

**QUALITY AND EXCELLENCE
IN LEARNING AND TEACHING IN HIGHER EDUCATION.
The AHELO Study, Accreditation and Performance Indicators**

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Leading Questions and Methodology

➤ Leading questions

- ❖ How is competence/learning outcomes orientation of study programs monitored, measured, accredited, improved?
- ❖ What achieved the AHELO (Assessment of Higher Education Learning Outcomes) project in terms of learning outcomes indicators and measurement?
- ❖ Has the core goal of AHELO been achieved, namely “to compare the quality of teaching and learning in higher education institutions on an international scale” (Tremblay 2013, p. 125)?
- ❖ How are learning outcomes, accreditation goals and quality/excellence in L&T related?

Competence Orientation in L&T.

The Experience of Program Accreditation

- **The shift from input-orientation to integrative environment-process-outcome-orientation in L&T has not been implemented to a sufficient extent and in a balanced manner yet** (at least in Germany, but most probably also in many other European countries)
 - ❖ It seems that still quite a number of academics consider the competence/learning outcomes-oriented development of study programs to be a strong **interference with the freedom of teaching**. Accordingly, framework regulations are sometimes believed to follow a **hidden agenda of undesirable standardisation** of study programs.

Competence Orientation in L&T.

The Experience of Program Accreditation

- ❖ There are **“technical” problems with the relation of (operationable, measurable) learning outcomes to study modules:**
 - Often, courses are just “loosely combined” to modules from a mere mediation perspective.
 - Problems do occur, e.g., with insufficient consideration of generic competences as qualification goals of study programs. E.g., “employability” and “citizenship” appear as empirically (almost) empty concepts.
 - Such problems are exacerbated by inadequate implementation of methods of teaching, learning, students’ assessment and evaluation of L&T. Moreover, the implemented methods often do have little regard to qualification goals, learning outcomes and the modules to be evaluated (e.g., inadequate assessment formats, i.e., missing/rudimentary constructive alignment).

Competence Orientation in L&T.

The Experience of Program Accreditation

- ❖ The **competence profiles of teachers** often seem to be in need of optimisation (especially in countries where there is no obligation for teacher training).
- ❖ One of the probably most serious obstacles for competence-orientation in L&T seems to be that, in the context of standard program accreditation, **external program accreditors are not able to effectively check learning outcomes** in module descriptions **and prove** their relation to the developed study programs and **their alignment with the study contents and the assessment formats.**

Competence Orientation in L&T.

Desiderata

- **‘Accepted’ definition of competences as “context-specific dispositions which are acquired and which are needed to cope successfully with domain-specific situations and tasks”** (Blömeke et al. 2013, p. 3).

Such dispositions should **combine knowledge, skills, assessments and motivation** relevant for **responsible action** in situations of **high complexity and uncertainty** and oriented at **professional standards**.

– But no **‘consensus’** how to transfer the definition of **competences into operationalised learning outcomes**

(**complexity**: variety of HEI types, profiles, achievement areas, subject fields, national policies, ...)

(probably not much prospects for it (cf. Gibbs et al. 2012))

Competence Orientation in L&T.

Desiderata

- **Learning outcomes are mostly not included in contemporary performance indicator systems of HEIs.**
- **Mechanisms and outcomes of competence acquisition in HE are rarely researched systematically and comparatively.**

Some burning questions (cf. Blömeke 2013, p. 13):

- ❖ How are the acquired competences structured content-wise?
- ❖ What performance levels can be identified?
- ❖ What are the (relational) roles of cognitive and affective-motivational aspects in L&T processes?
- ❖ Which features do adequately differentiate between more successful and less successful graduates?

Competence Orientation in L&T. Excellence and Diversity

- Widespread reductionist **bias to research** (and internationalisation) **excellence should be counterbalanced** by adequately taking into account **all core missions**, “**diverse values**”, **performance areas** of the various HEIs, thereby demonstrating the “**diversity of excellences**”, i.e., excellence in HE is a **multi-perspective matter** that should do justice to the HEIs’ complex **goals**, **profiles** and **performance areas**:
 - ❖ Conducting **research** and acquiring **knowledge and know-how** in subject fields
 - ❖ “Developing a **skill for a job**”
 - ❖ “Developing the full potential of the **person**” (i.e., “creating more active citizenship”, “enhancing social cohesion”, and “fostering multicultural dialogue” (Vandenkendelaere 2011, p. 50, 52, 58; also cf. Brennan & Patel 2011))

Results.

Learning Outcomes in AHELO vs. Program Accreditation

➤ Comparison of learning outcomes treatment

- ❖ Types of LOs are rather clearly described in AHELO (typical and probably fairly representative)
- ❖ Most types of LOs of AHELO are also represented in accreditation regulations (e.g., German accreditation regulations (GAC 2013) including the Qualifications Framework for German HE degrees)
- ❖ LO types of Global Outlook, Lifelong Learning, Flexibility, and ICT, which are not among the nine most frequently mentioned AHELO LO types, are not (explicitly) present in German accreditation rules
- ❖ German accreditation rules emphasize qualification goals which are not present in AHELO (e.g., artistic qualifications; qualification to take up a qualified employment, for societal engagement, personality development, interdisciplinary knowledge)

Results.

Learning Outcomes in AHELO vs. Program Accreditation

- **Comparison of learning outcomes treatment**
 - ❖ **Unhelpful intermingling of measurement types, measurement instruments, and measures of LOs in AHELO**
 - ❖ **AHELO proposes a set of (approximately a dozen) LOs measurement instruments** (among them: surveys; longitudinal surveys; achievement rates; in-course tests; in-class peer reviews; external marking of exams) out of which **only one** (i.e., singular student survey and faculty survey) was **used** in the AHELO feasibility study (cf. OECD-AHELO 2013b, pp. 57 ff.)
 - ❖ **Only few** of these instruments are normally or sometimes **applied in program accreditation**, while the number of used instruments and the frequency of their application usually seems to **increase** in HEIs which have an **institutional accreditation for self-reliant QA in L&T**.

Results.

Learning Outcomes in AHELO vs. Program Accreditation

➤ Comparison of learning outcomes treatment

- ❖ **Measures of LOs are not so well characterised in AHELO** (cf. OECD-AHELO 2013b, pp. 58 ff.). In particular, the degree of specification of measurable learning outcomes (and L&T quality in general) is not satisfactory in AHELO (as well as in (German) program accreditation).
- ❖ **Both, AHELO and (German) program accreditation, do not realise an integrative approach** to L&T environment, teaching methods, learning processes, and learning outcomes.

Results.

Learning Outcomes in AHELO vs. Program Accreditation

Table 1: Direct and indirect learning outcomes measures (also cf., e.g., Keshavarz 2011; Yarkova & Cherp 2013)

Direct learning outcomes measures	Used in	
	AHELO	Program accreditation (Germany)
Assessments of general education skills (of teachers)	No	No
Assessments of disciplinary knowledge	No	No
Think-aloud protocols	No	No
Grades	No	(Yes)
Pre-post test documentations	No	No
Observations of students performing a task	No	No
Analyses of student work products	No	(Yes)
Assessments of senior theses	No	(Yes)
Portfolios compiled over course of undergraduate study	No	No
Indirect learning outcomes measures		
Freshman/senior satisfaction rates	Yes	Yes
Marks/grades	No	Yes
Students assessment on new pedagogy, curriculum etc.	(Yes)	Yes
Students assessment on their reflections on their learning	(Yes)	(Yes)
Completion rates of study programs	No	Yes
Alumni satisfaction rates	(Yes)	Yes
(Graduate) Employment/acceptance rates	No	(Yes)
Employer satisfaction rates	No	(Yes)

Results.

Learning Outcomes in AHELO vs. Program Accreditation

➤ **Comments to Table 1**

- ❖ AHELO focuses on very few LOs measures (which may be fine for a pilot project), while program accreditation (in Germany) takes into consideration much more of the suggested measures
- ❖ Some direct LOs measures – e.g., think-aloud protocols, observations of students performing tasks, course portfolios – are probably not very appropriate for being effectively checked by external program accreditation peers, but could be more effectively applied in the framework of HEI-internal – permanent, ongoing – QA systems in L&T

Results.

A Set of Integrative Performance Indicators in L&T

➤ **‘Excellence’** (= ‘good quality of purpose and for purpose including improvement-oriented QA’) in L&T might be established and assessed via a set of integrative performance indicators (see Tables 2-6) or an appropriate subset of it

- ❖ **PIs** for subarea **L&T environment**
- ❖ **PIs** for subarea **teaching processes**
- ❖ **PIs** for subarea **learning processes**
- ❖ **PIs** for subarea **learning outcomes**
- ❖ **PIs** for subarea **assessment of learning outcomes**

Table 2: Performance types, indicators and measures – L&T subarea “learning-and-teaching environment” (C = Considers; PC = Partially considers; CN = Considers not)⁵

Performance types	Performance indicators and measures	AHELO		Program accreditation (Germany)	
		C/PC	CN	C/PC	CN
Learning resources	Number of book titles/ periodical subscriptions/ website subscriptions held in the library as a proportion of the number of programs offered		X	X	
	Expert assessments of quality of book titles/ periodical subscriptions/ website subscriptions		X	X	
	Student assessment of library services		X	X	
Teaching resources	Ratio of students to teaching staff		X	X	
	Proportion of teaching staff with verified doctoral qualifications		X	X	
	Proportion of teaching staff participating in professional development activities during the past year		X		
Facilities and equipment	Annual expenditure on IT as a proportion of the number of students		X		
	Number of accessible computer terminals per student		X		
	Teaching staff assessment of adequacy of facilities and equipment		X		
	Internet bandwidth per user		X		X
Financial planning and management	Expenditure for laboratory resources per time interval		X		
	Total operating expenditure (other than accommodation and student allowance) per student		X		X
Student administration and support services	Ratio of students to administrative staff		X		X
	Proportion of total operating funds (other than accommodation and student allowances) allocated to provision of student services		X		
	(Final year) Student assessment of academic and career counselling		X		
	Student assessment of student services (e.g., health, housing, food and sport facilities)		X		
Social context	Presence of opportunities and technologies for students to find and join networks that meet their social, cultural and study interests		X		
	Presence of opportunities and spaces for students to find contact to teachers		X	X	
Stakeholders' participation in curriculum development	Presence of appropriate facilities and spaces		X	X	
Stakeholders' representation in decision-making bodies	Presence of appropriate facilities and spaces		X	X	
Offer a diversity and variety of courses	Referring capacities (with respect to topics, class options, time, place, lecturers)			X	

Results. A Set of Integrative Performance Indicators in L&T

Results.

A Set of Integrative Performance Indicators in L&T

Table 3: Performance types, indicators and measures– L&T subarea “teaching processes” (high quality/ excellent teaching)

Performance types	Performance indicators and measures	AHELO		Program accreditation (Germany)	
		C/PC	CN	C/PC	CN
Subject-matter competence/ Research-based teaching	Student assessment of subject-matter competence of teachers			X	
	Proportion of full time member of teaching staff with at least a certain number [tbd] of refereed publications during a certain period of time [tbd]		X		X
	Number of papers or reports presented at academic conferences during a certain period of time [tbd] per full time equivalent members of teaching staff		X		X
Effective active learning (in particular comprising student-centeredness)	Diverse types of course structure (e.g., problem-based learning)		X		X
Effective communication skills	Students assessment of communication skills (e.g., classroom teaching skills; diversity of teaching approaches)			X	
	Staff assessment of adequacy of communication skills		X		X
Commitment to teaching well	Students assessment of teaching quality			X	
	Staff assessment of teaching quality		X		X
	Peer review or participating observation of courses		X		X
Course quality	Students assessment on the quality of their courses			X	
Respecting individual ways of learning/ diversity of learners and their motivations	Students assessment of teaching diversity				

Results.

A Set of Integrative Performance Indicators in L&T

Table 4: Performance types, indicators and measures– L&T subarea “learning processes”

Performance types	Performance indicators and measures	AHELO		Program accreditation (Germany)	
		C/PC	CN	C/PC	CN
Students workload	Students assessments of workload			X	
	Teachers assessments of workload		X		X
Quality learning	Students assessment of learning experience quality				X
Respecting individual ways of learning/ diversity of learners and their motivations	Students assessment of learning diversity				X
	Teachers assessment of learning diversity		X		X
QA in L&T	Students overall assessment on the quality of their learning experiences at the institution				

Table 5: Performance types, indicators and measures – L&T subarea “learning outcomes”

Performance types/ Generic and program learning outcomes	Performance indicators and measures	AHELO		Program accreditation (Germany)	
		C/PC	CN	C/PC	CN
Student success rates	Percentage of students entering programs who successfully complete first year		X	X	
	Proportion of students entering undergraduate programs who complete those programs in minimum time		X	X	
	Proportion of students entering postgraduate programs who complete those programs in specified time		X		X
Employability	Proportion of graduates from undergraduate programs who within a period of time (tbd) of graduation are (i) employed, (ii) enrolled in further study, (iii) not seeking employment or further study		X	X	
Clear and achievable L&T goals, yet high expectations (of students and teachers)	Students assessment of goals achievability	X		X	
	Academic staff assessment of goals achievability		X		X
Critical thinking			X		
Discipline knowledge/ Subject-specific learning outcomes	Students knowledge assessments		X		X
	Students assessments grades		X	X	
Problem solving	Documentation of problem-based learning processes		X		X
Teamwork	Observation of students at work		X		X
Communication			X		
Professional skills			X		
Ethics and values			X		
Creativity			X		
Learning to learn			X		
Global outlook			X		X
Self-management	Students (self-) observation of work plan and time management		X		X
Lifelong learning	Participation in further education		X		X
Flexibility			X		X
Social responsibility	Social engagement in the HEI and outside		X		X
Research	Observation of students solving research problems through application of scientific methods		X		X
ICT	Observation of students using ICT facilities		X		X
Applied knowledge	Observation of students applying knowledge in practice (i.e., in trans-disciplinary situations)		X		X
Development of curriculum in relation to learning outcomes	Description of procedure and participation/ responsibilities		X	X	
Artistic qualifications			X	X	
Interdisciplinarity			X	X	
Personality development			X	X	

Results. A Set of Integrative Performance Indicators in L&T

Results.

A Set of Integrative Performance Indicators in L&T

Table 6: Performance types, indicators and measures– L&T subarea “assessment of learning outcomes”

Performance types	Performance indicators and measures	AHELO		Program accreditation (Germany)	
		C/PC	CN	C/PC	CN
Assessment forms	Students assessment of assessment forms		X		X
	Teachers assessment of assessment forms		X		X
	Peer review or participating observation of assessments		X		X
	Pre-post test documentation		X		X

Results.

A Closer Look at the Systematicity of Learning Outcomes

- **Implementation of LOs approach** (also Keshavarz 2011, p. 2)
 - ❖ **HEI educational (and other) objectives and strategy**
 - ❖ **Program educational objectives** (addressing institutional and program objectives and taking into account relevant interests of program stakeholders)
 - ❖ **Program LOs** – knowledge, skills, attitudes – (addressing program educational objectives and including specific program outcomes)
 - ❖ **Measurable LOs for each course** (each CLO must map at least one PLO)
 - ❖ **Constructive alignment** between LOs, L&T methods, assessment tasks and assessment criteria (cf. Biggs & Tang 2007)

Results.

A Closer Look at the Systematicity of Learning Outcomes

- **Suggested features of operational/measurable CLOs** (cf. Keshavarz 2011, pp. 4-5)
 - ❖ **Use action verbs** from Bloom's Taxonomy (Bloom et al. 1956; Scott 2003)
 - ❖ One verb per CLO
 - ❖ Some 4-8 CLOs for each course (**few!**)
 - ❖ CLOs describe **what a student should be able to DO at end of course**
 - ❖ Write CLOs in **language understandable** for all relevant stakeholders
 - ❖ CLOs typically **not content-specific** (but generic, methodological, ...)
 - ❖ Include **LOs from more than one domain** (cognitive, psychomotor, affective) in each course or program
 - ❖ Guarantee measurability/assessability of each CLO (preferably more than one assessment tool per CLO)

Results.

A Closer Look at the Systematicity of Learning Outcomes

- **Bloom's Taxonomy: three domains of educational activities (Bloom et al. 1956)**
 - ❖ **Cognitive**
 - ❖ **Affective**
 - ❖ **Psychomotor**

Results.

A Closer Look at the Systematicity of Learning Outcomes

Table 7: Bloom's cognitive levels and list of verbs (Scott 2003)

Six cognitive categories	Description	List of verbs
Knowledge	...	Define, describe, identify, label, list, match, name, outline, reproduce, select, state, ...
Comprehension	...	Convert, defend, distinguish, estimate, explain, extend, generalise, give examples, infer, predict, summarise, ...
Application	...	Demonstrate, modify, operate, prepare, produce, relate, show, calculate, solve use, ...
Analysis	...	Diagram, differentiate, distinguish, illustrate, infer, point out, relate, select, separate, subdivide, ...
Synthesis	...	Categorise, combine, compile, devise, design, explain, generate, organise, plan, rearrange, reconstruct, revise, ...
Evaluation	...	Appraise, compare, conclude, contrast, criticise, describe, discriminate, explain, justify, interpret, support, ...

Results.

A Set of Integrative Performance Indicators in L&T

- A number of questions are answered, which, according to the authors of the AHELO report, “would have to be addressed before a full AHELO Survey could be launched” (OECD-AHELO 2012a, pp. 2-3):
 - ❖ Tables 2-6 make suggestions what are the **desired performances, achievements and LOs** of higher education, and what **can/should be measured**.
 - ❖ We think that QA in L&T should **underpin accountability AND enhance transparency AND provide data for improvement**.
 - ❖ In an integrative approach to L&T quality the **students** (i.e., their learning) as well as their **HEIs** (i.e., L&T environment and teaching) should be **assessed**.

Results.

A Set of Integrative Performance Indicators in L&T

- ❖ A first goal of measuring LOs is to assess the **level of competency** achieved. The further goal to measure the **value added from attending a specific HEI** can only be approached by undertaking more challenging **longitudinal studies** (before-after comparisons).
- ❖ The AHELO question what an international assessment could provide that national or institutional level instruments could not seems to be mistaken. **Assessments of LOs and L&T quality in general should be comprehensive, methodologically coherent and empirically reliable** (irrespective whether they are “international”, “national”, or “institutional”).

Conclusions

- **This study does not (strongly) support arguments for further pursuing the conception of AHELO**
 - ❖ Because AHELO utilized a **reductionist** perspective (i.e., exclusive focus on learning outcomes)

 - ❖ Because the **international coordination problems** in terms of content as well as methodology are still **tremendous**
(How can large heterogeneous groups of different persons with very diverse qualifications and goals effectively and efficiently achieve systematic solutions of complex problems?)

 - ❖ Because it is probably (?) a more successful strategy to first of all improve on integrative L&T quality in already well-developed national situations, and then enter into the adventure of European or international benchmarking (and learning from each other for common improvement)

Conclusions

- **(German) Study program accreditation (and AHELO?) should be substantially improved**
 - ❖ By establishing (more) coherent, comprehensive, integrative and development-oriented approaches towards measurable learning outcomes
 - ❖ By integrative consideration of the required “dimensions” (inputs, processes, outcomes) of strategic and evidence-based performance governance in L&T – L&T environment; theory-based understanding of teaching methods and learning processes; operational learning outcomes and their assessment
 - ❖ By relevant incorporation of operational features of quality teaching

References

- Adam, S. (2013) The Central Role of Learning Outcomes in the Completion of the European Higher Education Area 2013-2020. *Journal of the European Higher Education Area*, 2013-2, pp. 1-35
- Astin, A.W. & Antonio, A.L. (2012) *Assessment for Excellence. The Philosophy and Practice of Assessment and Evaluation in Higher Education*. New York: Rowman & Littlefield Publishers
- Biggs, J. & Tang, C. (2007) *Teaching for Quality Learning at University*. Maidenhead: Open University Press
- Blömeke, S. (2013) Ja, aber ... – Lehren aus TEDS-M und KoKoHs für eine Teilnahme an AHELO. In: E. Braun, A. Donk & M. Bülow-Schramm (eds.) *AHELO goes Germany? HIS: Forum Hochschule 2/2013*. Hannover: HIS, pp. 13-20
- Blömeke, S., Zlatkin-Troitschanskaia, O., Kuhn; C. & Fege, J. (2013) Modelling and Measuring Competencies in Higher Education: Tasks and Challenges. In: S. Blömeke, O. Zlatkin-Troitschanskaia, C. Kuhn & J. Fege (eds.) *Modeling and Measuring Competencies in Higher Education. Tasks and Challenges*. Rotterdam: Sense Publishers, pp. 1-10
- Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H. & Krathwohl, D.R. (1956) *Taxonomy of Educational Objectives. Handbook 1: Cognitive Domain*. London: Longmans Green
- Brennan, J. & Patel, K. (2011) 'Excellence' and the Student Experience of Higher Education: What It Is and How to Find It. In: M. Rostan & M. Vaira (eds.) *Questioning Excellence in Higher Education. Policies, Experiences and Challenges in National and Comparative Perspective*. Rotterdam: Sense Publishers, pp. 37-53

References

- GAC – German Accreditation Council (2013) Regeln für die Akkreditierung von Studiengängen und für die Systemakkreditierung. Decision of the Accreditation Council of 12-08-2009, last modified on 02-20-2013, Drs 20/2013
http://www.akkreditierungsrat.de/fileadmin/Seiteninhalte/AR/Beschluesse/AR_Regeln_Studiengaenge_aktuell.pdf
- Ghosh, R. (2012) Diversity and Excellence in Higher Education: Is There a Conflict? *Comparative Education Review*, 56(3), pp. 349-365
- Gibbs, A., Kennedy, D. & Vickers, A. (2012) Learning Outcomes, Degree Profiles, Tuning Project and Competences. *Journal of the European Higher Education Area*, 2012-1, pp. 71
- Keshavarz, M. (2011) Measuring Course Learning Outcomes. *Journal of Learning Design*, 4 (4), pp. 1-9
- Leiber, T. & Minke, B. (2015) Integrated Performance Governance Systems in Higher Education Institutions. Theoretical Model and Case Study Evidences for a Paradigm Change. (in preparation)
- Leiber, T. & Seidl, T. (2015) Increasing Autonomy of Higher Education Institutions for Quality Assurance in Learning and Teaching: A Case Study in German System Accreditation. (in preparation)
- Lodge, J.M. & Bonsanquet, A. (2013) Evaluating Quality Learning in Higher Education: Re-examining the Evidence. *Quality in Higher Education*, published online: 12 Nov 2013, 21 p.
- McGonigal, K. (2005) Teaching for Transformation: From Learning Theory to Teaching Strategies. *Newsletter on Teaching of the Center for Teaching and Learning of Stanford University*, 14 (2), 4 p.
- OECD-AHELO (2012a) *Newsletter*. July 2012, pp. 1-7 <http://www.oecd.org>
- OECD-AHELO (2012b/2013a/2013b) *AHELO – Feasibility Study Report*. 3 Vols. <http://www.oecd.org>

References

Scott, T. (2003) Bloom's Taxonomy Applied to Testing in Computer Science Classes. *The Journal of Computing in Small Colleges*, 19 (1), pp. 267-274

Tremblay, K. (2013) OECD Assessment of Higher Education Learning Outcomes (AHELO): Rationale, Challenges and Initial Insights from the Feasibility Study. In: S. Blömeke, O. Zlatkin-Troitschanskaia, C. Kuhn & J. Fege (eds.) *Modeling and Measuring Competencies in Higher Education. Tasks and Challenges*. Rotterdam: Sense Publishers, pp. 113-126

Vandenkendelaere, B. (2011) A Definition of Excellence. Opportunity for a Pit Stop? *Journal of the European Higher Education Area*, 2011-2, pp. 49-63

Wildt, J. (2003) "The Shift from Teaching to Learning" – Thesen zum Wandel der Lernkultur in modularisierten Studienstrukturen. In: Fraktion Bündnis 90/Die Grünen im Landtag NRW (Hg.) *Unterwegs zu einem europäischen Bildungssystem*. Düsseldorf, pp. 14-18 <https://www.u-asta.uni-freiburg.de/politik/bologna/texte/thesen-zum-wandel.pdf>

Yarkova, T. & Cherp, A. (2013) Managing the Sacred? Perspectives on Teaching Excellence and Learning Outcomes from an International Postgraduate University. *European Journal of Higher Education*, 3 (1), pp. 24-39