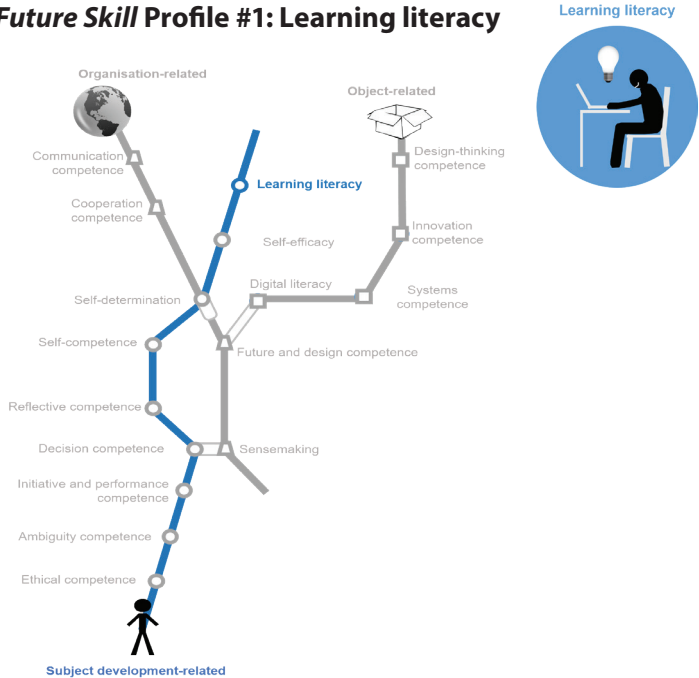


A 3.1.1 Future Skill Profile #1: Learning literacy



Definition: Learning literacy is the ability and willingness to learn in a self-directed and self-initiated fashion. It entails metacognitive skills as well. (*mean value: 4.5 of 5, standard deviation: 0.68*)¹³

Reference competences: self-directed learning, metacognitive skills

Significance: Learning literacy as a *Future Skill* enables individuals in highly emergent contexts to make the necessary adaptations through learning, to anticipate them and to shape them if they are necessary, e.g. in working or living environments or task areas that are subject to strong change.

Description: Learning literacy is defined as the ability and willingness to self-directed learning and to self-learning competence. That includes a kind of learning

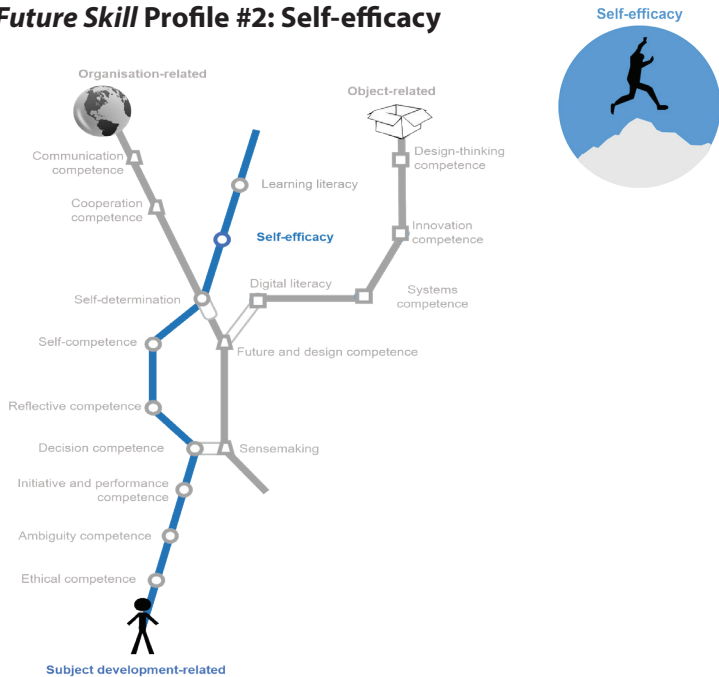
¹³ In the following, the mean value (M) and the standard deviation (SD) from the Delphi Survey are given for each *Future Skills* Profile, with which the experts assessed the relevance of the respective *Future Skills* Profile.

in which learners essentially control their learning process themselves. Learners must have a range of competences or learning strategies that enable them to use the existing leeway for their own learning. The learning process is specifically influenced through the deliberate use of learning strategies. This includes amongst others four learning strategies (Kilius 2002):

- Cognitive learning strategies – have a direct impact on the information to be acquired and processed.
- Metacognitive learning strategies – serve to plan, monitor and regulate the learning process.
- Motivational learning strategies – to ensure the success of cognitive and metacognitive learning strategies, students must be able to motivate themselves optimally.
- Resource-based learning strategies – i.e. scheduling, working with learning partners or using media and other tools.

Learning literacy as a *Future Skill* Profile enables the acting person to analyse the necessary learning needs in highly emergent practice contexts. The participants of the *NextSkills* Studies often stated that an essential aspect of current and future personnel development is to promote the self-directed learning skills of the organisation's members. The concepts and tools used for this are oriented towards promoting the ability for self-directed learning, the ability for lifelong learning and the readiness for learning in communities. Reference can be made here to instruments for organisational development, such as the Competence Workshop in Chapter II.3.1 Building a Networked Organisation, which focuses on these skills.

A 3.1.2 Future Skill Profile #2: Self-efficacy



Definition: Self-efficacy as a *Future Skill Profile* refers to the belief and one's (self-) confidence to be able to master the tasks at hand relying on one's own abilities and taking over responsibility for one's decisions.¹⁴ (mean value: 4.4 of 5, standard deviation: 0.69)

Reference competence: Self-confidence

Significance: Self-efficacy as a *Future Skill* enables an individual to act in highly emergent contexts with the conviction to be successful in awareness of her/his own abilities and needs.

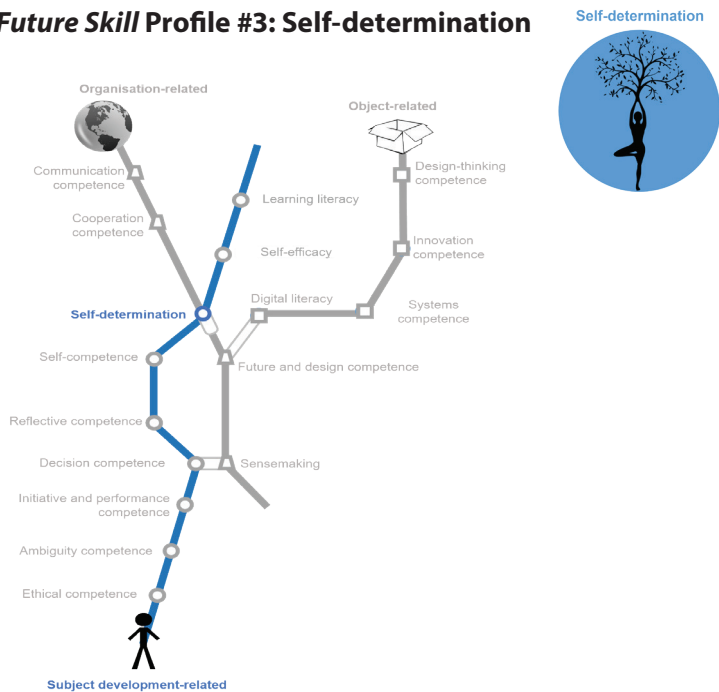
14 Definition according to Bandura (1989) "people's beliefs about their capabilities to exercise control over events that control their lives" (Bandura 1989, S. 1175). Bandura (1982 in Frayne 1987) defines self-efficacy as follows: "Perceived self-efficacy refers to the strength of one's belief that he or she can successfully execute the behaviours required" (Bandura 1982) (in Frayne & Latham 1987).

Description: Self-efficacy represents the conviction of being able to implement the tasks to be mastered with one's own abilities, taking responsibility and making decisions. Self-confidence is an additional competence in this competence profile. Self-confidence is a term used in several disciplines. It was first defined in philosophy, but also plays an important role in sociology, psychology or history. Self-confidence is essentially the experience of the peculiarity and unity of one's own person, the consciousness of one's own existence in contrast to the outside world, to the world of objects of knowledge and experience. In psychology, the term *self-confidence* is understood primarily as *self-esteem*, i.e. as awareness of the significance and value of one's own personality, whereby it represents primarily an emotional assessment of one's own value (Stangl 2019). Self-confidence arises through observation and reflection of the self, or in other words: one's own self, one's own personality. The self-observer is both object and subject at the same time. In this view the division of subject and object introduced by Karl Jaspers (1953) is suspended. Immanuel Kant (1964) expresses this as follows: "I am an object of contemplation and thought myself' is a synthetic sentence a priori and the principle of transcendental philosophy". (Kant 1964: 449)

Self-efficacy has been an established concept of learning psychology since the early nineties, which is well defined and can be observed empirically stable (Bandura 1989). Self-efficacy in psychology means the personal belief of a person that he or she can successfully cope with difficult situations and challenges on his or her own (ibid.). The concept of the general expectation of self-efficacy asks for the personal assessment of one's own competences, generally to cope with difficulties and barriers in daily life. This conviction about one's own abilities determines how people feel, think, motivate and act in a concrete situation. It therefore influences perception and performance in a variety of ways. Self-efficacy thus refers to the belief that one is capable of learning something or performing a particular task. Studies show that people who believe in their own strength are more persistent in accomplishing tasks and also develop a lower risk of anxiety disorders (Stangl 2019).

Examples from the *Future Skills* Study demonstrate that organisations work, for example, with theatre workshops or coaching methods in order to promote self-efficacy and self-confidence (see, for example, Chapter II.3 Conversations with Practitioners: Gaining Insights into the Practice of Supporting *Future Skills* Development).

A 3.1.3 Future Skill Profile #3: Self-determination



Definition: Self-determination as a *Future Skill* describes an individual's ability to act productively within the field of tension between external structure and self-organisation, and to create room for self-development and autonomy, so that they can meet their own needs in freedom and self-organisation. (*mean value: 4.5 of 5, standard deviation: 0.61*)

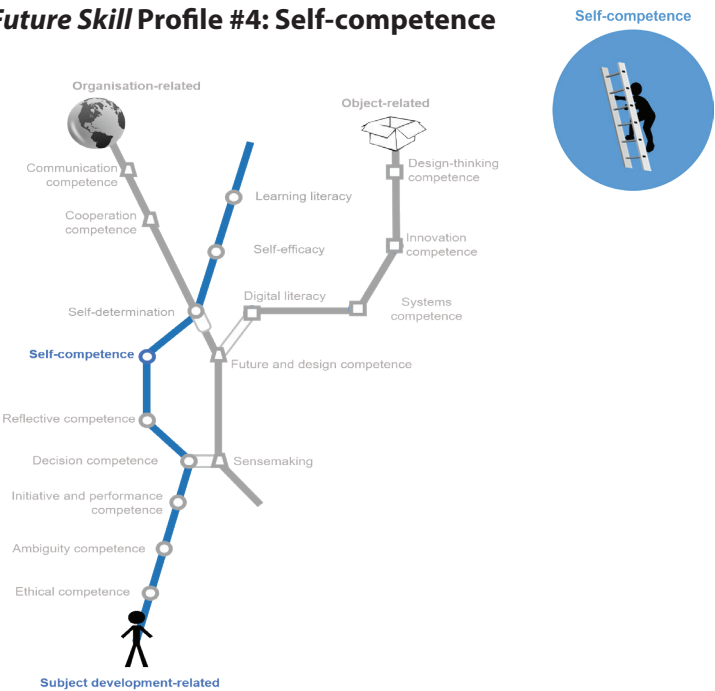
Reference competence: Autonomy

Significance: Self-determination as a *Future Skill* is particularly important for learning and development projects, since in highly emergent organisational and action contexts the appropriate and individually correct learning concept can less and less be externally specified. Autonomy and self-determination therefore play an increasingly important role in learning processes and performance situations.

Description: Self-determination comprises the ability of an individual to create learning contexts for himself in which important reference persons take part, in which the satisfaction of psychological needs is made possible (e.g. involvement,

success), in which an individual's striving for autonomy are being supported and in which they have the opportunity to experience their individual competences. The subcompetence autonomy belongs to the competence profile self-determination. Autonomy and self-determination are of particular importance for learning and development processes, since in highly emergent organisational and action contexts the appropriate and individually correct learning concept can less and less be specified and therefore autonomy and self-determination play an increasingly important role for learning processes and action processes. It is not only a matter of successfully implementing the learning and appropriation process, i.e. one's own development, for oneself, but also of selecting the important and perhaps necessary persons and group contexts suitable for this and of being aware and express one's own needs for development. Only through the knowledge and the ability to act or develop independently can actions be successfully carried out in highly emergent systems – because the conditions are unpredictable, and actions must be carried out under conditions of uncertainty.

A 3.1.4 Future Skill Profile #4: Self-competence



Definition: Self-competence as a *Future Skill* is the ability to develop one's own personal and professional capabilities largely independently of external influences (see also KMK 2015). This includes other skills such as independent self-motivation and planning. But also the ability to set goals, time management, organization, learning aptitude and success control through feedback. In addition, cognitive load management and a high degree of personal responsibility. (*mean value: 4.5 of 5, standard deviation: 0.82*)

Reference competences: self-management, self-organisation competence, self-regulation, Cognitive Load Management, self-responsibility

Significance: Self-competence occupies a special position within the framework of *Future Skills*. Since it refers to the capacity for self-organisation, Cognitive Load Management and self-regulation, it is important for a productive-balanced and sustainable handling of requirements in the field of tension between one's own abilities and needs, and the professional as well as the organisational requirements.

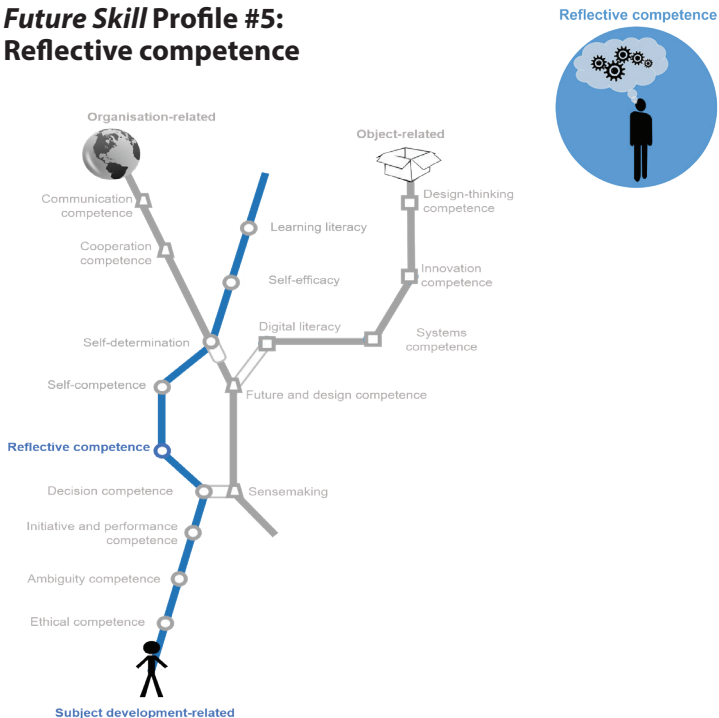
Description: The *Future Skill* self-competence consists of the competences self-management, self-organisation competence, self-regulation, Cognitive Load management and self-responsibility.

- *Self-competence* is the ability to shape one's own personal and professional development largely independently of external influences. This means that self-competence focuses on which actions and conditions can be shaped and controlled by personal influence. The corresponding competences such as self-management, self-organisation competence, self-regulation, but also Cognitive Load Management and self-responsibility are necessary for this.
- *Self-management* is defined as the ability to independently motivate, set goals, plan and manage time in relation to existing activities.
- *Self-organisation competence* is defined as the ability to independently understand structures, as well as maintain and develop models, patterns of order and structures.
- *Self-regulation* can be defined in various ways. In the most basic sense, it involves controlling one's behaviour, emotions, and thoughts in the pursuit of long-term goals. It includes, among other things, the mental handling of one's own feelings and moods and the ability to realise one's intentions through purposeful and realistic action. This also includes the ability to subordinate urgent short-term needs to longer-term goals (postponement of rewards). A high expectation of

self-efficacy can have a supporting effect (cf. also *Future Skill* #2, and Baumeister, Vohs 2004).

- *Cognitive Load Management* is defined as the ability of an individual to deal with cognitive requirements and stress in the sense of sustainable and productive personal development, taking into account his/her own needs (Plass et al. 2010).
- *Self-responsibility* is the attitude of overlooking, understanding and taking responsibility for one's own actions.

A 3.1.5 *Future Skill* Profile #5: Reflective competence



Definition: Reflective competence as a *Future Skill* includes the willingness and ability to reflect, i.e. the ability to question oneself and others for the purpose of constructive further development, as well as to recognise underlying systems of behaviour, thought and values and to assess their consequences for actions and decisions holistically. (*mean value: 4.5 of 5, standard deviation: 0.65*)

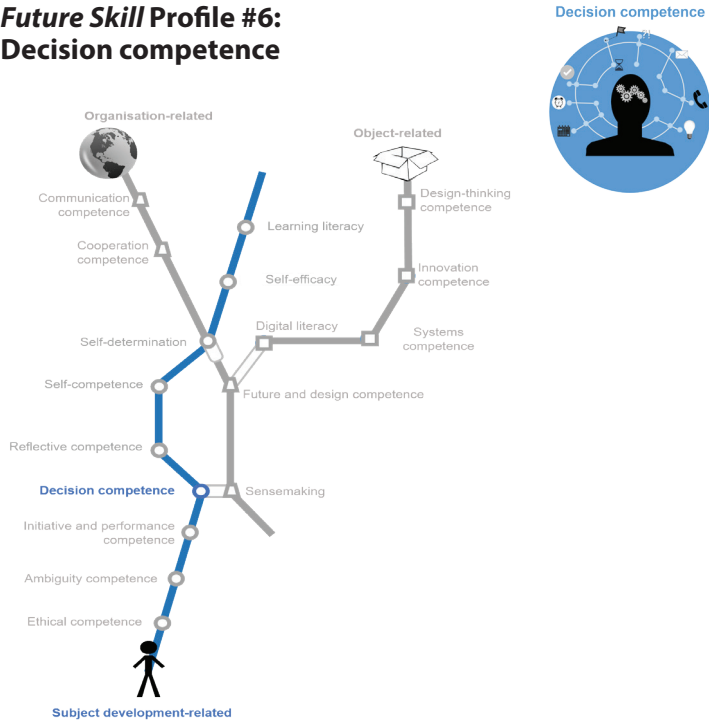
Reference competences: critical thinking, self-reflection competence

Significance: Reflective competence as a *Future Skill* is an important prerequisite for successful action in highly emergent action contexts. It enables individuals to see developments questioningly and in relation to their own canon of values and thus to perceive congruence or divergence between inner need and outer situation. It promotes both the *distancing from* one's own person (self-reflection competence) and the questioning and taking of another critical perspective in relation to existing identified facts.

Description: Reflective competence encompasses the ability and willingness to reflection. This includes the ability to communicate with oneself and with others for the purpose of being able to question structural further development and to recognise underlying systems of behaviour, thinking and values as well as their consequences; furthermore, to be able to evaluate negotiating situations and decisions holistically, i.e. in their entirety. This field of competence includes *critical thinking* and *self-reflection competence*.

Critical thinking and self-reflection competence make it possible to change perspectives. On the one hand, they make it possible to *distance* one's own consciousness from one's own person (self-reflection competence) and, on the other hand, they make it possible to question and change perspectives in relation to existing identified facts. In the organisations that took part in the *NextSkills* Studies, critical thinking, the questioning of given concepts and organisational processes as well as self-reflection skills are promoted.

A 3.1.6 *Future Skill* Profile #6: Decision competence



Definition: Decision competence as a *Future Skill* is the ability to seize decisions and to evaluate different alternatives against each other, as well as making a final decision and taking over the responsibility for it. (*mean value: 4.5 of 5, standard deviation: 0.71*)

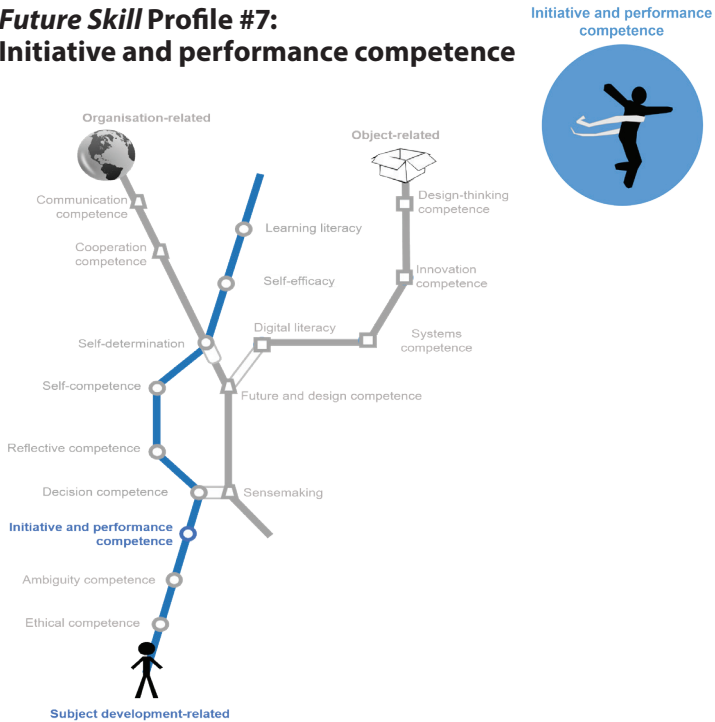
Reference competence: Responsibility-taking

Significance: The development from centrally managed to decentralised and networked organisational structures necessitates a decentralisation of decision-making powers and processes as well. This increases the importance of the ability to make decisions and take responsibility within the decentral spheres of an organisation. Decision competence as a *Future Skill* in highly emergent contexts enables an organisational change from hierarchical organisations to more network-based organisations with more decentralised control.

Description: Decision competence is the ability to perceive decision-making needs and to weigh possible alternative decisions against each other, to make a decision and to take responsibility for it. This field of competence also includes the competence to take responsibility. Making decisions and assuming responsibility are understood by the interviewees as two interdependent actions or competencies. Making decisions requires the ability to reflect critically on one's own decision bases and to rethink and communicate the action parameters that guide decisions in a given situation. Taking on responsibility also means being able to justify the decision taken in view of existing constellations of values and standards in the respective organisational situation, both personally and organisationally as well as socially.

With regard to taking responsibility, decision competence is the ability to explicitly justify a decision through dialogue. This understanding of responsibility is based on a purposeful or reinforced dialogical principle of answering via the prefix *re*, from which the ability to communicate can be derived as the first condition of responsibility. In this sense, every responsibility represents an act of communication. In order to be able to speak and answer for something, the actor in question must be able to communicate. Within the discourse of responsibility language plays an important role as a prerequisite for responsibility (cf. Piepmeier 1995: 86; Schwartländer 1974: 1580). Since the objects of a responsibility represent actions and consequences of actions, the subject in question must be able to act in order to bear responsibility. The process of justification is expressed in form of actions, it represents a way of acting. And yet action is to be distinguished from mere behaviour as actions always emphasise intentions. In this respect, actions are understood as target-oriented, purposeful activities, and thus as a special type of behaviour. The possibility of attributing responsibility begins with the description of behaviour as action.

A 3.1.7 *Future Skill* Profile #7: Initiative and performance competence



Definition: The *Future Skill* initiative and performance competence refers to an individual's ability to motivate him-/herself as well as to his/her wish of contributing to achievement. Persistence and goal-orientation form the motivational basis for performance. A positive self-concept also plays an important role as it serves to attribute success and failure in such a way that the performance motivation does not decrease. (*mean value: 4.1 of 5, standard deviation: 0.91*)

Reference Competences: (intrinsic) motivation, self-motivation, motivation capability, initiative-taking, need/motivation for achievement, engagement, persistence, goal-orientation

Significance: Initiative and performance competence act like a motor for *Future Skills*. The participants of the *Future Skills* Studies stated that initiative and performance competence should include the ability to always reflect on the goal of actions in practice and to check whether the original goal of action is still sustainable or

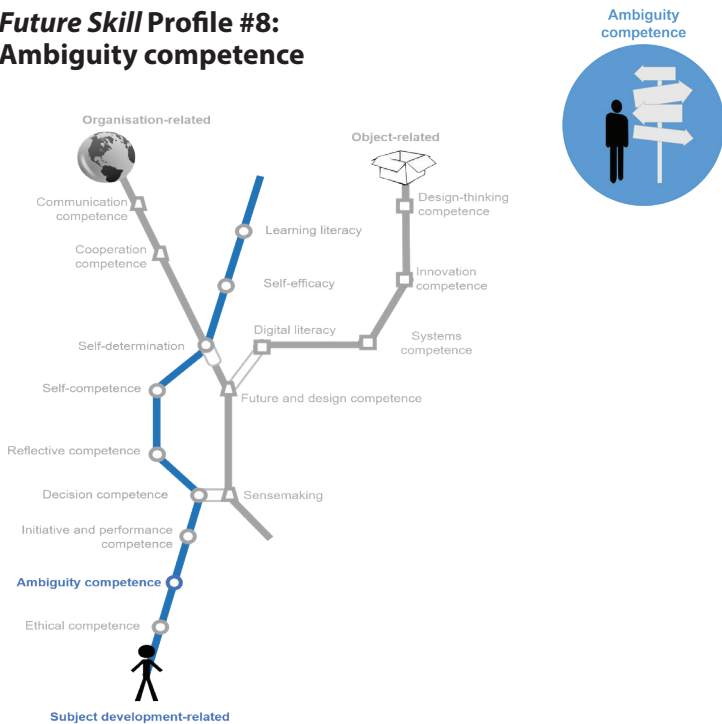
whether it can be redirected. In this way, high and intrinsic motivation, initiative and willingness to perform can continue to prevail in highly emergent contexts of action, even with newly formulated objectives.

Description: Initiative and performance competence is the ability to motivate oneself and the desire to contribute. It is also about perseverance, goal orientation and performance motivation as well as a positive self-concept. Motivation is understood as the totality of all motivations that lead to willingness to act. The striving for action is based on the principle of homeostasis, in an effort to balance the existing needs of the individual and the environment (on homeostasis, see also Chapter B 3 The Principles of *Future Skills* Development). The conversion of motives into actions is called volition or implementation competence, or activity competence.

Waldemar Pelz (2017) conducted an empirical study with 13,302 participants on the operationalisation and validation of activity and implementation competence (Volition). The goal was to operationalize the phenomenon of implementation competence as a human ability and to make it measurable so that it can be used and trained practically. The resulting *Giessen inventory of implementation competence* has large overlapping areas with the *Future Skill* initiative and performance competence presented here. Pelz proposes five partial competences (ibid.) which are also suitable for describing initiative and performance competence:

1. Attention control and focusing: Can the person concentrate fully on the essentials, even if influences occur that impair motivation and attention? Can it set clear priorities?
2. Emotion and mood management to increase personal energy: Is the person able to put himself or herself and others in a positive emotional position? Can she anticipate her own and other people's behaviour aptly and thus control it better?
3. Self-confidence and assertiveness: Is the person convinced of their own abilities and successes on the basis of their experience and can they achieve their goals constructively and prudently?
4. Foresighted planning and creative problem solving: Is action fundamentally proactive (instead of reactive) and future-oriented? Is the person well prepared for risks and problems?
5. Goal-oriented self-discipline by recognising the deeper meaning of the task: Does the person have a pronounced stamina until results are available? Does she recognise the deeper meaning in her activity? Can it constructively deal with the negative expectations of others?

A 3.1.8 *Future Skill* Profile #8: Ambiguity competence



Definition: Ambiguity competence as a *Future Skill* refers to an individual's ability to recognise, understand, and finally productively handle ambiguity, heterogeneity, and uncertainty, as well as to act in different roles. (*mean value: 4.3 of 5, standard deviation: 0.92*)

Reference Competences: dealing with uncertainty, dealing with heterogeneity, ability to act in different roles

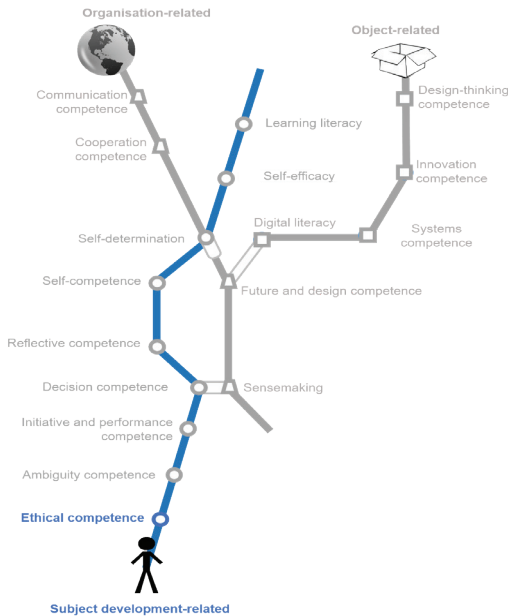
Significance: In highly emergent contexts, the ability to deal with vagueness and uncertainty or to reinterpret contradictory information and signals productively plays an important role.

Description: Ambiguity competence includes dealing with uncertainty and heterogeneity, i.e. different parts in a field of action and the ability to act in different

roles. It is also about recognising ambiguity, heterogeneity and uncertainty, understanding them and being able to deal with them productively.

A 3.1.9 Future Skill Profile #9: Ethical competence

Ethical competence



Definition: Ethical competence¹⁵ as a *Future Skill Profile* comprises the ability to perceive a situation or situation as ethically relevant, including its conceptual, empirical and contextual consideration (perceive), the ability to formulate relevant prescriptive premises together with the evaluation of their relevance, their weight, their justification, their binding nature and their conditions of application (evaluate) and the ability to form judgements and check their logical consistency, their conditions of use and their alternatives (judge).

¹⁵ Ethical Competence as a Future Skill Profile was resulting from the interview studies, but has not been included in the Delphi Survey.

Reference competence: ---

Significance: Every action is value-based. A consideration of values in specific action situations therefore requires the ability of an individual to understand and develop ethical standards and to make them usable for her/himself in her/his own constellations of action. This is all the more important if there are no or only a few reference actions, standards and models, as is the case in highly emergent contexts.

Description: Ethical competence refers to the ability to perceive an issue or situation as ethically relevant. Furthermore, ethical competence means developing ethical positions (*what is to be done?*) by weighing values, interests and consequences for a given context of action. Ethical competence also includes the communication of ethical positions and the ability to formulate premises together with the examination of their relevance, weight, justification, binding force and conditions of use (evaluation), as well as the ability to form judgements and the examination of their logical consistency, conditions of use and alternatives (judgement).

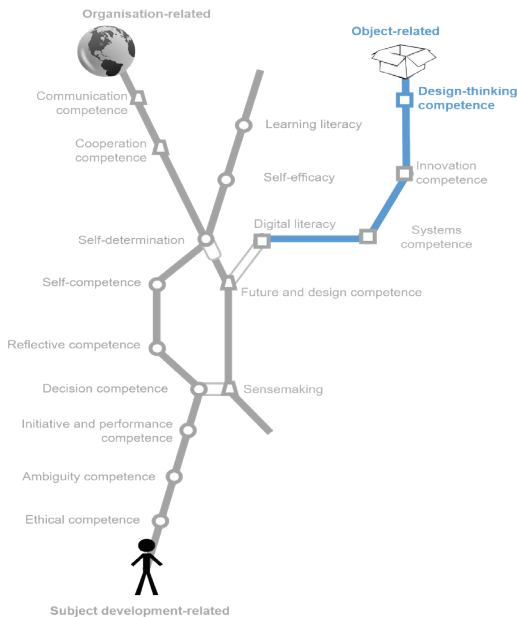
A 3.2 Competence Cluster II: Object-related competences

In the *NextSkills* Studies, respondents indicated that the way organisations handle products, processes and procedures is changing overall. Stability and market position therefore result from agility, the ability to organise rapid innovation cycles and openness, also for new and often international cooperation partners and alliances. This also results in new demands on employees and on how they deal with topics, objects, tasks and their view of processes, procedures and workflows. Those responsible in *Future Organisations* state that, in addition to new and creative methods, an open attitude and an innovative approach are particularly important in order to create the necessary sustainable innovation ecosystems.

The second competence cluster includes in particular object-related competences. These are skills which refer to acting creatively, agilely, analytically and with a high level of system understanding in relation to certain objects, topics and tasks and to acting successfully even under highly uncertain unknown conditions. This field of competence comprises four competence profiles that deal with creative and innovative ways of handling the respective topics of the context of action. These are design-thinking competence, innovation competence, systems competence and digital literacy.

Here, too, it should be noted that each of the 17 *Future Skill* Profiles cannot be clearly assigned to one of the three areas of the *Triple Helix-Model*, as if a particular action could be assembled from a three-box construction kit. Instead, we find interdependent areas and interrelated capabilities within the three areas of the *Triple Helix-Model*. They all aim to make a contribution to the capacity to act in highly emergent contexts, each having different anchor or starting points, but successful action as a common goal.

A 3.2.1 *Future Skill* Profile #10: Design-thinking competence



Definition: The *Future Skill* Profile design-thinking competence comprises the ability to use concrete methods to carry out creative development processes open-endedly

with regard to given problems and topics and to involve all stakeholders in a joint problem and solution design process.¹⁶

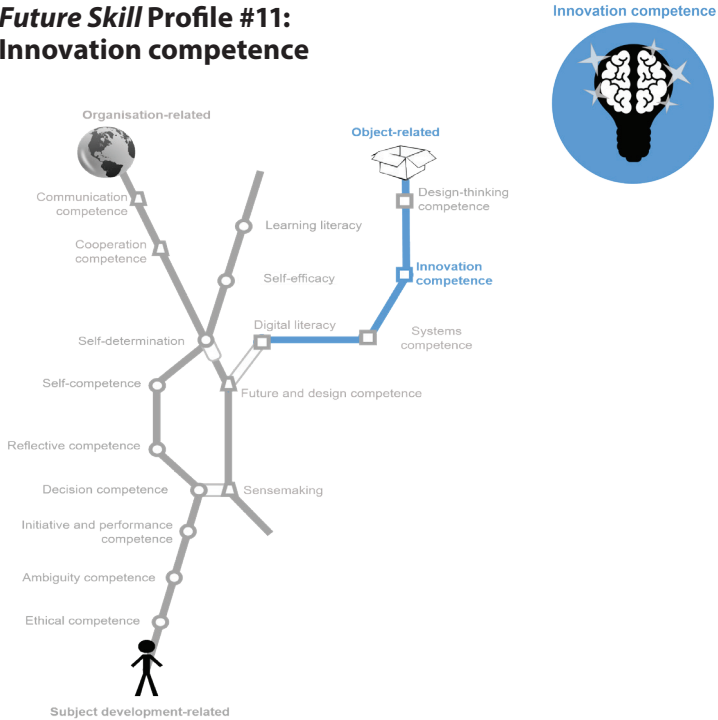
Reference Competences: flexibility and openness, versatility, ability to shift perspectives, interdisciplinarity

Significance: As innovation ecosystems, *Future Organisations* are dependent on being able to use concrete methodological skills that incorporate the given social stakeholder constellations into concrete problem definition and solution designs, as represented in the *Future Skill* Profile design-thinking competence.

Description: As a concrete methodological competence profile, the *Future Skill* design-thinking competence refers to the ability to develop concrete and creative solutions for organisations, processes or products that integrate stakeholders in the process and take their needs into account in a special way. In particular, this class of creative and innovation methods are summarised in the design-thinking profile. In addition to the concrete methodological skills, this *Future Skill* Profile is also concerned with promoting and shaping the organisational culture in *Future Organisations* in such a way that open-ended methods for core processes in the development and internal management of *Future Organisations* can be applied without leading to credibility crises.

¹⁶ Design Thinking Competence was not included in the Delphi Survey.

A 3.2.2 Future Skill Profile #11: Innovation competence



Definition: Innovation competence as a *Future Skill* profile includes the willingness to promote innovation as an integral part of any organizational object, topic and process and the ability to contribute to the organization as an innovation ecosystem. (mean: 4.3 of 5, standard deviation: 0.75)

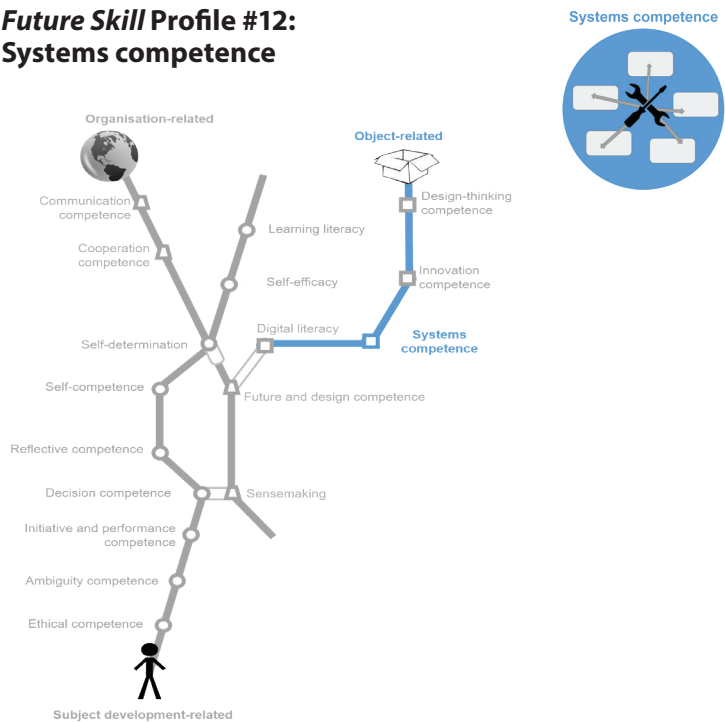
Reference Competences: creativity, innovative thinking, willingness to experiment

Significance: In *Future Organisations*, the disposition to an *experimental mindset*, *fail forward* and *error tolerance* is indispensable. Furthermore, it is important to understand *Future Organisations* as innovation ecosystems and to be able to promote innovation processes.

Description: *Future Organisations* are innovation ecosystems. Innovation helps to maintain and develop them. First and foremost, innovation competence means developing a comprehensive understanding of this and being open to the pro-

motion of innovation cultures. This profile comprises the ability to translate the contribution of innovation or innovation itself into sustainable value creation for the respective organisational context rather than methodological or operational competences to promote innovation.

A 3.2.3 Future Skill Profile #12:
Systems competence



Definition: Systems competence as a *Future Skill* is the ability to recognise and understand complex personal-psychological, social and technical (organisational) systems as well as their mutual influences and to be able to design and/or accompany coordinated planning and implementation processes for new initiatives in the system. (*mean value: 4.3 of 5, standard deviation: 0.73*)

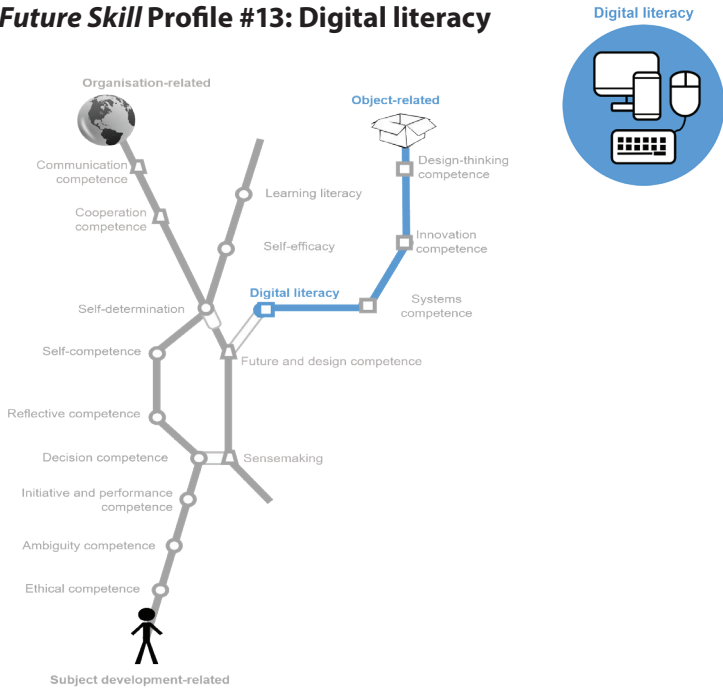
Reference competences: systems-thinking, knowledge about knowledge structures, navigation competence within knowledge structures, networked thinking, analytical competence, synergy creation, application competence, problem-solving, adaptability

Significance: For the work in *Future Organisations*, systems competence enables an understanding of the multipolar dependencies of personal-psychological, social and technical systems and is thus a prerequisite for the ability to shape *Future Organisations*.

Description: Themes, objects and processes of everyday work in *Future Organisations* are increasingly systemically interwoven with each other. Globalized, intercultural contexts, the increasing integration of technical and social systems, such as artificial intelligence, decision or performance support systems in professional and increasingly private contexts, require us to know the mutual dependencies of personal-psychological, social and technical systems, to understand them and to perceive them as designable. Systems competence also means recognising system boundaries and subsystems. Systems competence as a *Future Skill* entails the development of the understanding that systems are networked and integrated with each other, i.e. are connected with each other and influence each other to varying degrees (positively or negatively),

1. can only be recognised through a holistic approach, the focus having to be on the structure of the overall system while individual sub-areas are becoming blurred,
2. are becoming increasingly emergent and non-linear, with often only minor cause-and-effect relationships, and that deep comprehension and self-organisation skills become crucial.

A 3.2.4 Future Skill Profile #13: Digital literacy



Definition: Digital literacy is the ability and disposition to use digital media, to develop them in a productive and creative way, the capacity to critically reflect on its usage and the impact media have on society and work, both for private and professional contexts, as well as the understanding of the potentials and limits of digital media and their effects. (*mean value: 4.5 of 5, standard deviation: 0.80*)

Reference Competences: media literacy, information literacy

Significance: Digital literacy cannot be overestimated in terms of its importance as a *Future Skill*. Especially the critical-reflective aspect but also usage and creative design competences are of essential importance as *Future Skills*.

Description: Digital literacy includes media and information literacy. As a *Future Skill*, it refers above all to a) the knowledge of digital media and their (also social) modes of action, b) application competence, c) the competence to shape communication and cooperation with the help of digital media, and d) a critical attitude

towards one's own use, design, social significance, information quality of media, and e) their significance for one's own life and that of society as a whole, as well as f) the social mechanisms of action and power that digital media bring about.¹⁷

A 3.3 Competence Cluster III: Organisation-related competences

Respondents to the *NextSkills* Studies largely agree that the way organisations are organised in both the private and public spheres will be subject to radical and disruptive changes in the future. The drivers, symptoms and effects of this change have been described in other chapters in detail (see for example Chapter B 4 *Future Skills* for Future Organisations: An Analysis). One of the most far-reaching consequences of this development is a change from primarily hierarchical organisational forms to primarily flexible network structures (in working contexts but also in society, see e.g. the work of Manuel Castells on the networked society.) This change is often already largely developed in *Future Organisations*. There are completely new demands on the employees, which are described in the four following *Future Skills* Profiles contained in this third competence cluster.

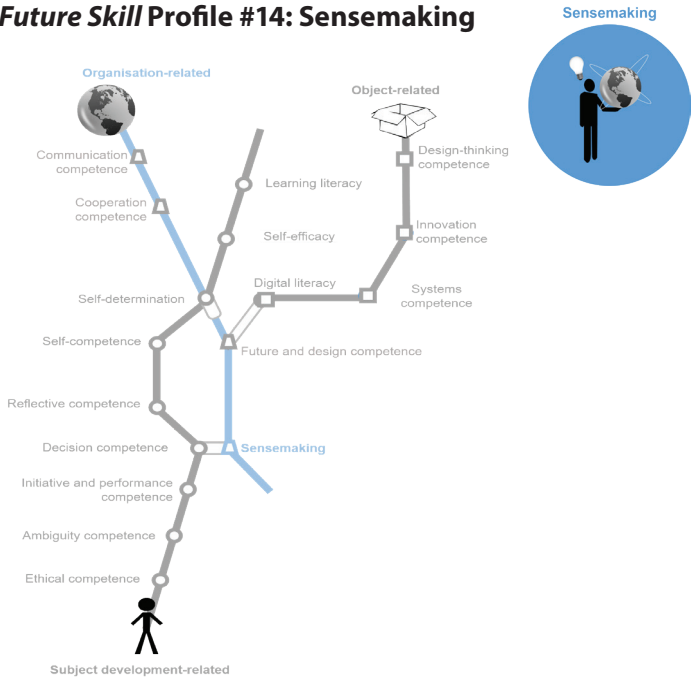
Competence Cluster III thus encompasses *Future Skills* Profiles that relate to dealing with the social, organisational and institutional environment. This includes skills such as creating meaning and value, the ability to shape the future, to cooperate with others and to be able to communicate, criticise and reach a consensus, also in intercultural contexts. In the interviews, the respondents particularly emphasised the unpredictability and uncertainty of conditions for action and thus the need to support sensemaking and build connections and meaning. The learning and development approaches necessary and practiced are primarily coming from the field of coaching and mentoring. In addition, the development of internal networks within organisations is being promoted.

Here, too, it should be noted that each of the 17 *Future Skill* Profiles cannot be clearly assigned to one of the three areas of the *Triple Helix-Model*, as if a particular action could be assembled from a three-box construction kit. Instead, we find interdependent areas and interrelated capabilities within the three areas of the *Triple Helix-Model*. They all aim to make a contribution to the capacity to act in highly

¹⁷ A comprehensive definition of digital literacy is presented in the framework concept “DigiComp”, which is the current concept at European Commission level (Carretero et al. 2017).

emergent contexts, each having different anchor or starting points, but successful action as a common goal.

A 3.3.1 Future Skill Profile #14: Sensemaking



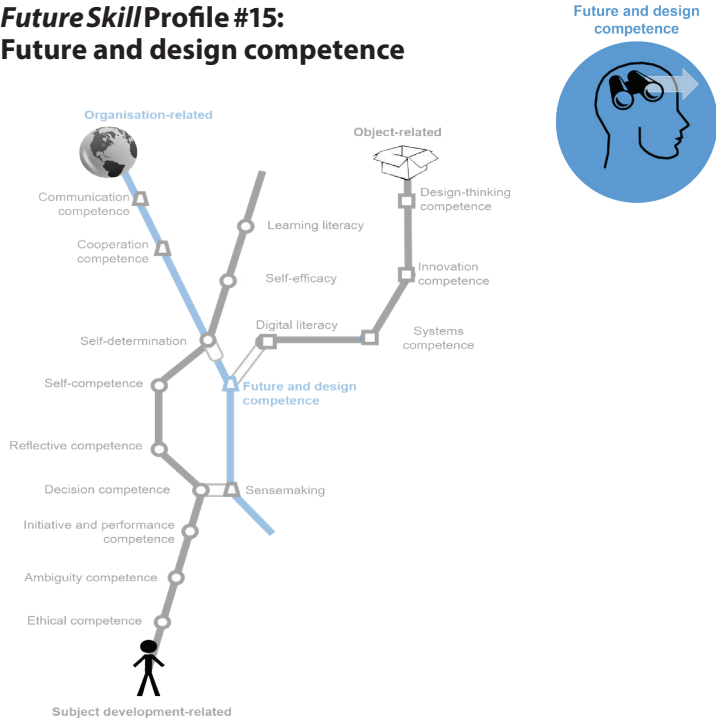
Definition: The Future Skill Profile Sensemaking comprises the willingness and ability to construct meaning and understanding from the rapidly changing structures of meaning within future work and life contexts, to further develop existing structures of meaning or to promote the creation of new ones where they have been lost. (*mean value: 4.0 of 5, standard deviation: 0.90*)

Reference competences: meaning creation, value orientation

Significance: Sensemaking is important in highly emergent action contexts, as it enables individuals to orient themselves when structures of meaning change rapidly and evolve.

Description: Sensemaking encompasses the creation of meaning and values. Every action and every decision is value-based – also in future agile, networked and unpredictable action contexts. The ability of individuals to realise sensemaking from within themselves is of greater importance in that the action situations diversify and no longer result in lasting constellations of meaning guaranteed from outside by the organisation. The value-bound nature of actions, decisions and interactions must therefore increasingly be assumed by employees in the respective organisational units. Sensemaking describes the process by which people classify the stream of experiences, which is absorbed inarticulately into meaningful units by the senses. Depending on the classification of the experience, a different sense and thus a different explanation for the recorded experiences can result. Sensemaking means especially the ability to recognise structures and values in different organisational contexts on the one hand and to structure experiences and perceptions productively and positively into meaningful meanings on the other hand.

A3.3.2 *FutureSkillProfile* #15: Future and design competence



Definition: Future and design competence is the ability to master the current situation with courage for the new, willingness to change and forward thinking. To develop situations into other, new and previously unknown visions of the future and to approach these creatively. (*mean value: 4.3 of 5, standard deviation: 0.81*)

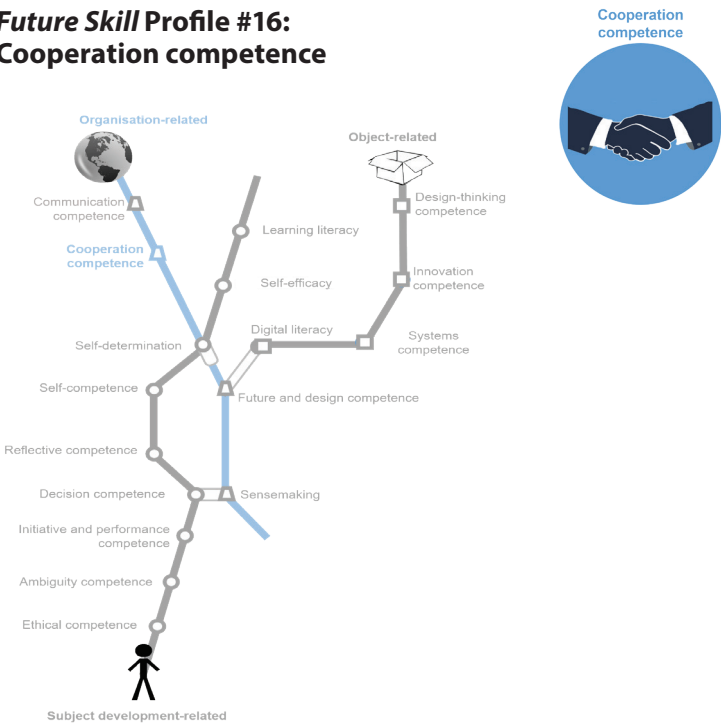
Reference Competences: willingness to change, ability to continuously improve, future mindset, courage for the unknown, readiness for development, ability to challenge oneself

Significance: Future and design competence is important in highly emergent contexts of action, as it allows individuals not only to react to changes, but to exert a proactive and formative influence, to understand changes as challenges and to approach them productively with the courage to embrace the new.

Description: Future and design competence means that individuals can envision alternative perspectives on the future, formulate them and take the first steps towards

their realisation/ creation, if desired. In particular, the competence to create enables to carry out a change of perspective and to move from a perspective of reaction into a perspective of action. The *Future Skill Profile* #15 contains competences such as willingness to change, ability to continuously improve, future mindset, courage for the unknown, readiness for development, ability to challenge oneself.

**A 3.3.3 Future Skill Profile #16:
Cooperation competence**



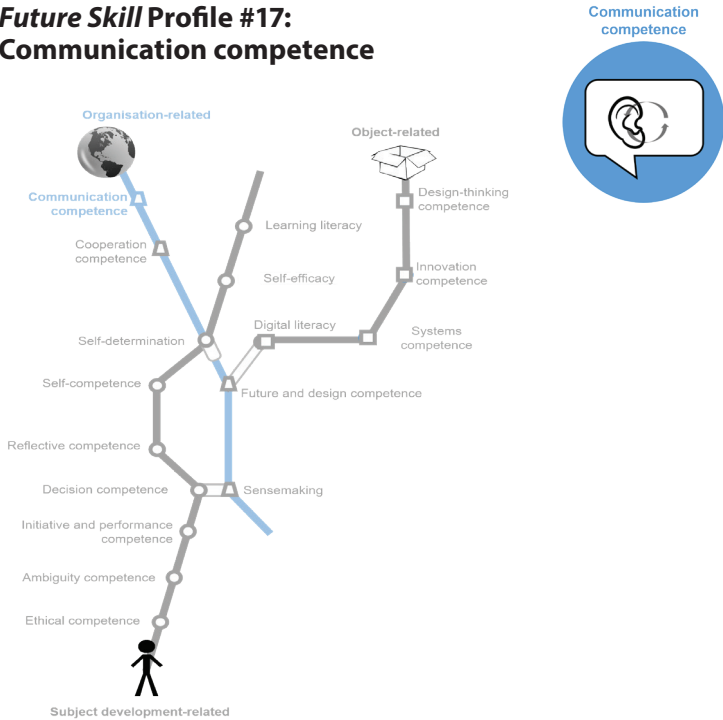
Definition: Cooperation competence as *Future Skills* relates to the is the ability and disposition to cooperate and collaborate in (intercultural) teams either in face-to-face or digitally-supported interactions within or between organisations with the purpose of transforming differences into commonalities. Social intelligence, team-working competences and consultation competence play a key role for this competence. (*mean value: 4.6 of 5, standard deviation: 0.67*)

Reference competences: social intelligence, team-working ability, leader as a coach, intercultural competence (organisational culture), consulting expertise

Significance: In networked, digital, global and highly emergent contexts of action, the ability to successfully collaborate with others within and outside one's own organisation, to build new networks as a *social artist* and to openly invite others to collaborate, both digitally and in physical presence, is essential.

Description: Cooperation competence includes competences such as social and emotional intelligence, team-working ability, the ability of leaders to act as coaches, intercultural competences which also include the different organisational cultures and consulting expertise. Thus, cooperation competence in the comprehensive sense is the ability to work together in teams, also interculturally (as well as inter-organisational-culturally) in direct interaction or by using media within or between organisations, to shape cooperation in such a way that existing differences can be transformed into commonalities. Social intelligence, team-working ability and consulting expertise play an important role in this.

A 3.3.4 Future Skill Profile #17: Communication competence



Definition: Communication competence as a *Future Skill* entails not only language skills, but also discourse, dialogue, and strategic communication aspects, which – taken together – serve the individual to communicate successfully and in accordance with the respective situation and context, in view and empathy of her/his own and others needs. (mean value: 4.6 of 5, standard deviation: 0.68)

Reference competences: language proficiency, presentation competence, capacity for dialogue, communication readiness, consensus orientation, openness towards criticism

Significance: In all interviews in the *NextSkills* Studies, experts from *Future Organisations* have repeatedly emphasised that the change from hierarchical to networked and from predefined to self-organised structures only works if organisational members are able to communicate in a needs-oriented, distinct and empathic way.

Description: Communication competence comprises competences such as language proficiency, presentation competence, capacity for dialogue, communication readiness, consensus orientation and openness towards criticism. In addition to language skills, communication competence also includes discursive and dialogic abilities, requiring the adoption of different positions in communicative cooperation while promoting acceptance and further development. The focus is on information purposes as well as strategic communication skills in order to be able to communicate successfully and appropriately in different contexts and situations. An important role also play self-reflection competences and empathy because a needs-oriented communication demands an awareness of one’s own position and needs and the competence to be empathic for others needs and feelings in communication situations.

Table 1 summarises the *Future Skills* Profiles, the corresponding reference competences and the descriptions of the competence clusters.