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Research paper

Research on quality criteria in didactics and pedagogy

Partner 2- University of Paderborn

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Quality and Equity are key challenges in OECD countries and since the last PISA study from the year 2012 in our focus. The aim is to increase the quality of education and to focus on the learners needs.

The figure 1 shows the results of the PISA survey from the year 2012: Differences in performance among young adults and among 15-year- olds. It shows the different scores in mathematics and reading comprehensives.[1]
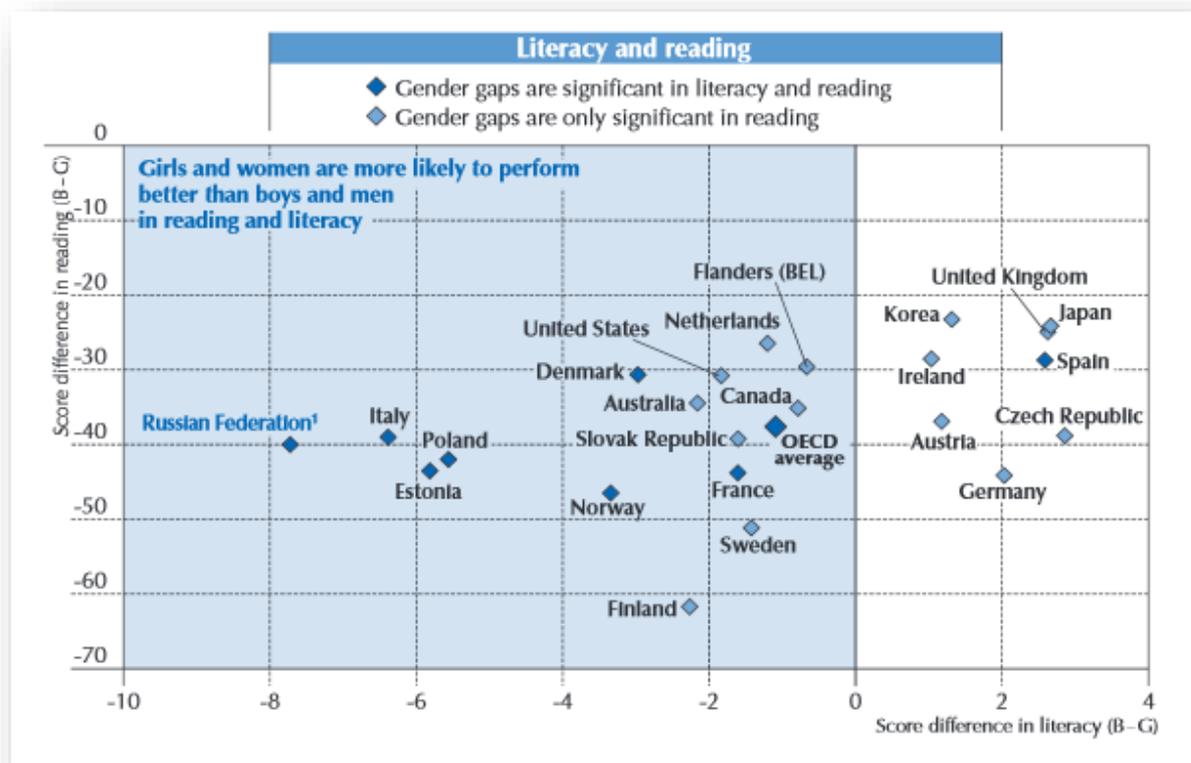
Source: OECD, PISA 2009, PISA 2012 and PIAAC Databases.
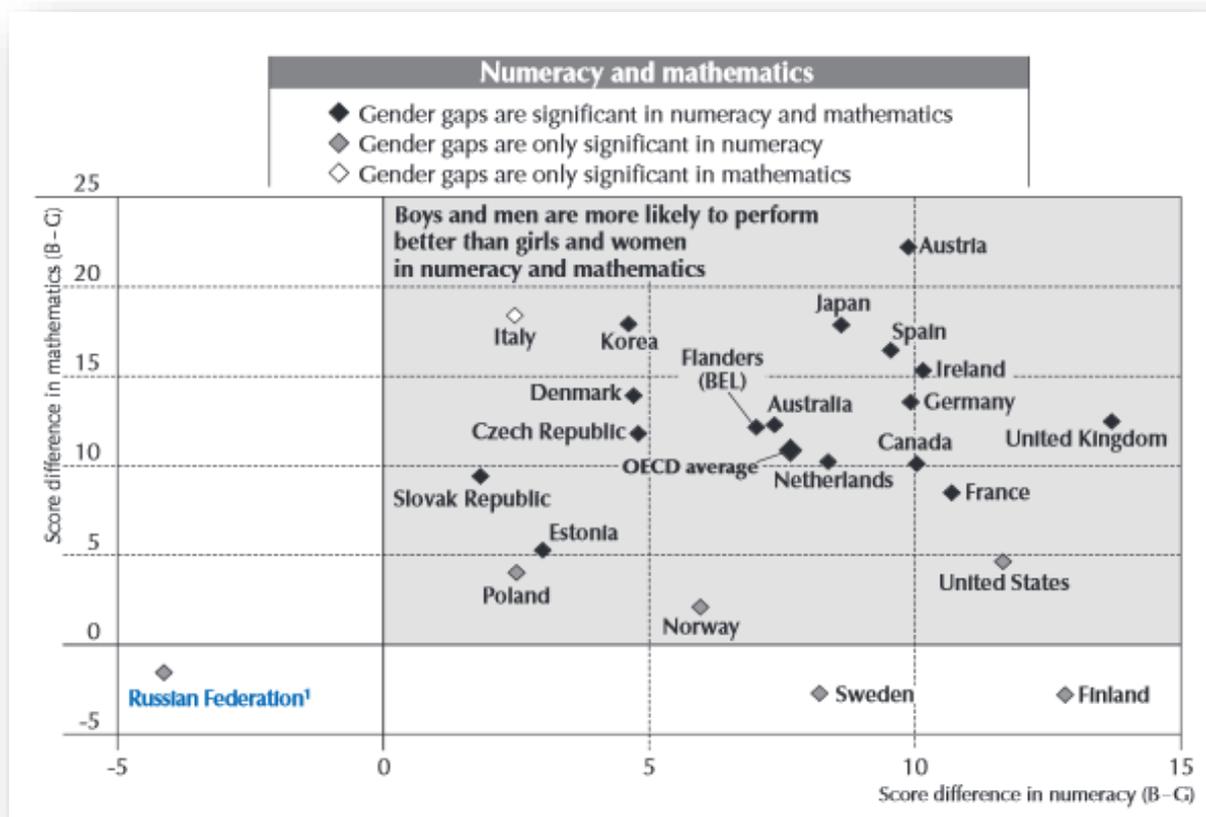
Source: OECD, PISA 2009, PISA 2012 and PIAAC Databases.

Equity in education can be defined in many different ways, the OECD sees this through two different dimensions: fairness and inclusion.[2] Fairness implies that personal or socio-economic circumstances, such as gender, ethnic origin or family background are not obstacles to educational success, while equity as inclusion means ensuring that all students reach at least a basic minimum level of skills, like reading-, writing, and counting compresences.[3]

UNICEF write in the year 2000:

"Children have a right to an education, a quality education."[4]

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[2] OECD (2012), Equity and Quality in Education: Supporting Disadvantaged Students and Schools, OECD Publishing, p. 18- 21. http://dx.doi.org/10.1787/9789264130852-en
[3] IBIT.
[4] UNICEF (2000): A paper presented by UNICEF at the meeting of- The International Working Group on Education Florence, Italy June 2000, p. 3- 5. http://www.unicef.org/education/files/QualityEducation.PDF.

They defines education as a complex system embedded in a political, cultural and economic context, which aims influence each other in ways that are sometimes unforeseeable.[5]

The defined quality education like follows:

"**Quality education includes**:

- Learners who are healthy, well-nourished and ready to participate and learn, and supported in learning by their families and communities;

- Environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities;

- Content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention and peace.

- Processes through which trained teachers use child- centred teaching approaches in well-managed classrooms and schools and skillful assessment to facilitate learning and reduce disparities.

- Outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society."[6]

This definition becomes obvious, that educational quality cannot just consider on one indicator of education but rather it should be focus in the complex system of teaching, pedagogic and education at all. There comes in the quality management system for education. The function of quality management to give "trust of quality" to outside "stakeholders" is what is understood under quality assurance.

Following the results of the PISA study (2001) that shocked the German politicians, educators, teachers and educational sientistics alike, the leading repesentatives of empirical education research – German Bildungsforschung- initiated a state funded program aiming at

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[5] IBIT.

[6] UNICEF (2000): A paper presented by UNICEF at the meeting of- The International Working Group on Education Florence, Italy June 2000, p. 4.
http://www.unicef.org/education/files/QualityEducation.PDF.

the definition of educational standards and competences levels for their assessment and criticized
the leading representatives of German general didactics for their neglect of empirical research. Meyer, Prenzel and Hellenkamps (2008) and Terhart (2009) gives a short description of the prevailing trends in the field of didactics in Germany, today and describes traditional determination of themes in general didactics:
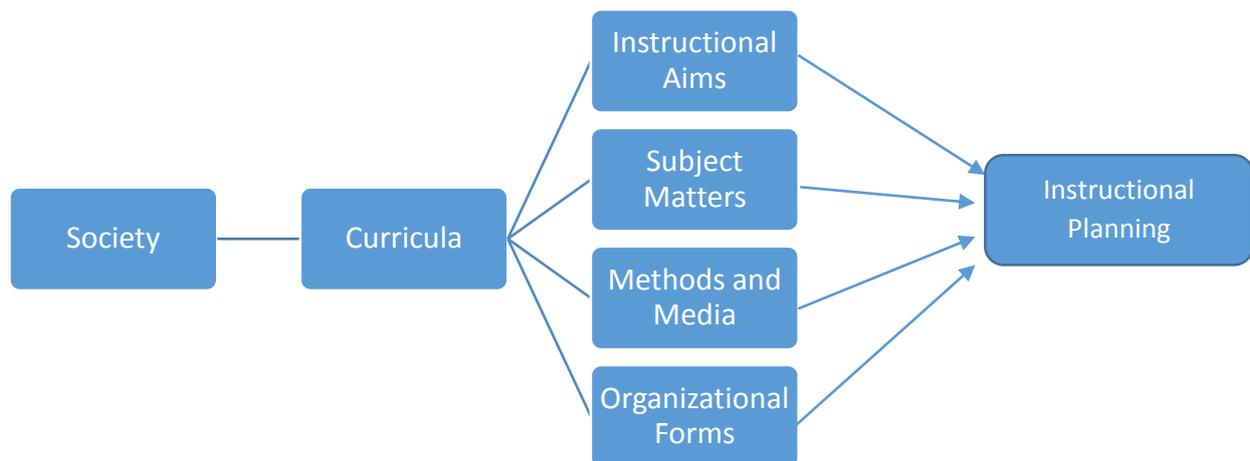
In this scheme, educational standards have to be understood as a modern version of curricula.[7] Moreover, the traditional German didactic is often related to Wolfgang Klafki´s scheme of lesson planning- German Perspektivenschema der Unterrichtsplanung- Wolfgang Schulz´s Model of lesson planning- German Unterrichtsplanung- and Hilbert Meyer´s action- oriented didactics- German Handlungsorientierter Unterricht. Hilbert Meyer (2010) have a very critical view on the didactical quality criteria. He developed 12 rules and statements for quality criteria rules which caused from an interplay of the state of research on instructional planning and teacher- student interaction which has been empirically gathered in a Hamburg University PhD Gratuated School and around it:

"(1) We should deal with both teachers' *and* students' *developmental tasks*. (…).

(2) Students and teachers are mutually required to balance out their commitment to *developmental tasks* and their commitment to *general education* ('Allgemeinbildung'). (..).

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(3) Teachers should accept that the ***future is uncertain*** and draw their conclusion from this (cf. Meyer, 2003). They have to teach ***as if they knew*** what the students need for life; but they can only ***hope*** that the teaching aims are acceptable, that the contents they teach is actually meaningful, understandable and acceptable for students, and that their methodology is a help for learning.

(4) We have to accept that, in a way, teachers can only *demonstrate* what is to be learned while learners' progress comes self-directed. This approach results in an ***as-if-didactics***. We have to teach ***as if*** there was a stable bridge from teaching to learning. That is why teachers should accept the necessity of practicing open planning, which would allow students to cooperate with them, as stated by Klingberg (1987).

(5) This, in turn, justifies a view on ***didactics as the art of teaching*** ('*Lehrkunstdidaktik'*) (cf. Berg/Schulze, 1998; Berg/Klafki, 2001). In political instruction, Andreas Petrik, Stefan Hahn et al. (2007) have shown, in their project on a 'village foundation', that the 'objective' curricular demands and students''subjective' experience can be harmonized to some extent, against Hagen Kordes' view cited above, in open curricular settings.

(6) We have to accept ***competence orientation:*** Introducing competence-oriented instruction and exploring competence levels is a must, as far as I am concerned. The reform has to be domainspecific: Interlanguages, learner literature, learner mathematics, learner physics, levels of historical consciousness, levels of intercultural competence etc. should be the starting point for instructional planning (cf. Meyer-Hamme, 2009; Klieme et al., 2003; Prenzel/ Gogolin/ Krüger, 2007).

(7) Focusing on the ***zones of proximal development*** is a promising approach for lesson planning (Wigotski [= Vygotskij], 1934/2003, pp. 298 ff.; cf. Gedaschko, forthcoming) because, as stated above, students usually possess considerable ***didactic competence***. Making use of this resource is a very important element of our didactics of learner development and educational experience. Students' ***participation*** in instructional settings is based on their current didactic competence and its development; it is not restricted to their current and developing subject matter competence.

(8) The way students are able to contribute to instruction and teachers are able to include them is directly related to the objective of ***self-regulated learning*** (cf. Boekaerts et al., 2000; Merziger, 2006) and to ***self-determination*** in learning processes (cf. Klafki 1985/1991; Deci and Ryan, 2002; Lechte,2008). The tense relationship of teacher guidance within the developmental zones on the one hand,and self-regulation/ self-determination on the other hand, makes student participation a central task in the development of teaching methods.

(9) Instruction has to enable students to ***experience authenticity*** (Hericks, 1998; Meyer/Kunze/ Trautmann, 2007), (…). This means it is desirable for teachers to be receptive to instances of authenticity in the classroom. But they should know that authentic learning occurs, it cannot be planned by the teacher.

(10) The interest in authenticity is linked to the necessity to take students' ***everyday fantasies***, which they contribute to the instructional process, into consideration. There is evidence of the fantasies' positive effect on biology instruction (Gebauer/Gebhard, 2005; Born, 2006; Monetha, 2008). There is no reason to assume that this should be any different in other domains and other subjects of study.

(11) It should be obvious that great importance is attached to ***consulting students*** and to students' ***feedback*** to teachers in didactics for learner development and educational experience (cf. Bastian/Combe/ Langer, 2003; Flutter and Rudduck, 2004; Thomson and Gunter, 2006; Rudduck and McIntyre, 2007). Consulting pupils needs to become a matter of course whenever we deal with instructional planning.

(12) The last and most important quality criterion for classroom interaction focuses on the importance of ***sense-making*** ('Sinnkonstruktion') for instructional planning and teacher-student interaction. From the perspective of research on learner development and educational experience, organizing the teacher-student interaction according to teaching aims is not enough. Instruction has to be linked to the students' sense making, because it supersedes the teachers' intentions."[8]

To summaries Hilbert Meyer´s ideas of quality criteria, he illustrates his research results and own ideas of quality criteria in the figure: Instructional planning from the perspective of research on learner development and educational experience.

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[8] Meyer, Meinert (2010): A view on Didactics and Instructional Planning from the Perspective of research on learner development and educational experience, in éducation and didatique, Vol. 4- n°2, p. 85-86.
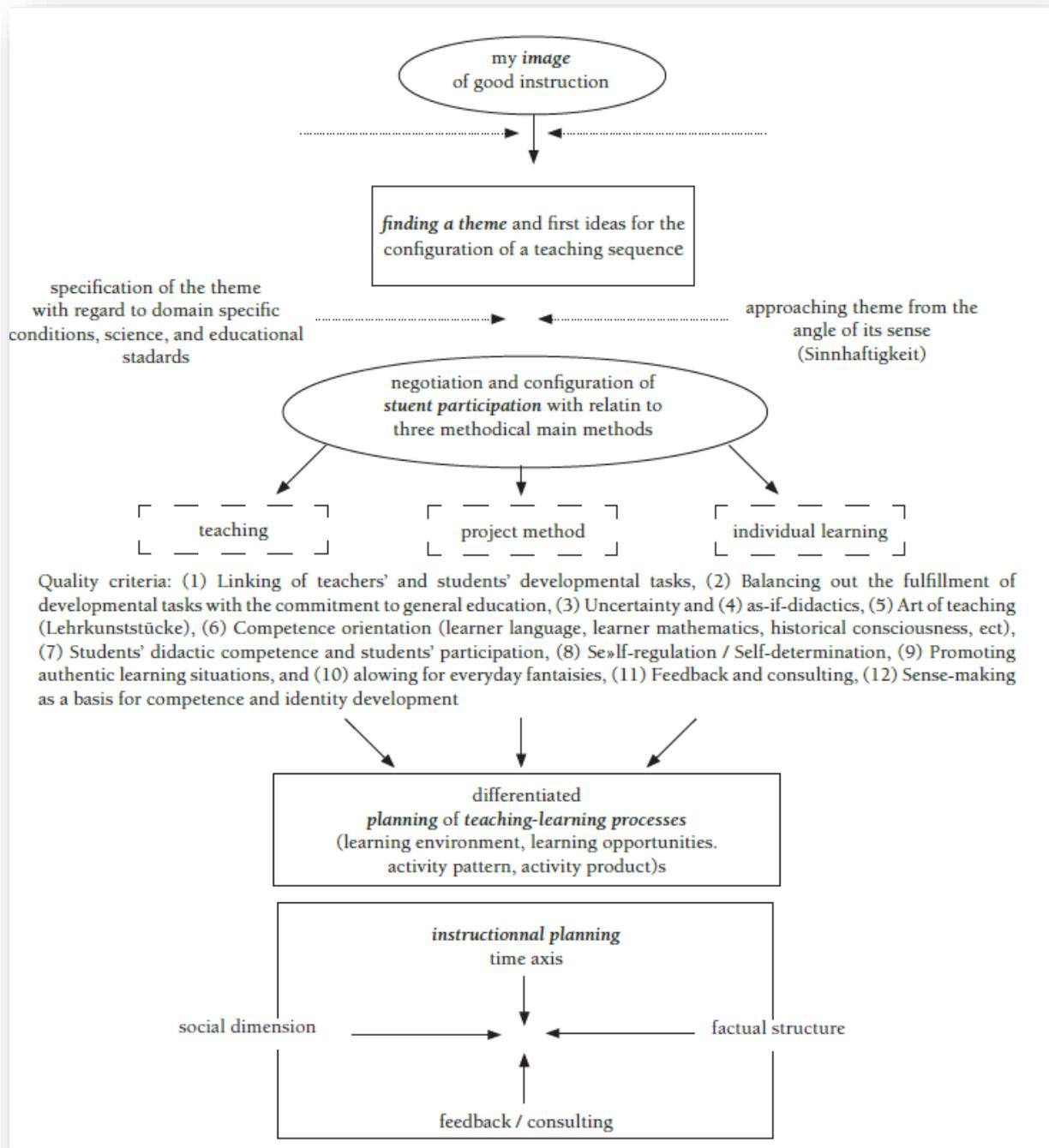
my *image*
of good instruction

finding a theme and first ideas for the
configuration of a teaching sequence

specification of the theme
with regard to domain specific
conditions, science, and educational
stadards

approaching theme from the
angle of its sense
(Sinnhaftigkeit)

negotiation and configuration of
stuent participation with relatin to
three methodical main methods

teaching

project method

individual learning

Quality criteria: (1) Linking of teachers' and students' developmental tasks, (2) Balancing out the fulfillment of developmental tasks with the commitment to general education, (3) Uncertainty and (4) as-if-didactics, (5) Art of teaching (Lehrkunststücke), (6) Competence orientation (learner language, learner mathematics, historical consciousness, ect), (7) Students' didactic competence and students' participation, (8) Se»lf-regulation / Self-determination, (9) Promoting authentic learning situations, and (10) alowing for everyday fantaisies, (11) Feedback and consulting, (12) Sense-making as a basis for competence and identity development

differentiated
planning of *teaching-learning processes*
(learning environment, learning opportunities.
activity pattern, activity product)s

instructionnal planning
time axis

social dimension

factual structure

feedback / consulting

Figure: Instructional planning from the perspective of research on learner development and educational experience, Hilbert Meyer (2010), p. 88.

Sarialtin (2015) gives a general overview of a new idea that shows benchmarking as a quality assurance tool and its application to higher education. He shows that benchmarking is an important element of **Higher Education quality assurance cycle** and should focusing to answer the following questions:

- "How do the standards we have set ourselves compare to our peers?
- How does our performance measure against the outcomes of national and international comparator institutions?
- How can we adapt good practice examples from other institutions to our own organization?"[9]

In general there are many different approaches regarding quality in didactics and pedagogic.

The University of Kassel (2015) explains quality in didactic and pedagogic as an aim to support students and learners to achieve an excellent, and successful study, to prepare them for their professionals and to improve their own competences and qualities. [10] To guarantee the quality they foster small classes and courses, motivate their students to improve their qualities and develop trainings and coaching programs for teachers.

The University Paderborn (2015) has a commission which rate the quality of education in their University and give the best, qualified teacher every year a teaching award and a prize money. The rating and the choice of the winner is based on the following quality aspects, which are related to didactic and pedagogic, too:

- ➢ Improve the teaching in an innovative way;
- ➢ Use different and successful methods in classroom;
- ➢ Have a good transfer of the general theory- to praxis;

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[9] Fouzia Shersad, Sabeena (2015): Benchmarking as a quality assurance tool and its application to higher education (a conceptual framework), p.16- 21. In: 2014 - THE ONLINE JOURNAL OF QUALITY IN HIGHER EDUCATION. Published in Turkey.

[10] http://www.uni-kassel.de/projekte/qualitaetspakt-lehre/didaktische-qualitaet-der-lehre.html , April 2015.

➢ Provide an all- around consulting regarding teaching, learning etc.[11]

To summarize the research results, there are many different ways to understand the topic around quality in didactic and pedagogic.

There is not just one view, more a complex system which should considering education in every field. Generally there should be -in minimum-a focus on

➢ Teacher
➢ Student
➢ Teaching and learning environment
➢ And the wide variety of teaching and learning material.

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[11] http://www.uni-paderborn.de/fileadmin/bildungsinnovationen/lehrpreis/Ausschreibung_Lehrpreis_2015.pdf.

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