Operationalisation of Higher Education Teaching Performance (HETP) recognising and rewarding teaching as a part of science is enabled by Open Scholarship

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2. Higher Education Teaching Performance (HETP)

The second chapter looks at HETP from an educational science perspective and explores the question of good university teaching. To obtain a differentiated view of the issue, I approach the topic from three different angles. I examine HETP against the background of Humboldt's educational ideal (chapter 2.1), from a subject-education perspective according to Huisinga & Lisop (chapter 2.2), and from a systems theory perspective according to Luhmann (chapter 2.3). The following summary focuses on the results and discusses implementations for the qualitative operationalisation of HETP (chapter 2.4). The subsequent texts are extracts from a contribution to an edited volume. The extracts are taken verbatim. Changes have only been made to ensure readability in this context (Weimer, Alt & Hiebl 2024).

2.1. HETP according to the humboldtian educational ideal

Criticism that the RRS is limited exclusively to research is particularly evident in the light of Wilhelm von Humboldt's (1767 - 1835) understanding of universities and education. Humboldt is often accredited for demanding a so-called *unity of research and teaching*. Although this phrase is not found verbatim in Humboldt's literature, his work can nevertheless be interpreted in this way:

> *"The concept of higher scientific institutions, as the pinnacle in which everything that happens directly for the moral culture of the nation comes together, is based on the fact that they are intended to process science in the deepest and broadest sense of the word, and to provide it for use as a material of intellectual and moral education that is not intentionally but purposefully prepared by itself"* (Humboldt 2022, original around 1810(a), 152)[1]

Humboldt argues for the simultaneous location of "science" (or: research) and "intellectual and moral education" in the same "higher scientific institution" (or: university). The unity of research and teaching therefore does not mean that the two are identical but that both practices are carried out in the same place, in the same institution. Humboldt argues for an interplay between the two practices so that they mutually enrich and stimulate each other. Research should enter into teaching, refer to it. Likewise, teaching should refer to research and influence it. This argument can be justified by Humboldt's understanding of education.

At a time of progressive social differentiation and harsh cultural criticism (for example by Schiller) (Rieger-Ladich 2019, 48 - 49), Humboldt argued for a return to the individual as the central starting point for education and social transformation. He places the individual at the centre of his educational theory:

> *"At the centre of all special types of activity is the human being, who, without any intention directed towards anything in particular, only wants to strengthen and increase the forces of his nature, to give his being value and duration."* (Humboldt 2022, original around 1810(b), 6)

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[1] All quotes in chapter 2 were originally in German. They have been translated into English by the author for this publication.

Education therefore is an inner process (Humboldt 2022, original around 1810(b), 8). People are not educated but they educate themselves. This inner process is based on the mind, which has "manifold" (or multifaceted; differentiated) powers (Humboldt 2022, original around 1810(b), 8). However, the mind does not suffice so according to Humboldt's theory of education, a counterpart is needed against which the human being can educate themselves:

> "But since mere force needs an object on which it can exercise itself, and mere form, pure thought, needs a substance in which it can continue to develop, man also needs a world outside himself." (Humboldt 2022, original around 1810(b), 6)

In educational processes, people interact and people "impress their spirit's shape on the world and make both more similar" (Humboldt 2022, original around 1810(b), 8). According to Humboldt, education is therefore a resonance process in which the human being has an impact on the world and the world has an impact on the human being (Rieger-Ladich 2019, 51-52). According to Humboldt, this "linking of our ego with the world" (Humboldt 2022, original around 1810(b), 7) is at the core of the educational process.

If both university teaching and research are seen as educational processes for academics, then the demand for the unity of research and teaching can be explained by the principle of Humboldt's educational ideal. It seems sensible that students benefit from an external environment where research happens. They can interact with research and deal with the latest scientific findings. It is also logical that researchers and teachers enrich their research and educational processes when they present and discuss their content with young scientists. They are confronted with communicating complex content in an understandable and comprehensible way and this potentially resonates with critical questions or interesting thoughts.

Higher education in the sense of the Humboldtian educational ideal aims to develop the personality and (in the tradition of the Enlightenment) is geared towards the formation of self-determined individuals (Rieger-Ladich 2019, 50). In this individuality, people should become aware of themselves and of being "whole":

> "In order to escape the scattering and confusing multiplicity, one seeks allness; in order not to lose oneself in an empty and unfruitful way towards infinity, one forms a circle that can be easily overlooked at every point; in order to attach the idea of the ultimate purpose to every step that one advances, one seeks to transform scattered knowledge and action into a unified one, mere erudition into learned education, mere restless striving into wise activity" (Humboldt 2022, original around 1810(b), 9)

Regarding the question of what "wise activities" are in the humboldtian sense, reference should be made to Eduard Spranger. He closes his habilitation thesis "Wilhelm von Humboldt und die Humanitätsidee" by stating:

> "Of course, no teaching can create individuality and a sense of form (totality). But it can stifle them if it works against them. That is why the demands on every form of school today are: "Strengthening and protecting individuality. Contact with and training in reality." Inner form and unity of the educational ideal: humanity!" (Spranger 1936, 500)

The concept of individuality means the centralization of the human being and the sense of form/totality means going beyond oneself. According to Spranger, these two aspects are essential in the Humboldtian sense of education but not sufficient. Only the idea of humanity completes the understanding of education and is therefore also part of higher education. This idea of humanity means supplementing self-improvement with "social ethics" or "practical love of humanity" (Spranger 1936, 16).

If the idea of humanity is to be incorporated into university teaching, then the question arises as to what circumstances are needed for this to succeed. In this regard, Humboldt primarily emphasized the freedom of those being educated: "Freedom is the first and indispensable condition for this education" (Humboldt 2022, original around 1810(c), 76). Only when people are free from external constraints can they develop in a self-determined way, can their intellectual powers contribute to the development of their personality and develop humanity. Humanity is therefore inherent in human beings. What the development of this looks like in concrete terms is up to the individual: "One person would ponder and collect for himself, another would associate with men of the same age, a third would gather a circle of disciples." (Humboldt 2022, original around 1810(a), 153). This argument therefore refers to the students' personal circumstances. Anyone who worries about their income, for example, or is burdened by caring for relatives or loved ones, will not be mentally free to educate themselves according to the Humboldtian ideal. However, the idea of freedom also applies to the university. Humboldt makes it very clear that the state must keep out of the organization of a university that represents the Humboldtian ideal of education: "Public education therefore seems [...] to lie entirely outside the bounds within which the state maintains its effectiveness." (Humboldt 2022, original around 1810(d), 104). This, too, addresses a form of freedom when the space of higher education is not politically directed, but can work exclusively as an interplay of research and teaching. Political influence can also appear in external funding or the subsidization of special research projects. If universities are required to be completely independent of the state, then funding can only be provided via institutional funds and project-supported research funds are unavailable. The state's only controlling task is to ensure that schools prepare young adults for universities. Humboldt therefore did not deny the state any influence on schooling. Humboldt sees the state as being responsible for curricula and organizational issues (Humboldt 2022, original around 1810(a), 158).

Finally, regarding Humboldtian university teaching, the relationship between teacher and learner should be addressed. Humboldt emphasizes that science should be treated as "a problem that has not yet been fully resolved" (Humboldt 2022, original around 1810(a), 153) and must be taught as such. As a result, a different teacher-learner relationship is appropriate in a university context compared to a school context. At school, the teacher imparts knowledge to students and creates a space for education. At university, teaching is not offered as a service. Rather, teachers and students collaborate to create a space for educational processes. In addition to the option of personal development, it should also be said: "Both are there for science" (Humboldt 2022, original around 1810(a), 153).

2.2.   HETP from a subject-education perspective

Some of Humboldt's educational ideas are shared and further developed by emancipatory educational science (German: Emanzipatorische Erziehungswissenschaft) and the associated theory of subject formation (German: Subjektbildungstheorie). In particular, the interaction of the educated person with the world is similar in both educational theories. In this regard, Humboldt mentions the individual's mind as being linked to the other person (Humboldt 2022, original around 1810(d), 8). Emancipatory educational science argues that the subject (the learner) is in a reciprocal relationship with the world (subject-object dialectic) (Lisop & Huisinga 2004, 103).

Both schools of thought should be seen in their different cultural and historical contexts. The end of the 18th and beginning of the 19th century was characterized by progressive social differentiation, the constant demand for increased performance and the associated disintegration of the individual (Rieger-Ladich 2019, 48 - 49), prompting Humboldt to call for a return to the human being as the

starting point for all activities (Humboldt 2022, original around 1810(d), 6). Emancipatory educational science, which emerged in the 1970s, reacted to the pedagogical "Wesensschau" (Roth 1963, 112) pursued in the humanities, which had done nothing to counter German fascism and the Holocaust and allowed them to continue. It is based on a social critique of ideology, appeals to individual and collective potential for maturity in pursuit of democratic and humanist goals and thus adds an emancipatory dimension to Humboldt's educational ideal. Education should not be functional but should liberate from political and economic appropriation (Mollenhauer 1977, 27).

Lisop & Huisinga (2004) develop a theory of subject formation with "Arbeitsorientierte Exemplarik", which is meant to meet this requirement. They argue that people encounter their environment through work, change it and are changed by it. Lisop & Huisinga draw on a broad anthropological concept of work with a trinary character (gainful employment, reproductive work and public work) and thus include all conscious activity in all areas of life in the concept of work (Lisop & Huisinga 2004, 20). The individual, who is thus constituted as a subject, is accordingly part of society and is also shaped by it (Lisop & Huisinga 2004, 138-139). Through the subject-object dialectic and the objectification of the individual lifeworld, one's own individuality is developed by means of the ability to work and cognize (Lisop & Huisinga 2004, 138). Accordingly, the subject is constituted through "knowledge and ability, reflexivity and work, with which people can transcend the status of being an object, of merely functioning" (Lisop & Huisinga 2004, 103). The authors thus differentiate the concept of the individual from the subject. The former is seen as a transgression, based on the anthropological developmental capacity of humans, in accordance with their species. Consequently, development is aimed at unfolding as a social, creative human being. This higher value within the development process is characterized by autonomy, activity, and reflexivity of one's own history and environment, as well as the related conscious shaping and autonomous unfolding. The development of the subject is also always individual as well as shaped by the lifeworld. Ultimately, the subject's consciousness relates both to the development of self and to its inner conceptions of society and genus (Lisop & Huisinga 2004, 138). The subject can establish connections of meaning between sub-areas and the social whole in order to generate autonomous and discursive solutions to problems and conflicts. In this context, the subject faces certain ambiguities and polarities which, due to the environment and psychological experience, cannot always be overcome by means of the ability to act, decide and evaluate. In this respect, the subject tends to be enlightened, tends to have scientific awareness and also tends to have a moral world view (Lisop & Huisinga 2004, 102-103).

Based on the described process of subject formation, the authors view their emancipatory understanding of education as conveying value patterns for shaping life and society as well as for the development of the personality (Lisop & Huisinga 2004, 106) by means of self-competence, professional competence and social competence according to Heinrich Roth:

- o *Self-competence* (German: Selbstkompetenz), also described by Roth as value insight and ego-competence (Roth 1971, 448), is aimed at self-determination and moral maturity. This refers to the ability to act responsibly for oneself (Roth 1971, 17, 180). It is therefore crucial to develop values and norms in the individual and in society in order to enable the individual to solve moral tasks. Moral maturity as the ability to act is only possible if the individual has factual and social competence (Roth 1971, 389, 405, 589).
- o *Professional competence* (German: Sachkompetenz) encompasses intellectual curiosity (Roth 1971, 456) as the ability to set goals, to use them to build knowledge about the world through thoughtful inner action, anticipation of the action plan and linguistic articulation as experiences of reality (Roth 1971, 459-460). In factual areas, critical thinking requires that the reference to reality is not lost but is nevertheless creatively transcended. Critical thinking is therefore linked to creative thinking, going beyond existing conditions (creative thinking:

creativity, imagination, ideas, intuition, invention and discovery) (Roth 1971, 465-467, 470). The factual insight also leads to the learning of distanced behavior towards the world (Roth 1971, 432).

- o *Social competence* (German: Sozialkompetenz) equates social maturity. This means being able to judge and act in socially and politically relevant areas (Roth 1971, 17, 180).

Lisop & Huisinga see this subject formation as enabling the "holistic development and unfolding" of human potential with reference to the following threefold principles of education (Lisop & Huisinga 2004, 107):

- Historical education: cause and effect relationships as well as causal relationships and the ability to think in terms of consequences
- Technical education: Knowledge and skills for manufacturing efficiency and functionality in all areas of life
- Aesthetic education: evaluative shaping of work, both product-related and in relation to events

In summary, the challenge in educational processes is to access critical analysis of social existence from the conditions of subject constitution, with a particular focus on the resources of autonomous self-realization. This adheres to the subject's reflexivity on the understanding of a possibly linear or intermediate level of reflection insofar as one's own thinking must become clear about preconditions and their historical and cultural roots. Such self-reflection on one's own presuppositions does not per se provide insight into the history of the genre. Rather, the concrete determinations of one's own thinking, acting and evaluating require the above-mentioned understanding of education to open and clarify certain experiences in which socio-cultural implication contexts are incorporated. Such an implication-theoretical view cannot therefore stop at a mere collection of knowledge. The educational effort aims to penetrate the surface of the factual material, to break down the immediacy of current social problem contexts in a subject-oriented way in order to unfold imminent context. The authors pursue this intention when they understand education as an implication (Lisop & Huisinga 2004, 98) as a structure of mutual inclusion; by placing a subject matter in an overall context, by finding all thematic interrelationships (Lisop & Huisinga 2004, 97). In this way, teaching is not aimed at the learning material or the learning process itself but at subject formation (Lisop & Huisinga 2004, 74). Using exemplarity as a guiding didactic principle, they provide guidance on how learning objects can be selected and prepared given complexity and high psycho-social and cognitive integration requirements (Lisop & Huisinga 2004, 17, 19). The starting point for exemplary education is a concise point (object, complex, concept or law) from which meaning structures, manifestations, parts and whole, individual and social, general and can be developed in a knowledge-oriented way. Learning objectives develop their formative effect when they belong to the whole in a meaning-oriented way (Lisop & Huisinga 2004, 433-434). The wholeness of the social constitutional logic (Lisop & Huisinga 2004, 93-96) results from the structuring of individual parts in relation to each other so that learners can develop the pattern of the whole from the parts (Lisop & Huisinga 2004, 433). To this end, Lisop & Huisinga develop three implication contexts:

According to Blankertz, the **Didactic Implication Context** (German: Didaktischer Implikationszusammenhang (DIZ)) clarifies the central question of the meaning of the acquisition of knowledge, skills and attitudes for life and the social utilization context (interdependence between goal, content and method) (Lisop & Huisinga 2004, 163). This decision in terms of content and method is important:

> *"The methodological structuring of teaching always has to unite the individual-subjective (anthropogenic) prerequisites of the pupils with the objective factual claim (which in turn*

has socio-cultural conditions), regardless of all other differences in procedures. For our purposes, we will call this the methodological guiding question" (Blankertz 1977, 99)

The guiding question cannot then be imposed in the form of a recipe (Lisop & Huisinga 2004, 9), rather it requires the frame of reference of the individual implication contexts (see DIZ, PIZ, GIZ below) as perception, interpretation and decision-making (Lisop & Huisinga 2004, 73-74). In this respect, imparting does not mean ""teaching" but rather linking, connecting and integrating" (Lisop & Huisinga 2004, 79) by the teaching staff. The medium is the tool through which the teaching takes place methodically (Lisop & Huisinga 2004, 52), without the modulation of the material in the context of the learners' goals and level of development being ignored. The contexts of implication thus prevent a reduction to methodological arrangements" (Lisop & Huisinga 2004, 55, 254-255). In short, no distinction is made between methodological and media issues:

> *"We regard didactics [...] as the professional core of pedagogical activity, which has to relate objectives, objects of learning or knowledge, methods and framework conditions, developmental stage and interests of the learners as well as social concerns to each other" (Lisop & Huisinga 2004, 431).*

The **Psychodynamic Implication Context** (German: Psychdynamischer Implikationszusammenhang (PIZ)) centers the constitution of the subject from the somato-psychic-social mediation of the individual and the social. This means that on the subject side, life forces and needs are at work, which are differentiated according to two movements - the somato-psychic and the psycho-social side - to create meaning and identity through the satisfaction of these life needs and the expression of the life forces. The PIZ is a model of basic human orientation in the socialization process in order to counteract motivational problems, attachment issues and learning resistance (Lisop & Huisinga 2004, 178-182).

The **Social Implication Context** (German: Gesellschaftlicher Implikationszusammenhang (GIZ)) solves the question of the subjectively effective experiences, norms and values of the contextualized social pre-understanding. In this respect, learning content must be prepared with reference to society and milieu. The GIZ provides an analytical and decision-making framework for structuring the material:

1. orientation in the subject or in the field of forms of production (categories such as understanding, moving and coping with the world)
2. the objectives in terms of the skills and competences to be developed
3. socialization and psychodynamics - subject reference (prior knowledge, experience)
4. correlation and condensation (is there something that explains and characterizes the social constitution in an exemplary sense?) (Lisop & Huisinga 2004, 208-215).

In summary, the authors present a competence-oriented relevance framework for deciding on and differentiating objectives, content and methods to address human behavior, relationships, values and the need for action in society from a socio-psychological, individual-psychological and economic perspective in educational processes. Lisop & Huisinga consider that learning is not exclusively a cognitive process, and that emotional and affective processes need to be dealt with in an educationally oriented manner, precisely because of the social conflicts and resulting contradictions. In this respect from an emancipatory perspective, this is a subject-oriented contribution to pedagogical professionalism which addresses higher education (Lisop & Huisinga 2004, 15), to make the social context of action at the intersection of science and practice the subject of critical (self-) reflection. This is a contribution to individual and social development, qualification and professionalization.

2.3.   HETP from a systems theory perspective

By taking a systemic approach, a more descriptive and less normatively charged perspective on higher education teaching is presented. Niklas Luhmann (1927 - 1998) saw science as a functional system with education as a part. To make this (and other functional systems) describable, Luhmann uses codes in his systems theory, i.e. binary schemes that are used in functionally differentiated systems to process and organize information. They serve to orient and structure communication within a system. The scientific system uses the true/untrue code to evaluate information and make decisions. Programs are complex sets of rules or criteria used in systems to determine how codes are applied. They provide more detailed guidance for decision-making within a system, often being customised to its specific conditions and goals. In the scientific system, theories and methods are examples of programs that make information assessable according to the code true/false (Luhmann 1998).

In addition to the academic system, higher education can also be seen as part of the education function system. The functional system of education contributes to the stabilization of social structures by conveying and maintaining norms and values. Socialization is the fundamental process through which people learn and adapt to the norms, values, behaviours and culture of their society. "While socialization is always self-socialization on the occasion of social communication, education is the communicative event itself because this is the only way to understand its unity." (Luhmann 2009(a), 188).

When describing university teaching as part of the social functional system of education, it is necessary to ask about the medium through which the system operates, which forms this medium can take, within which codes and with which programs the system operates.

In Luhmann's theory, a medium enables malleability. It is a loose but stabilizing structure that facilitates the formation of forms. A medium consists of a multitude of elements that exist in a kind of potential state and can be structured by forms. For example, language is a medium that enables various forms of communication. In the economic system, the medium is money, which also enables communication in terms of payments. A form is a specific structure that arises within a medium. It is shaped by selection from possibilities of the medium. Forms are the concretized states within a medium that carry a certain information or meaning. In the example of language, a specific word or sentence would be a form.

In the educational system, the medium is the child who, according to modern educational theory, is "equipped" with knowledge and skills for life in society (Luhmann 2008, 195). The child is an observer's construct (Luhmann 2008, 199). Just as media are malleable, the child as a medium of education is also malleable. "Knowledge, seen in this way, is the contraction of the medium to certain firmly coupled forms, and the children to be educated can (or at least should learn to) deal with it " (Luhmann 2008, 206). The medium/form scheme for this is therefore child/knowledge.

In order not to "consume" the medium of the child through its formal education, the concept of education is replaced by the formula of learning ability. "The learning ability formula postulates a principle of the selection of forms of knowledge that is oriented towards the learning opportunities they convey. And learning possibilities means that new yet undetermined coupling possibilities are generated. [...] The medium remains bound to the distinction between children and adults, but it can supplement the term 'child' with others (pupils, students or finally: learners)." (Luhmann 2008, 210)

The "imposition of forms in a medium" is always selective. It takes up specific possibilities and by favouring them leads to other possibilities being ignored. In view of the openness of the medium

(child), all learning simultaneously implies corresponding learning restrictions (Luhmann 2008, 208). True knowledge is taught and learned in the classroom. This results in a relevance of truth that corresponds to the code of truth of the scientific system (Luhmann 2008, 207).

Luhmann (2008, 211; 2009(a), 197) finds it somewhat difficult to code the medium of the child in binary terms, as the coding into good/bad children, passed/failed exams etc. is carried out for reasons of selection and not for reasons of education. To carry out this coding, the educational system must educate non-trivial systems (children) as trivial systems (Luhmann 2009(b), 204). Non-trivial and trivial systems differ in that trivial systems qua programming produce an expected (always the same) output for a given input: 2+2=4. Children as non-trivial systems "form" a "self", which in turn influences the programming.

If we now understand students as the medium of university teaching, we must realize that the trivialization of students has reached a new quality since the Bologna reform latest. In the Humboldtian sense, the university is caught between organization and freedom. Everything that cannot be regulated by organization can remain in a sphere of freedom. Luhmann understands freedom as a medium and organization as a form. However, Luhmann (2009(c), 214) argued in the 1980s that this distinction had become obsolete, distinguishing three trends in particular that are undermining the traditional self-image of universities:

(1) Function of prestige multiplication: "Education participates in the prestige of scientific research, while this research owes its social prestige not least to the fact that it is conducted by academics." (Luhmann 2009(d), 218)
(2) Deinstitutionalization of life courses: "This means that individual prospects are no longer based on predetermined conditions of normalcy and can no longer even deviate from them. The relatively rigid order of proper time in relation to education, contact with the opposite sex, marriage, having children, career choice, professional career and age has been significantly loosened." (Luhmann 2009(d), 218)
(3) Decreasing usability of education in interactions: "To put it more concretely, education is about presenting the fruits of reading in interactions among those present." (Luhmann 2009(d), 219)

Luhmann's systems theory gives us a new perspective on the topic of university teaching compared to what we have experienced from Humboldt and subject formation theory. If university teaching is viewed systemically and students are understood as the medium of university processes, then this opens a different perspective on the RRS of academia.

2.4. Summary and qualitative operationalisation

We can approach a critique of a research-focused RRS at universities in the context of Wilhelm von Humboldt's understanding of education. Humboldt emphasizes the importance of integrating science and intellectual and moral education in an educational institution. He argues for an interplay between research and teaching, whereby both should enrich each other. He places the individual at the center of his educational theory and sees education as an internal process in which people educate themselves. Education occurs in interaction with the world, whereby people and their environment influence each other. He sees university teaching and research as educational processes that enrich students and researchers alike, whereby both serve science, and the teachers are not exclusively imparting knowledge (chapter 2.1).

The theory of subject education adopts a critical perspective in pedagogy, emphasizing the need for a systematic testing of socio-historical conditions and striving to promote individual and collective maturity as well as democratic and humanist objectives. Education should not happen in a pre-social and apolitical space but include political, economic and ideological factors. Regarding university teaching, Humboldt emphasizes the importance of personality development and the formation of self-determined individuals, arguing for an education aimed at humanity and supplemented by social ethics. Critical educational theory goes beyond the ideal of the education of individuality as a process of self-education and integrates the idea that the individual is absorbed into the generic being. Education is a process that is embedded in historical contradictions and contributes to the memory of a liberated humanity. In the context of higher education, this perspective focuses on linking education, science and social practice and emphasizes science´s critical function. Higher education should not only serve current purposes but should also be able to reflect on these purposes. In summary, subject education theory aims to liberate education and training from political and economic appropriation and instead use them as a means of changing society and developing maturity, emancipation and autonomy. Central to this is the idea that good higher education and professionalism arise from a twofold problem: On the one hand, the (historically) truthful recording of social reality and on the other, the preservation of reference to normative value systems, particularly the emancipation of the subject (chapter 2.2).

Regarding a qualitative operationalisation of HETP, a good argument can be made based on the humboldtian educational ideal and the subject education perspective. If the humboldtian educational ideal or the education of emancipated subjects is set as the goal of higher education processes, then quantitative indicators can only reflect the fulfilment of this achievement to a very limited extent. In this logic, more substantive aspects should be examined. For example, the application process should establish whether empirical knowledge and scientific knowledge are interlinked in the teaching material (in the sense of theory-practice coupling). The learning content should ideally have a connection to the students' world so that they can reflect on themselves in the learning processes. There should be the opportunity to promote personality development within the framework of university seminars and to critically question one's own values and norms in relation to society. For this purpose, there should be discourse among students but also with the teacher.

If university teaching is to be considered qualitatively in the RRS, then the following questions can be addressed:

- Are personal, technical and social skills developed during teaching?
- Is the teaching well prepared didactically? (see *Didactic Implication Context*; chapter 2.2)
- Does the teaching serve to promote personality development?
- Do the learners have the opportunity to develop and reflect on values and norms?
- Is the holistic context of the learning objective and the learning material clear?
- Is the teaching geared to the learners' needs and environment? (see *Psychodynamic Implication Context*; chapter 2.2)
- Is the teaching socially relevant? (see *Social Implication Context*; chapter 2.2)

Questions like these can be answered qualitatively. Colleagues from the same discipline could review teaching performance and thus provide a more comprehensive insight into the teaching performance of a person or institution (equivalent to peer review in the research area).

Building on Luhmann's systems theory, it can further be argued why quantitative approaches are useful to operationalise HETP. Systems theory, which tends to abandon the individual level in favour of the societal level, shows how this contradiction between individual-normative educational demands must give way to a system logic of complexity reduction to maintain the structural coupling

between the individual functional systems as well as the communication within a functional system. If we imagine that in an application process two people had to be assessed with all their facets from birth to the present day, a decision could not be made. Moreover, key figures relieve us morally so that we do not have to justify the choice with an assessment of a personality, of their self, but can refer to this "objective" measure. This makes decisions justifiable and attributable (chapter 2.3). Following Luhmann's systems-theoretical argument, the academic RRS could be described as a trivial system. A binary coding of this system follows the pattern service provided/service not provided (or: teaching material published/teaching material not published). Based on this argument, quantitative operationalisation's of HETP make a lot of sense. I will discuss these in the following.