).jpg)

Adapting the model to the needs of the project the different levels (systems) the following differences concerning the developmental tasks were regarded as important:

- Whether the developmental tasks are referred to as actions that are directly connected to the person or those who are in a direct contact with her (**micro-level**).
- Whether they aim at the (personal) environment of a person, including for example persons who are closely connected to each other such as e.g. family or close friends (**meso-level**).
- Whether it is referred to groups or events in the direct environment of a person. An environment is which the person is not a member by themselves, but which has a strong effect on the possibilities of action, such as changes for sustainable consumption or sustainable usage of energy (**exo-level**).
- Or whether it aims at things that are connected with the whole of a society, such as values, conventions, traditions, rules and regulations, laws or ideologies (**macro-level**).

As a result, the analysis of the project shall lead to a competence framework of a sustainable development in the field of lifelong learning. But – since this framework will be based on an empirical analysis and not on a theoretical one – it might not represent the full range of competences and their variety that is necessary to fully support sustainable development in all its forms. Thus the empirical framework is set into contrast to a theoretical one that is well established in other contexts and that can be adapted. For this the so called competence-atlas by Heyse & Erpenbeck (2017) shall be used. The reasons why it was chosen are explained in the next step by discussing several conceptions of the term ‘competence’.

How the concept of competence is understood in this project

The term 'competence' is used in different pedagogical contexts during the last decades. Depending on the context – vocational education, measuring literacy at schools or the defining a common understanding of basic skills in EU countries – different understandings of the term 'competences' can be found. A common understanding is to see competences as available and teachable cognitive skills and proficiency within a person to solve problems and the motivational, volitional and social readiness and capabilities to solve these solutions in variable situations successfully and responsible (see Weinert, 2002, p. 27). Following Meigel (2022) the differences in the understanding can be categorized into three groups:

- 1. Competences as generalized capacities (OECD).** This understanding of the term 'competences' can be found in the German Qualification Reference Framework (DQR) that is based on the European Qualification Framework (EQF). Like the EQF, the DQR has eight levels, which are structured differently to those of the EQF. In a sense, the categories and competence descriptions of the DQR expand on and specify the EQF in more specific terms. The EQF has three categories (1. Knowledge, 2. Skills and 3. Responsibility and Autonomy) the DQR four of them (1. Knowledge, 2. Skills, (= professional competence), 3. Social competences and 4. Independence (= personal competence) (BMBF, 2011). Thus, the DQR makes clear that a holistic understanding of competence is central to the German education system. The four-categories structure was selected in order to appropriately describe a comprehensive ability to act in all its aspects. Both – EQF and DQR – regard competences as outcomes of learning. As such they are based on the idea that there is a match between (professional) activities and necessary competences.

- 2. Competences as definitions for cognitive skills (PISA, PIRLS, PIAAC).** Another view on competences can be found in the international studies like PISA, PIRLS or PIAAC. Here we find a strict separation of cognitive and motivational components of competences. The competence description is focussed on the cognitive components that can be taught at schools or other institutions of formal and non-formal learning. This leads to an understanding of competences which is more precisely concentrated on concrete domains or situations (Klieme & Hartig, 2007). Competences are functional! This understanding helps to separate competences from more general terms like intelligence or talent.

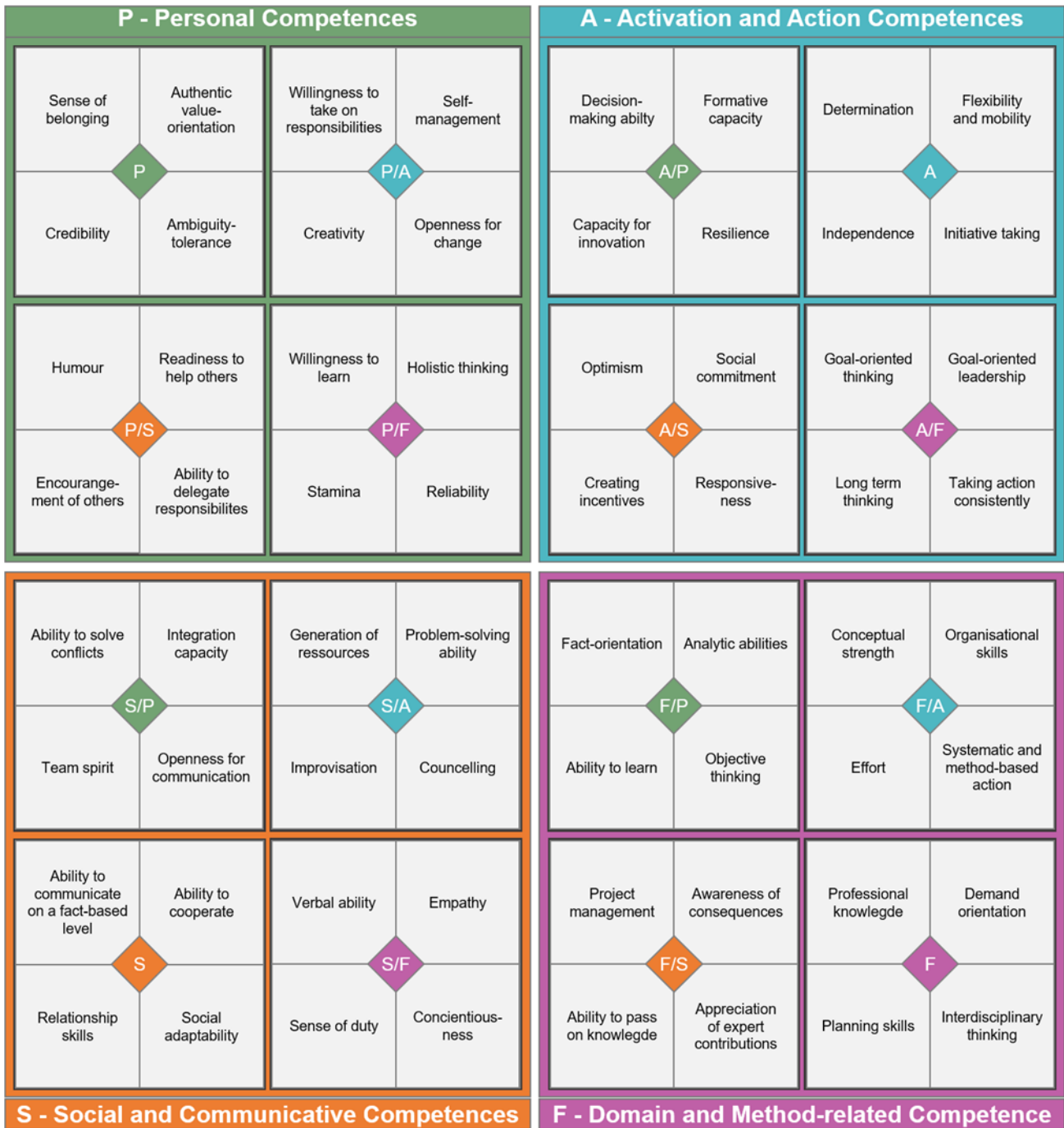
- 3. Competences as dispositions for self-organization.** In this understanding competences are seen as the ability of a person to successfully master open, incalculable, complex and dynamic situations in a self-organized way (Heyse & Erpenbeck, 2004). In other words: competences are dispositions to organize oneself. They are conditions to adapt oneself to concrete situations and changing conditions by successfully adapting one's strategies of behaviour. (Heyse & Erpenbeck, 2004). This understanding matches very well with the idea of informal learning because it focusses on the fact that individuals are defining the goals of their learning by themselves. Competences are – like informal learning, too – based on self-determination. The following principles are crucial: Their development is non-linear; they are reinforcing themselves because competences are leading to the development of new competences because of new experiences; they are depending on factors inside the individuals and not from outside (environment); they are depending on internalized values and they are depending on the development of a person and on his or her history.

As it was shown the understanding of competences as dispositions for self-organization is matching very well to the concept of informal learning. In a circular process it is affecting (and affected by) mental actions (like problem solving or assessment), physical actions (like working or manufacturing), communicative actions and reflexive actions (like self-assessment). They are especially important in situations in which established routines are not available. As a consequence self-organized actions are reflexive on the individual (personal competence), on the social environment (social and communicative competence), on the objective environment (domain and method related competence) and on one's motivation and endurance (activation and action competences).

- **Personal competences (P)** are dispositions within the individual leading to self-organized action. They encompass the ability to assess oneself, to reflect on oneself as a person and to develop own individual values, motivation and standpoints. This is as well affecting gifts, motivation, creativity and learning.
- **Social and communicative competences (S)** are dispositions to collaborate with others in a self-organized, cooperative and communicative way. The behaviour of a person is orientated on groups and relationships to others in order to create shared action-plans to develop joined tasks and objectives. Social and communicative competences are important to put coordinated actions on a stable ground.
- **Domain and method related competences (F):** These dispositions are the conditions for a self-organized, accurate, objective and domain-based problem solving. This is depending on professional and methodological knowledge and on the capability to develop this knowledge further in a creative way.

- **Activation and action competences (A)** are dispositions to put the other competences into action. This means to integrate the personal, social-communicative and domain related competences of a person into his or her personal motives and endurance.

The categorization of competences into these four sub-categories is very well matching with the four categories of the DQR in spite of different terms used. As can be seen in IO 2 they are as well matching with the developmental tasks explained above. Heyse and Erpenbeck (2017) have defined 64 aspects of the four sub-categories of competences and summarized them systematically in their competence-atlas. What makes this atlas relevant for this project is – besides the topics mentioned above – the fact that they can be adapted to different topics. The following graphic mentions the personal competences, social-communicative competences, domain and method-related competences and action competences of the competence-atlas using our adaptation to the properties of informal learning and education for sustainable development. In our adaptation of the model from Heyse and Erpenbeck (2017), the following matrix (competence-atlas) can be formulated:



On the basis of Hezse, V. & Erpenbeck, L. (2017). KODE© KompetenzAtlas

In the next step, the three above mentioned developmental tasks (material resources, social cohesion / justice / social fairness, self-efficacy; see also the definitions above) will be integrated into the model. Again, the mapping cannot be done clearly and unambiguously, but it is plausible.

The coding of the projects is described in a separate publication, which gives a detailed overview of the elements and features of the 5P competence framework. For the selection of the projects it was not mandatory

that the initiatives mention the term ,sustainable development‘ explicitly.
But they have to aim at events or actions standing in a close contact to the
sustainability goals of the UNESCO.

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