Can Self-Responsible Education be Transposed into other Cultural Frames?

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Abstract: In the face of globalization, the question arises if educational and didactic strategies based on self-responsibility and self-motivation can be easily transposed to other countries, in order to prevent international crises at an early stage by means of communication of opposing standpoints.

This chapter reflects experiences made at the Moscow-based Lomonosov University during a period of guest-lecturing in 2019, and analyses the response encountered from local students. Within three courses, namely on "Climate Change and Climate Models", "European Cooperation" and a "Dissertation Seminar on Globalization", response of students to requirements of self-directed learning, study, and analysis was predominantly poor and weak.

The hypothesis is provided that student activity rates are generally couched in a society's overall inclination to take civic responsibility versus perceiving the self as a victim of outside, hostile forces.

As a background to such comparison, the developmental "Global Studies" (GS) curriculum at Graz University, Austria is taken as an example for a transdisciplinary approach and quality monitoring based on QA criteria. Such criteria are developed in the present article.

1. INTRODUCTION

International curricula are most often facing *intra*-university procedures of quality control. While this might seem as a regular and normal procedure, *inter*-university, inter-country and especially inter-culture comparisons of how a given curriculum functions, works out pedagogically and didactically might be still a rare endeavour.

Within the frame of the "Global Studies Consortium" [63], comparisons of curricula have been undertaken, and so did the author as part of a group of his students [30-32]. However, an open question remains if "transferring" a university course – including all its didactic and pedagogic framework conditions – into the setting of a "sibling" curriculum of "Global Studies" in another city would be successful or not.

During the months of April to June 2019, such an endeavour was undertaken. The author took two courses (on which there existed experience of several decades regarding didactics and contents) from the Austrian home university in Graz and held them at Moscow State University named after Lomonosov (MSU, see its main building in Figure **1**).

Three university courses were held, namely on the themes "Climate Change and Climate Models", "European Cooperation" and a "Dissertation Seminar on Globalization".

These were based on interactive didactics and made use of a negotiation game that relies on self-responsible action from the side of students [67, 68].

Experiences showed the following features and results:

- while Austrian students would fulfil their first introductory tasks by 80-90% when it comes to writing a short summary of one page until the coming week, Russian students would largely ignore this task. Only a minority of 20% of students would have posted their assignment on the web-based course platform.

- While Austrian students instantly enter a provided web platform (most of them even during the same lesson), a majority (80%) of Russian students would not enter the platform even after 3 weeks of repeated reminders.

- The understanding of a university course as a platform and opportunity for exchanging opinions on a peer basis after having studied content in self-motivated manner is perceived as close to zero in the observed Russian cases, while it was

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present in the case of six Austrian universities for which such experience exists.

The following conclusions are drawn:

- Cultural pre-conditions are a key driver of student behaviour.

- Levels of self-motivated activity are closely linked to prevailing understanding of the role of a citizen in society: in a society of "followers", also the "new elite" of alumni of a top-level university seems to be inclined to act passively. Only a minority of 10-20% of students showed proactive behaviour.

The author draws the following conclusions on the necessity of transnational quality control and inter-comparability of student achievements:

For such and similar endeavours in tertiary education, quality management and value management are sensible and useful approaches in evaluating curricula. Today, higher education providers face a world-wide environment full of competitors all explaining, interpreting and managing global change in the cultural, political, economic, technical and environmental fields [94]. Curricula developers are therefore urged to satisfy *Quality Assurance* (QA)

criteria to maintain and further improve the profile of delivered results.

In order to make such quality criteria operational, appropriate stakeholders with a role in assessing such quality for a GS curriculum are suggested to take into account the following backgrounds in inter-country comparisons of curricula and student achievements: lecturer's content frame, lecturer's didactic frame, students' content frame, and students' didactic frame (Figure **1**).

The remainder of this chapter will therefore develop conceptual frames on how to best describe, harmonise and materialize these all-to-often most divergent framework conditions.

1.1. SUGGESTIONS FOR QUALITY CRITERIA FROM THE PERSPECTIVES OF VARIOUS STAKE-HOLDERS

In accordance with the evaluation standards (see [53]), the task of auditors is to seek to identify the interests and viewpoints of all those involved and include them in the evaluation.

As Figure **1** suggests, the very diverse location of the stakeholders within society does not merely result in a *different view on the factual situation* (i.e. the

Figure 1: Moscow State University (MSU) named after Lomonosov in one of the two "lighthouse" universities in Russia, according to a Presidential Decree. The photo features the main building constructed in the 1950s, which shapes Moscow's silhouette and is one of the architecturally representative so-called "Seven Sisters" buildings in "Stalin Baroque" style.

physical landscape in Figure **1**), but also in a very diverse perception of which set of quality criteria is valid in order to best assess "quality" as such in a curriculum. *We may therefore speak of stakeholder-dependent quality criteria.*

(A) QA criteria for the perspective of university administration

For the recent external audit of the Graz-based GS curriculum, the university administration (in this case the university senate) prescribed the following questionnaire for the evaluation of the Master Program Global Studies to auditors contracted from an external university:

a) Review of the curriculum

a1) Should student access to GS be regulated in a different way?

a2) How is assessment of the type and positioning of single courses done within the entire GS curriculum?

a3) Which skills should the curriculum enable?

a4) Does the existing curriculum ensure a high quality of studies?

b) Issues related to the implementation of the curriculum

c) Organizational and content-related measures

(B) QA criteria for a student perspective

In a written procedure (each student provided at least one page of their assessment of the current quality of GS Graz), 50 students contributed their opinion via web platform and 26 of them collaborated to write up and publish a text on improvement measures [30-32]. They used the following criteria to organize their evaluation:

1   positive features of GS Graz

2   partner universities

3   semester abroad

4   interdisciplinarity

5   didactics and lectures

6   internships, practicals etc.

7   languages

8   electives

9   admission

10   exams.

In an earlier survey among GS students in 2012, [28] analysed results from around a hundred students with an emphasis on e-learning and student satisfaction. The potential of web platforms for dialogic learning was corroborated further in a subsequent study by [29].

(C) QA criteria for the perspective of lecturers

Earlier texts provide a more in-depth analysis of QA for transdisciplinary studies [11, 12, 17, 18], mainly assuming a lecturer's standpoint. In the procedure of adapting the criteria of success valid for the University of Graz as a whole (in its relationship to the national ministry responsible for higher education), the GS lecturers, the GS curricula commission and the GS student representatives presented specific formulations and several paragraphs of text to the rector in order to include GS substantially in the *strategic quality agreement* [7].

1.2. Suggestions for Quality Criteria from the Perspective of this Handbook

The *main intention* of this chapter is to apply mechanisms and criteria of *quality assurance* to a specific transdisciplinary *curriculum "Global Studies"* – as mentioned in the title and as analysed by lecturers, students and external auditors in [10, 11, 17, 29, 56]. These are the assessments from the standpoint of diverse stakeholders (as symbolized by the four clouds in Figure **1**).

The term "transdisciplinary" and "interdisciplinary" is key for the present chapter, including the notion of standpoint-dependent views and – much more significantly – *standpoint-dependent quality criteria* and will be explained and discussed in detail in subchapter 1.2.2.

The target audience of this book chapter [94] will be composed of professionals, policy makers, managers and researchers working in the field of higher education, tutors and industrial mentors who guide and support the path of trainees; hence of the several groups of stakeholders pictured in Figure **1**. (In order to provide clarity, it is mentioned that this book chapter targets improving the quality *of* the curriculum but not

enhancing the quality of assessment used with*in* the curriculum; the latter question is discussed in [4, 14], as an example).

Profiles of students following a GS curriculum include internationally minded, value-oriented, transdisciplinary, cutting-edge students with a combination of bachelor studies from diverse disciplines. For details on student profiles see [4, 14, 28, 29, 56].

1.3. Background for this Chapter

The world-wide integration of higher education, curricula and their quality criteria, as well as practices in international projects and experience in academic education didactics, suggest the necessity for *transnational collaboration* among universities such as the clarification of success criteria and subsequently, possibly even joint degrees. Higher education management involves governance, self-responsibility and courageous steps in quality assurance that may also be inspired by cutting-edge cases of already implemented developmental curricula which target the ethical questions of globalization [19, 22].

As a basis for writing and contextualizing, this chapter dwells on both

(a)   a *theoretical* literature analysis that scanned ~1000 peer reviewed articles (making use of the Scopus literature reference system) of which ~100 were taken into consideration and ~10 considered as very suitable (among which are [45, 59, 83, 84, 98, 105, 114, 125]).

(b)   the concrete involvement and *practical* experience of the author, in co-founding and implementing the GS curriculum at Graz University and lecturing in practically all courses established specifically for GS, as well as in other interparadigmatic curricula.

2. WHY QA FOR CURRICULA?

The importance of *quality assurance* (QA) during curricula development and subsequent regular quality improvement is widely debated and *confirmed* in literature for all modes of education [36-39], on both national and supranational levels. On OECD level, various initiatives attempt to strengthen cross-country compatibility of education management and QA, e.g., [25, 76, 77] – often promoted via large international conferences.

[104, 124] provide an overview of key developments in the past three decades. In particular, medical and health care studies already have a long tradition in QA, for which [113] find that "although interprofessional education and continuing interprofessional education are becoming established activities (…), *assessment of learners* continues to be limited". The present chapter, however, includes such initiatives of learner-centred assessment, e.g. undertaken by [28].

The necessary *broad scope* of assessment for interprofessional education and scholarship is highlighted by [103] who names seven key trends leading to higher quality: "*conceptual clarity, quality, safety, technology, assessment of learning, faculty development, and theory*". Evidently, QA is more than merely counting the impact points of lecturers or the political honours of administrators. [66] propose a *collaborative model of teacher community in the workplace* based on *mutual respect and professional criteria-orientation*: such is ultimately demanded here also, both as a general recommendation and for the case study of GS after literature and bibliometric analyses.

The mentioned extensive literature analysis of hundreds of peer-reviewed articles brought the review framework for interdisciplinary and transdisciplinary curricula taken from [41, 42], and cited in [114] (Figure **1** in [11]) that embraces *input, process and output* (from left to right) as suggested by practically all the in-depth articles analysed. For quality learning at university, [42] "analyses the nature of good teaching and provides a framework for reflective practice". He "proposes the '*constructive alignment*' model whereby the curriculum, teaching method assessment procedures and general institutional environment should all be in alignment with the societally desired output to promote deep learning. Similarly, Figure 1 in [11]) simultaneously combines the perspectives and perceptions from three different roles of co-citizens: studying, teaching/training, and working in practice (from left to right). Their collective views on higher education provide the full picture.

2.1. What is Quality in Curricula and in Higher Education?

2.1.1. Necessity and Effect of QA in Higher Education

A study by [45] on QA and institutional change based on experiences from 14 countries "presents a *conceptual model of institutional change* in higher

education implied by quality management. (…) The programme for Institutional Management in Higher Education (IMHE) of the Organization for Economic Co-operation and Development (OECD) has sponsored a project entitled 'Quality Management, Quality Assessment and the Decision-Making Process' that considers the *impact of quality assurance* in terms of

1.   rewards/*incentives*,

2.   *policies/structures* and

3.   *cultures* of institutions.

Evidently, any successful quality management approach in higher education should not neglect to follow *all three* paths; especially the latter two institutional and corporate culture ones. A refreshingly sober and realistic outlook should provide a promising start:

> "Drawing on the work of the sociologist Max Weber, [58], p. 152-153 has drawn a distinction between 'naked power' and 'legitimate authority' with regard to decision-making in higher education. (…) What was necessary was the conversion of naked power into legitimate authority. (…) Legitimacy in higher education is commonly thought to be achieved through adherence to *values and standards* which are a part of the cultures of academic disciplines [58], i.e. a reasonably clear *collective understanding* between academics in a given discipline that a particular piece of work counts as good and something else as less good. (…) Thus, for Finch, the role of *peer review* is central to the achievement of legitimacy for quality assurance processes and the decisions reached on the basis of them." [45], p. 347.

Brennan *et al*. [45] refer

> "to the '*moral'* authority of peers in contrast to the '*bureaucratic'* authority of quality [i.e. administrative] bodies. This is why virtually all quality bodies make *peer review* a central part of their assessment processes. (…) We conclude, therefore, that the introduction of *external quality assessment* systems in most European countries, as well as in many other parts

of the world, over the past decade has been associated with a shift in the *distribution of power* within higher education."

The author of the present chapter is very keen to emphasize the importance of peer review and a spirit of partnership, whilst at the same time being oriented on previously jointly agreed and common criteria for academic quality as well as didactics and pedagogy. This aspect of power relation analysis [60] was addressed in a bibliographic analysis [16, 21].

In the same vein, [107] diagnoses the shifting roles and self-conceptions of university senates more towards peer review and audit-driven accountability mechanisms. On the other hand, [72] critically analyse fifteen years of (traditional) QA in higher education: internal quality assurance with assurances of the impact of quality assurance brought improvements in learning and teaching to a varying degree:

> *"Quality assurance has become an international concern and procedures have become increasingly standardized across national boundaries. Significantly, the consumerist approach to higher education quality that is driven by governments and senior management, has not met with enthusiasm (…) and there appears to be a strong commitment to autonomy and academic freedom. However, (…) academia is prone to inertia and compliant indifference. Ultimately, (…) it is still not clear that, even after 15 years, quality assurance systems have really enhanced higher education."*

As one possible approach in this dilemma, [115] highlights the *structural importance of organizational change*, entitled "Trance, Transparency and Transformation: The impact of external quality monitoring on higher education". He discusses

> "the impact of external quality monitoring (EQM) on higher education, and identifies areas in higher education where changes have taken place as a result of such external initiatives. Of special interest is the question whether quality improvement actually is the result of the many EQM systems implemented. By interpreting available data an ambiguous answer is provided, highlighting some of the typical

side-effects of current EQM systems at the institutional level. The article argues that lack of effects directly related to quality improvement should not be conceived as an EQM design error alone but as a misconception of how organizational change actually takes place. In the conclusion, it is claimed that a more dynamic view on how organizations change, highlighting the responsibility of the institutional leadership as 'translators of meaning', may contribute to a more useful process."

Carr *et al*. [49] investigate the influence of external quality audits (EQA) on university performance and find that "evaluations have a stronger foundation when the combined effects of university governance, management initiatives and government initiatives are examined together with EQA."

2.1.2. QA for Global Developmental Studies: Discourse as Procedural Strategy for Quality

Curricula on global and developmental studies [40, 61, 111] necessitate especially high levels of both disciplinary and interdisciplinary academic quality [4-6, 9, 13]. Given their complex fact base and epistemological landscape, such curricula require a wider range of quality criteria than do curricula of a purely disciplinary nature, given the inapplicability of any concept of "absolute truth" in multi-stakeholder and multi-perspectivistic issues in the framework of global change. Hence, *global developmental studies constitute the cutting edge of academia* in this respect.

A very elucidating text on *ethics* and foreign policy was written by an American educator who had students discuss contemporary issues of conflict resolution (e.g. Kosovo, Iraq) while using *structured debate* with preparative essay writing [83]. [65] successfully use historical simulations and Socratic debates to teach political theories. [70] studied the meanings and interrelationships of national and European identity as well as cultural identities in the face of globalization [70]. [96] argues that the use of debate in a core world history course can foster both authentic learning in the discipline and progress toward intellectual and ethical maturity. In fact, academic culture in general is a culture of *argumentation*, and democracies are societies in which *debate is central*. Yet such a criteria-based culture of argumentation and peer review might be initially alien to most students and even lecturers who have grown up in a culture of personal loyalties.

Thus, any QA has to take the dialogic element of debate and discourse into account. Web based discourse in GS is described by [6].

As a consequence, the concept of quality in higher education is shifted from "*suitable content*" (i.e. truths that can be learned) towards "*suitable processes*" and constructed consensus [1, 2, 8] in multi-stakeholder issues such as global development. A didactic approach using dialogic, debate-oriented and collaborative learning and inquiry [34, 35] shows more promise than in a purely disciplinary science.

Debate as an instrument [54] and the power of in-class debates leads stakeholders to *change their roles* [79]. [95] tested the effectiveness of traditional versus active learning methods of debate for teaching graduate students [92]. [80] propose debate preparation and participation as an active, effective learning tool; [64] finds that collaborative learning enhances *critical thinking* – even in technological education. [52] used panel debates to increase student involvement in an introductory sociology class. [73], convinced by the power of debate, reflects on the potential of debates for engaging students in critical thinking about controversial geographical topics. [106] provides an extended literature review on student participation in the college classroom.

Personal cooperation is an essential strategy: [66, 130] highlight the *increasing dominance of teams in the production of knowledge*. [123] reflect on cases of faculty members' failure to collaborate as the main challenges in transdisciplinary projects. [27] studies the efficacy of globally distributed teams as vehicles for knowledge sharing. [48] emphasized the necessary targets and ethics in university teaching when developing and implementing an ethical decision-making framework for an integrated business curriculum. For *peace education and international economics*, [81, 82] utilizes decades of professional experience in team building, continuing interprofessional education and andragogy and, after consistently excellent student feedback, was nominated by GS students for the university's lecturer prize [69].

2.1.3. Structural Strategies for Quality in Interdisciplinary Curricula

Interdisciplinary and intercultural education needs *structural and organizational transformation strategies* because traditionally discipline-oriented hierarchies are not always appropriate to cope with the issues of

globalization [3, 15, 19, 20, 22]. [44] surveyed the growth of research on inter- and multidisciplinarity within scientific and social science articles. [114], in an intriguing text, systematically reviewed teaching and learning in interdisciplinary higher education.

[85] identified "eight *dimensions of interdisciplinary competence* that emerged from [their] extensive literature review:

1.   awareness of disciplinarity

2.   appreciation of disciplinary perspectives

3.   appreciation of non-disciplinary perspectives

4.   recognition of disciplinary limitations

5.   interdisciplinary evaluation

6.   ability to find common ground

7.   reflexivity, and

8.   integrative skill."

2.2. Qualities in Interdisciplinarity

2.2.1. Definitions for Varying Degrees of Interdisciplinarity

"All too often a curriculum is called interdisciplinary when it is actually multi-disciplinary: Multiple perspectives are presented without any support for the integration of disciplinary knowledge throughout the curriculum. (…) In addition, curricula that aim to develop interdisciplinary thinking on a broad scale are likely to experience more difficulties than curricula that aim to develop interdisciplinary thinking on a narrow scale." [114], p. 366.

Motivated by the above introduction that clearly highlights the confusion of concepts, and given the strategic importance of interdisciplinarity that has long since gained credibility in science, we adopt suitable definitions, concepts and implementations of interdisciplinarity in literature and practice. *What is interdisciplinarity?* First is presented a clear definition of the three key concepts in *growing degree of integration* (Table **1**).

Table **2** splits up single characteristics for the above three degrees of integration. It includes in the 3rd column the importance of the "paradigm" (i.e. thinking model) being utilized; the 4th column hints towards a spectrum of the social behaviour of scientists that might range from using the same coffee machine to actually working together, and the relevance of the 5th column will become apparent when interpreting bibliometric results in sub-chapter 2.3. The importance of true *"translation" of meaning* [127] is referred to in the last grid cell below right.

2.2.2.   Interdisciplinary,   Intercultural   and Interparadigmatic Modes of Science

The following paragraphs define three "*scientific modes*" that *add* to the above, quite common, definitions.   In   addition   to   common-sense *interdisciplinarity* that uses different (let us call their number "n") disciplinary *lenses* to look onto and to understand one specific real-world problem (first line in Figure **2** and below in Figure **3**), the present sub-chapter proposes the notion of "*interculturality*" which shall mean here to take a *standpoint* of perception (i.e., not a lens) depending on one's own real-world position and involvement in the given real-world problem. An example would be to look on the Nagorno-Karabakh conflict in the Caucasus from an Armenian or Azerbaijani standpoint.

Table 1:   Definitions of Key Terms Used in Most Literature: Multi-, Inter-, Trans-Disciplinarity. Sources: [116, 125], Adapted.

Multi-	disciplinary approaches juxtapose disciplinary/professional perspectives, adding breadth and available knowledge, information, and methods. They speak as separate voices, in encyclopaedic alignment, an ad hoc mix, or a mélange. Disciplinary elements retain their original identity. In short, the multidisciplinary research product is no more and no less than the simple sum of its parts
Inter-	disciplinary approaches integrate separate disciplinary data, methods, tools, concepts, and theories in order to create a holistic view or common understanding of a complex issue, question, or problem. The critical indicators of interdisciplinarity in research include evidence that the integrative synthesis is different from, and greater than, the sum of its parts.
Trans-	disciplinary approaches are comprehensive frameworks that transcend the narrow scope of disciplinary worldviews through an overarching synthesis. More recently, the term has also connoted a new mode of knowledge production that draws on expertise from a wider range of organizations, and collaborative partnerships for (social, economic, environmental) sustainability that integrate research from different disciplines with the knowledge of stakeholders in society. Here too, the transdisciplinary product is greater than the sum of its parts, though the scope of the overall effort is more comprehensive and the parts may be more diverse.

Table 2:   Characteristics of Multidisciplinary, Interdisciplinary, and Transdisciplinary Research. Source: [47], p. 340, Adapted

	Participants/ Discipline	Problem Definition	Research Style	Presentation of Findings
Multidisciplinary	Two or more disciplines	Same question but different paradigm *or* different but related questions	"Parallel play" by individuals	*Separate* publications by participants from each discipline
Interdisciplinary	Two or more distinct academic fields	Described/defined in language of at least two fields, using *multiple models* or intersecting models	Drawn from more than one, with *multiple* data sources and varying analysis of same data	*Shared* publications, with language intelligible to all involved fields
Transdisciplinary	Two or more distinct academic fields	Stated in *new* language or *theory* that is *broader than any one discipline*	Fully *synthesized* methods, may result in new field	Shared publications, probably using at least some new language developed for *translation* across traditional lines

In this sense, "interculturality" means in this text an individual's ability to take several ("m") standpoints (second line in Figures **2, 3** and below) that are likely to result in different weighing and assessing of single partial arguments. Other meanings of "culture" in the usual sense (e.g. [127]) remain of course untouched by the above definition.

The combination of both interdisciplinarity ("n") and interculturality ("m") in the above-mentioned sense is called "*interparadigmatic*" in this text and means a "m×n" combination of both n viewing lenses and m viewing standpoints (second line in Figure **2, 3**), hence the ability to use diverse paradigms and epistemolo*gies for thinking and assessing realities*. According to [84], p. 35 and [97], the ability to employ various epistemologies and paradigms increases during individual biography.

As can be seen from the architecture of Figure **3**, the curriculum "Global Studies" (and the bundle of electives GS) endeavors to build such combined, interparadigmatic view of globalization and global development by including the "cultures of thinking"

stemming from ("m") different cultural positions of students and faculty with the ("n") lenses of the disciplines history, economics, technology, sociology & culture, and international law as constituting perspectives and essential epistemologies. Figure **3** symbolically proposes the wedge of perception as a cognizable entity.

The evolution of "substrates of cognition" along the three modes is depicted in the rightmost column of Figure **2**: elements – interactions – perspectives. Evidently, any strategy in global politics and developmental cooperation needs to deal with diverging perspectives as substrata of assessment – rather than dealing merely with sheer facts; as does, for example, physics (the author's initial discipline).

2.2.3. Competencies for Interdisciplinarity

After the enlargement of the conceptual framework in the above sub-chapter, competencies and other requirements identified for interdisciplinarity in literature are understood to be also applicable to an interparadigmatic approach.
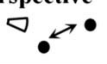
Scientific mode as defined here	Explanation	Likely substrate of perception and cognition
interdisciplinary ("n-fold")	The observer uses n lenses from 1 standpoint to perceive the real world.	**element**
intercultural ("m-fold")	The observer uses 1 lens from m standpoints to perceive the real world.	**interaction**
interparadigmatic ("m×n-fold")	The observer uses n lenses from m standpoints to perceive the real world.	**perspective**

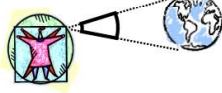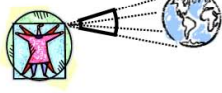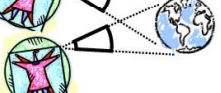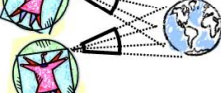**Figure 2:** Concise explanation of interdisciplinary, intercultural and interparadigmatic scientific modes [14].

No integration	Moderate integration	Greater integration	Greatest integration
Monodisciplinary	**Multi**disciplinary **Inter**disciplinary **Trans**disciplinary	-	-
Disciplinary ("1") "1" facet of viewed facts	Inter*disciplinary* ("n") "n" facets of viewed facts	Inter*cultural* ("m") "m" perspectives by viewing actors	Inter*paradigmatic* ("n × m") "n" facets of viewed facts × "m" perspectives by viewing actors

Figure 3: Typologies of research modes in growing degree of integration: Traditional definitions (only included different lenses from different disciplines but not yet different standpoints, as is provided by an intercultural or interparadigmatic approach (below row, see [5], p. 17-18, [14, 16, 21]).

The initial definition of interdisciplinarity includes "the capacity to *integrate* knowledge and *modes of thinking* in two or more disciplines to produce cognitive advancement" [114], p. 366 and "builds on a performance view of understanding, meaning that individuals understand a concept when they are ready to apply it accurately and flexibly in novel situations" [43].

As a consequence of the above-mentioned requirements for the increasing levels of interdisciplinarity, [114], p. 366 consider "the ability to *synthesize or integrate* as a beneficial learning outcome of interdisciplinary higher education". As an example, a didactic procedure for such integration was provided by the negotiation game "Surfing Global Change" [1, 2, 23, 24, 55].

Highlighting the importance of perspectives (Figure **2** below right) as substrata of reasoning and cognizing, [125], p. 16 and [90] assume a "*social process* along four phases of increasing *integration*:

1. *Mutual ignorance* of other disciplinary perspectives

2. *Stereotyping* that may have significant misconceptions about the other's approach

3. *Perspective-taking* where individuals can play the role of, sympathize with, and anticipate the other's way of thinking

4. *Merging of perspectives* has been mutually revised to create a new hybrid way of thinking."

2.3. How to Measure Quality in Curricula?

Given the above theoretical deliberations on criteria for interparadigmatic collaboration in higher education,

this sub-chapter proposes concrete methodologies. According to [33], "*it is suitable and indispensable to measure a practical curriculum against its original intentions*". In the case of GS, these *original and inalienable intentions* were *cooperatively* defined in a peer-oriented process by [81, 82] and are reiterated in the general introduction of the curriculum [67], p. 1-2 and documented as a history of GS in [5], p. 21-23).

Literature on *"quality" as a concept* is extremely extensive; one of the early paradigmatic narrative considerations of quality as such was the cult novel by Robert Pirsig [100, 101] "Zen and the Art of Motorcycle Maintenance: An Inquiry into Values". [71] similarly provide very general criteria: "Quality can be viewed as exception, as perfection, as fitness for purpose, as value for money and as transformative". For quality assurance of (joint) Master programmes, [57], p. 14 suggests to understand quality as follows:

*   Quality as compliance with standards

*   Quality as fitness of purpose

*   Quality as fitness for purpose

*   Quality as customer satisfaction

*   Quality as continuous enhancement.

Such includes evaluation of curricula against needs of global real-world complexity and evaluation of the inherited course structure against the curriculum; called *curriculum mapping* and *course mapping*, respectively, in literature [105], compare Figure **4** later). [121] perceive curriculum mapping in higher education as a *vehicle for collaboration*. In an older article, [58] states that "the efforts of each teacher must be 'mapped', which means the real curriculum being taught in each

classroom must be examined and recorded. This mapping can be done by having teachers map their own classroom curricula (…). It can also be done by having observers use tools like an observer form for curricular mapping to record what is being taught in the classroom. The results of this mapping must be the beginning point for making the real curriculum fit the desired curriculum."

Cheng & Tam [51], p. 24ff present seven models of quality in education:

1. Goal and specification model,

2. Resource-input model,

3. Process model,

4. Satisfaction model,

5. Legitimacy model,

6. Absence of problems model,

7. Organizational learning model.

Cheng [50] emphasizes the *multidimensional concept of education quality*, which is not easily assessed by only one indicator (in similarity with management literature), as:

> "Education quality is the character of the set of elements in the input, process, and output of the education system that provides services that completely satisfy both internal and external strategic constituencies by meeting their explicit and implicit expectations."

Cheng & Tam [51] continue: "the difference in the *choice* of and the emphasis on indicators may *reflect the diverse interests* and expectations among the concerned constituencies and also the different management strategies". Consequently, consensus must be reached on the set of indicators, especially in such a complex case as GS. Regarding QA of interdisciplinary scientific research (ISR), [125] are undertaking a very comprehensive study commanded by the US National Science Foundation NSF, a review of the literature in order to consistently understand and measure interdisciplinary scientific research (IDR) and propose (my comments in [ ]) while "expanding the inquiry beyond quantitative measures to be inclusive along the following lines:

1. "Measurement of interdisciplinary research should recognize and incorporate *input* (consumption) and *process* value (creation) components as well as *output* (production) [compare the architecture of Figure **1** in [11] taking this into account].

2. Interdisciplinary research involves both *social and cognitive* phenomena, and both these phenomena should be reflected in any measure or assessment of interdisciplinarity [hence no limitation to cognitive measures].

3. Assessment of research outputs should be broadened *beyond* those based in *bibliometrics*, [i.e., ISI, Scopus, PoP, see later sub-chapter] while also factoring in differences in granularity and dimensions of measurement and assessment [hence include lecturing, didactics and pedagogy]."

A practical application of such measurement endeavours will be performed in sub-chapter 2.3.

Taking a *learner-centred standpoint*, [65] suggest that "the quality of students' experience of higher education can more effectively be improved by combining educational development with quality assurance to create a more holistic approach." To reach better learning, [26], p. 4f sees *design research* as important regarding (curriculum and course) design. He suggests interventionist, iterative, process oriented, utility oriented and theory-oriented design research.

2.3.1. Methods for QA as a Process

Peterson *et al*. [98] propose a course assessment *process* for curricular quality improvement and [99] strive to *create and sustain a culture of assessment*. [105] suggests a model for curricular quality assessment and improvement (Figure **4**); all three authors for the case of pharmaceutical education. [102], p. S47 assess and evaluate GIScience curricula using the Geographic Information Science (GIS) body of knowledge while mentioning the pros and cons of being a completely regulated scientific field. They favour an outcome-based assessment of curricula founded on clear objectives: "in this approach, quality is not judged by conformance but by results". For them, the assessment of outcomes and curricular alignment can be thought of as an *ongoing process* that addresses four important *steps* [118], p. 3:

a. what does the programme expect students to learn? (Desired Student Outcomes);

b. does the programme give students sufficient opportunities to meet these expectations? (Curriculum Alignment);

c. what have students learned? (Actual Student Outcomes);

d. how can learning be improved through changes in the programme? (Programme Revision)."

Such procedural architecture is still sufficiently in line with the process suggested in sub-chapter 1 (see Figure **1** in [11]). [105] discusses each component of his *continuous quality improvement* model, "including (i) the definition of a competent practitioner, (ii) development of the core curricular competencies and course objectives, (iii) students' baseline characteristics and educational attainment, (iv) implementation of the curriculum, (v) data collection about the students' actual curricular performance, and (vi) reassessment of the model and curricular outcomes" (simplified as flow chart in Figure **4**).

Prager & Plewe [102], p. S50 suggest a model with seven steps for integrated assessment and curriculum evaluation: specify mission and objectives, specify curriculum elements, review objectives and curriculum, assess student learning outcomes, verify alignment of objectives and curriculum, verify alignment of student outcomes with objectives and curriculum, and identify revision needs. These seven steps fit roughly into Ried's [105] concept in Figure **4**.

For the sub-process "course mapping" in Figure **4**, [98], p. 4 propose a tentatively standardized *course evaluation form* for each lecturer with ten open-ended questions including a variety of perspectives:

1. Course policies and procedures: completeness of course syllabi, use of standardized syllabi format, and compliance with policies and procedures

2. Course content and relationship to learning outcomes: content and competencies match, learning objectives are addressed

3. Integration within the curriculum: appropriate placement within vertical integration, appropriate sequencing and horizontal integration with concurrent courses when appropriate

4. Skills: identifies that knowledge and skills are developed, practiced, and assessed

5. Student assessment: types and number of assessments linked to learning objectives, student performance, and advancement

6. Course coordinator performance review: course management skills

7. Summary of individual faculty teaching reviews: summarized from teaching evaluation forms and student instructor evaluations

8. Recommendations: specific recommendations and suggested changes for course improvement

9. Active learning: describe active-learning techniques observed

10. Key assessments and key artifacts: specific examinations or learning activities that serve as a demonstration of competency.

The implementation of the above-mentioned processes of QA (and of any sustainable QA) that is to be accepted by those involved requires a *spirit of cooperation, mutual understanding, esteem, and respectful professionalism* [120], p. 107 among the greater team of assessors *and* assessees.

2.3.2. Assessable Quality Criteria

In this sub-chapter, the set of quality criteria assessed as most appropriate is displayed in Table **3**;
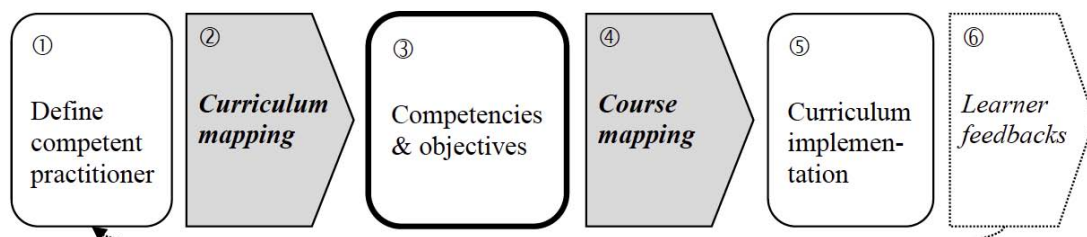
Figure 4: The continuous quality improvement model proposed by [105], p. 2, simplified representation along his main path of curriculum mapping and course mapping, including reassessment.

its leftmost column is identical to Table **1** that has been equally recommended in this sub-chapter. These *structured quality criteria* are general enough to be used henceforth and practically. As an example, "communication skills" indicate the necessity of learning the language of discourse of different disciplines in order to be able to negotiate meaning, resolve epistemological differences, develop shared understanding, and communicate cognitive advancements to a broad audience [87, 114, 129].

As a suggestion, Table **3** can be complemented by a fourth column into which performance for the respective quality criterion is then entered.

2.3.3. Practical Examples for Curriculum Development Around the World

"Over the last decade, almost all European countries have established national systems for the assessment of quality in higher education. Similar developments can be found in many other parts of the world" [45].

Regarding developmental curricula such as GS, curriculum development in the South (earlier called 3rd world) seems no less common than in the North (earlier called 1st world). Among others, the following studies and notes pertain to Kenya, South Africa, China, Indonesia, Iran, and Latin America: [46, 62, 74, 88, 89,

Table 3:   **Overview of Potential Sub-Skills and Conditions for Interdisciplinary Curricula. Source: [114], Adapted from [41]**

Interdisciplinary thinking	Having knowledge	Knowledge of disciplines
		Knowledge of disciplinary paradigms
		Knowledge of interdisciplinarity
	Having skills	Higher-order cognitive skills
		Communication skills
Student	Personal characteristics	Curiosity
		Respect
		Openness
		Patience
		Diligence
		Self-regulation
	Prior experiences	Social
		Educational
Learning environment	Curriculum	Balance between disciplinarity and interdisciplinarity
		Disciplinary knowledge in-/outside courses on interdisciplinarity
	Teacher	Intellectual community focused on interdisciplinarity
		Expertise of teachers on interdisciplinarity
		Consensus on interdisciplinarity
		Team development
		Team teaching
	Pedagogy	Aimed at achieving interdisciplinarity
		Aimed at achieving active learning
		Aimed at achieving collaboration
	Assessment	Of students' intellectual maturation
		Of interdisciplinarity
Learning process	Pattern	Phased with gradual advancement
		Linear
		Iterative
		Milestones with encountering questions
	Learning activities	Aimed at achieving interdisciplinarity
		Aimed at achieving reflection

93, 108, 117, 126]. Themes pertain to students' perceived service quality, the influence of national systems of evaluation on curriculum development, the quality of curriculum evaluation in postgraduate studies, or they pertain to QA in curriculum development.

Curriculum development in the North especially seems to takes place in Anglo-Saxon countries [86, 112, 119, 122] that appear to have more of a review and discourse-oriented tradition than Central European countries might have. [128] takes advantage of interdisciplinarity for new curricula and courses, [78] propose a network method for QA of curricula, [110] assess quality regarding e-learning, [120] create an interdisciplinary business program, [109] include alumni research, [75] educate earth science teachers.

For further quality assurance in transnational education management, clear declaration of assessment criteria, assessment procedures and a revealing of the hidden agendas (i.e., what the actors plan, but hide from being understood openly) of those involved (such as attempts to strengthen own institutes) will prove most useful.

3. CONCLUSIONS AND RECOMMENDATIONS

Experiences in transposing course didactics from one country to another show clearly that expectations for self-responsible student action may well be disappointed in countries that did not train themselves in self-motivated citizen roles during the past decades – such as the Russian Federation. Consequently, sets of quality criteria should be introduced and used, in order to compare student participation levels.

This book chapter has been undertaken in order to facilitate transparent and internationally acceptable high-quality assessment to assure the quality of transdisciplinary curricula such as developmental, peace, environmental and global studies.

The literature analysis undertaken has yielded sufficient theoretical concepts on quality, interdisciplinarity and QA methodologies for interparadigmatic university curricula to propose a framework for future QA.

For higher education it is found to be important to take on an *interparadigmatic approach* which means being able to think along conceptions of diverse

stakeholders involved in the complex issues of development, global change and globalization. Such an approach practically means a collaborative and team-oriented performance of academic duties, and no reliance on administrative hierarchies.

The main recommendation for quality assurance in transnational higher education, especially in interdisciplinary curricula on global change and development, is professional clarity on targets that should most efficiently be monitored in a peer-oriented procedure involving assessors, lecturers, practitioners and university administration on an equal basis in a culture and atmosphere of collaboration (Figure **1**). Limitation to discipline-oriented bibliometric metrics alone is not appropriate, as is limitations to implicit or explicit attribution of administrative or political power or financial sources in higher education. The present chapter suggests that cutting-edge quality can be maintained and enhanced best in a culture of mutual esteem, respect, personal integration and orientation towards clear performance criteria previously agreed in consensus among older and younger contributors, from both the theory and practice sides of all disciplines.

REFERENCES

[1]   Ahamer, G. (2005). "Surfing global change": How didactic visions can be implemented. Campus-Wide Information Systems, 22(5), 298-319. https://doi.org/10.1108/10650740510632217

[2]   Ahamer, G. (2006). Surfing global change: Negotiating sustainable solutions. Simulation & Gaming – an International Journal, 37(3), 380-397. https://doi.org/10.1177/1046878106287772

[3]   Ahamer, G. (2008). Im Spiegelkabinett unterschiedlicher Entwicklungsvorstellungen. Journal für Entwicklungspolitik, 24(3), 56-76, see http://www.mattersburgerkreis.at/jep/20083.php#ahamer.

[4]   Ahamer, G. (2011) How technologies can localize learners in a multicultural space. International Journal of Technology and Educational Marketing, 1(2), 1-24. https://doi.org/10.4018/ijtem.2011070101

[5]   Ahamer, G., Kumpfmüller, K. A., & Hohenwarter, M. (2011). Web-based exchange of views enhances "Global Studies". Campus-Wide Information Systems, 28(1), 16-40. https://doi.org/10.1108/10650741111097278

[6]   Ahamer, G. (2012a). The jet principle: Technologies provide border conditions for global learning. Multicultural Education & Technology Journal, 6(3), 177-210. https://doi.org/10.1108/17504971211254010

[7]   Ahamer, G. (2012c), Stellungnahme zum Entwicklungsplan 2013-18 aus Sicht eines langfristigen Ausbaus von „Global Studies" an der KFU Graz. Graz, 9.3.2012. unterstützt vom Vorsitzenden der Curricula-Kommission und der Studienrichtungsvertretung, 6 Seiten.

[8]   Ahamer, G. (2012d), Learn Multicultural Responsibility by Global Studies. Multicultural Education and Technologies Journal, 6(4), 216-217. https://doi.org/10.1108/metj.2012.32206daa.001

[9]   Ahamer, G. (2013b), A Planet-Wide Information System. Campus-Wide Information Systems, Volume 30 issue 5, 369-378.
https://doi.org/10.1108/CWIS-08-2013-0032

[10]   Ahamer, G. (2013c), How Technologies Can Localize Learners in Multicultural Space: A Newly Developed "Global Studies" Curriculum. In P. Tripathi, & S. Mukerji (Eds.), Marketing Strategies for Higher Education Institutions: Technological Considerations and Practices (pp. 103-127). IGI Global, Hershey, PA: Business Science Reference.
https://doi.org/10.4018/978-1-4666-4014-6.ch008

[11]   Ahamer, G. (2014a), Quality assurance in transnational education management – the developmental "Global Studies" curriculum. In: Handbook of Research on Transnational Higher Education Management, S. Mukerji and P. Tripathi (eds.), Advances in Higher Education and Professional Development (AHEPD) Book Series, IGI Global Publishers, USA, volume I, chapter 15, pp. 259-302, 2014.
https://doi.org/10.4018/978-1-4666-4458-8.ch015

[12]   Ahamer, G. (2014b), GIS^S and GIS^P facilitate higher education and cooperative learning design. In: Handbook of Research on Transnational Higher Education Management, S. Mukerji and P. Tripathi (eds.), Advances in Higher Education and Professional Development (AHEPD) Book Series, IGI Global Publishers, USA, volume I, chapter 1, pp. 1-21, 2014.
https://doi.org/10.4018/978-1-4666-4458-8.ch001

[13]   Ahamer, G. (2014c), Global Studies means Forward-Looking. Campus-Wide Information Systems, Volume 31, issue 2/3, 78-81.
https://doi.org/10.1108/CWIS-01-2014-0001

[14]   Ahamer, G. (2014d), Multi-disciplinary didactics for curricula of 'Global Studies'. In: Ilyin, I. et al. (eds.) Globalistics and Globalization Studies 2014: Aspects & Dimensions of Global Views, Volgograd: 'Uchitel' Publishing House, Russia, pp. 243-268, see http://www.sociostudies.org/books/globalistics_and_globalization_studies_3/ and https://books.google.at/books?id=IVMPBAAAQBAJ and http://www.socionauki.ru/book/files/globalistics_and_globalization_studies_3/243-268.pdf.

[15]   Ahamer, G. (2014e), Evolutionary bloom: collation of data on long-term evolutionary process in the world. MSU Bulletin – Series XXVII Globalistics and Geopolitics, Volume 2014, Issue 3/4, pp. 25-35, ISSN 0201–7385, Lomonosov Moscow State University, Moscow, Russia, see http://msupublishing.ru/index.php?option=com_content&view=article&id=356&Itemid=100123. [Original citation in Russian language: Ахамер Г. (2014), Эволюционный расцвет: обобщение данных о долгосрочных эволю-ционных процессах в мире. Вестник Московского университета, Серия XXVII: Глобалистика и геополитика, № 3/4, 25-35, Издательство Московского университета МГУ.]

[16]   Ahamer, G. & Kumpfmüller, K.A. (2014), An educational program for development in responsibility – Partnership hedges globalization. In: S. Mukerji & P. Tripathi (eds.) Handbook of Research on Transnational Higher Education Management), Advances in Higher Education and Professional Development (AHEPD) Book Series, IGI Global Publishers, USA, volume II, chapter 27, pp. 526-584, 2014,
https://doi.org/10.4018/978-1-4666-4458-8.ch027

[17]   Ahamer, G. (2015a), Quality Assurance in Transnational Education Management: The Developmental "Global Studies" Curriculum. In: Curriculum Design and Classroom Management: Concepts, Methodologies, Tools, and Applications, (pp. 1271-1313). Hershey, PA: Information Science Reference.
https://doi.org/10.4018/978-1-4666-8246-7.ch069

[18]   Ahamer, G. (2015b), T5: Tackle the Task of a Transition through Technological Targets. International Journal of Technology and Educational Marketing, 5(1), 1-14.
https://doi.org/10.4018/ijtem.2015010101

[19]   Ahamer, G. (2015c), Mapping Global Dynamics – Geographic Perspectives from Local Pollution to Global Evolution. Springer, Dordrecht.

[20]   Ahamer, G. (2015d), Applying student-generated theories about global change and energy demand. International Journal of Information and Learning Technology, 32(5), 258-271.
https://doi.org/10.1108/IJILT-01-2015-0002

[21]   Ahamer, G., & Kumpfmüller, K. A. (2015), Education and Literature for Development in Responsibility: Partnership Hedges Globalization. In: Business Law and Ethics: Concepts, Methodologies, Tools, and Applications (pp. 774-830), Business Science Reference, IGI Global, Hershey, PA.
https://doi.org/10.4018/978-1-4666-8195-8.ch040

[22]   Ahamer, G. (2016a), Tracing Global Dynamics – Milestones, Landmarks and Transitions in Techno-Socio-Economic Evolution. Springer, Dordrecht.

[23]   Ahamer, G. (2016b), Web-Based Instruction revolutionizes Environmental Systems Analysis. In: Revolutionizing Education through Web-Based Instruction, M. Raisinghani (ed.), IGI Global.
https://doi.org/10.4018/978-1-4666-9932-8.ch010

[24]   Ahamer, G. (2016c), Can educational approaches help to revolutionize quantitative solutions for climate change? In: Revolutionizing Education through Web-Based Instruction, M. Raisinghani (ed.), IGI Global.
https://doi.org/10.4018/978-1-4666-9932-8.ch001

[25]   AHELO (2012), The Assessment of Higher Education Learning Outcomes. See http://www.oecd.org/edu/highereducationandadultlearning/testingstudentanduniversityperformancegloballyoecdsahelo.htm.

[26]   Akker, van den, J.J.H. et al. (2006), Educational Design Research. Routledge, Abingdon.

[27]   Baba, M. L., Gluesing, J., Ratner, H., & Wagner, K. H. (2004). The contexts of knowing: Natural history of a globally distributed team. Journal of Organizational Behavior, 25(5), 547-587.
https://doi.org/10.1002/job.259

[28]   Bader, L. & Zotter, V. (2012), Interdisciplinarity: wishful thinking? Experiences at the University of Graz. Multicultural Education & Technology Journal, 6(3), 118-136.
https://doi.org/10.1108/17504971211253976

[29]   Bader, L. & Köttstorfer, M. (2013), E-learning from a student's view with focus on Global Studies. Multicultural Education & Technology Journal, 7(2/3), 176-191.
https://doi.org/10.1108/17504971311328062

[30]   Bader, L., Bereuther, T., Deutsch, E., Edlinger, J., Füreder, S., Kaspar, E., Köttstorfer, M., Mautner, C., Rossegger, C., Samonig, A., Samonig, S., Schuster, C., Witz, G., Zotter, V., Ahamer, G. (2013a), Quality Improvements in Curricula for Global Studies. Multicultural Education and Technologies Journal, 7(2/3), 113-126.
https://doi.org/10.1108/17504971311328035

[31]   Bader, L., Bereuther, T., Deutsch, E., Edlinger, J., Fink, T., Fischer, B., Friedrichkeit, A., Füreder, S., Hölblinger, E., Jörg, K., Kaspar, E., Köttstorfer, M., Leitmeier, L., Mautner, C., Muhoberac, M., Niederbichler, K., Reisenhofer, L., Rossegger, C., Samonig, A., Samonig, S., Schinnerl, C., Schuster, C., Steindl, L., Taurer, A., Witz, G., Zotter, V., Kapper, C., Lehner, D., Ahamer, G. (2013b), University of Graz and Other Eighteen Universities' Curricula for Global Studies: Comparisons and Improvements. Globalistics and Globalization Studies 2013, Theories, Research & Teaching, pp. 348-384, edited by Leonid E. Grinin, Ilya V. Ilyin, and Andrey V. Korotayev, Volgograd: 'Uchitel' Publishing House, Russia, 400 pp. See http://www.socionauki.ru/book/globalistics_and_globalization_studies_2_en/ or http://books.google.at/books?id=1UwmQ9srjxgC.

[32] Bader, L., Bereuther, T., Deutsch, E., Edlinger, J., Füreder, S., Kaspar, E., Köttstorfer, M., Mautner, C., Rossegger, C., Samonig, A., Samonig, S., Schuster, C., Witz, G., Zotter, V., Rozanov, A., Ilyin, V., Ahamer, G. (2014). Multiparadigmatic Humanities: Curricula for Global Studies. International Journal of Humanities and Social Science, Vol. 4 No. 6(1), 314-337, see http://www.ijhssnet.com/journals/Vol_4_No_6_1_April_2014/34.pdf.

[33] Bath, D., Smith, C., Stein, S., Swann, R., (2004), Beyond mapping and embedding graduate attributes: bringing together quality assurance and action learning to create a validated and living curriculum. Higher Education Research & Development, 23(3), 313-328. https://doi.org/10.1080/0729436042000235427

[34] Becher, T. (1981), Towards a definition of disciplinary cultures, Studies in Higher Education, 6(2), pp. 109–122. https://doi.org/10.1080/03075078112331379362

[35] Becher, T., Trowler, P.R. (2001), Academic Tribes and Territories: intellectual enquiry and the culture of disciplines. 2nd edn. Buckingham: SRHE/Open University Press.

[36] Bernhard, A. (2011a), Quality Assurance in an International Higher Education Area. A case-study approach and comparative analysis of six national higher education systems, abstract at http://www.uni-graz.at/bernhard2011_abstract.pdf.

[37] Bernhard, A. (2011b), Quality assurance on the road: Finland and Austria in comparison. European Educational Research Journal, 10(4), 583-594. https://doi.org/10.2304/eerj.2011.10.4.583

[38] Bernhard, A. (2012a), Quality Assurance in an International Higher Education Area. - A Case Study Approach and Comparative Analysis, Dissertation Klagenfurt University, VS Research, Springer Fachmedien. https://doi.org/10.1080/13583883.2012.654504

[39] Bernhard, A. (2012b). Quality assurance in an international higher education area: A summary of a case-study approach and comparative analysis. Tertiary Education and Management, 18(2), 153-169. https://doi.org/10.1080/13583883.2012.654504

[40] Bernstein, H. (ed.) (1973) Underdevelopment and Development. The Third World Today. Penguin, Harmondsworth.

[41] Biggs, J. B. (1993). From theory to practice: A cognitive systems approach. Higher Education Research and Development, 12(1), 73–86. https://doi.org/10.1080/0729436930120107

[42] Biggs, J. B. (2003). Teaching for quality learning at university: What the student does (2nd ed.). Buckingham: Open University Press.

[43] Boix Mansilla, V., Miller, W. C., & Gardner, H. (2000). On disciplinary lenses and interdisciplinary work. In: S. Wineburg & P. Grossman (Eds.), Interdisciplinary curriculum: Challenges of implementation. Teachers College Press, New York.

[44] Braun, T. & Schubert, A. (2007), The growth of research on inter- and multidisciplinarity in science and social science chapters 1975–2006. Scientometrics, 73(3), 345-351. https://doi.org/10.1007/s11192-007-1933-3

[45] Brennan, J., & Shah, T. (2000). Quality assessment and institutional change: Experiences from 14 countries. Higher Education, 40(3), 331-349. https://doi.org/10.1023/A:1004159425182

[46] Busoga (2012), Quality Assurance. Directorate of Quality Assurance and Curriculum Development, http://www.busogauniversity.ac.ug/index.php?option=com_content&view=article&id=71&Itemid=96.

[47] English, F.W. (1978), Quality Control In Curriculum Development. American Association of School Administrators, Arlington, Virginia.

[48] Cant, G., & Kulik, B. W. (2009). More than lip service: The development and implementation plan of an ethics decision-making framework for an integrated undergraduate business curriculum. Journal of Academic Ethics, 7(4), 231-254. https://doi.org/10.1007/s10805-010-9104-1

[49] Carr, S., Hamilton, E., Meade, P. (2005), Is It Possible? Investigating the influence of external quality audit on university performance. Quality in Higher Education, 11(3), 195-211. https://doi.org/10.1080/13538320500329665

[50] Cheng, Y.C. (1995), School education quality: conceptualization, monitoring, and enhancement, in Siu, P.K. and Tam T.K. (Eds), Quality in Education: Insights from Different Perspectives, Hong Kong Education Research Association, Hong Kong, pp. 123-47.

[51] Cheng, Y.C. Tam, W.M. (1997), Multi-models of quality in education. Quality Assurance in Education, 5(1), 22-31. https://doi.org/10.1108/09684889710156558

[52] Crone, J. A. (1997). Using panel debates to increase student involvement in the introductory sociology class. Teaching Sociology, 25(3), 214-218. https://doi.org/10.2307/1319397

[53] DeGEval (2008), Standards für Evaluation. Deutsche Gesellschaft für Evaluation (ed.), DeGEval, Mainz.

[54] Doody, O., & Condon, M. (2012). Increasing student involvement and learning through using debate as an assessment. Nurse Education in Practice, 12(4), 232-237. https://doi.org/10.1016/j.nepr.2012.03.002

[55] Duraković, E., Feigl, B., Fischer, B., Fleck, C., Galler, L.-M., Heinrich, J., Kulmer, K., Kurzweil, B., Scholze, M., Sperl, R.; Unterköfler, R.; Matzenberger, J.; Remele, K.; Ahamer, G. (2012), Dialogic Global Studies for Multicultural Technology Assessment. Multicultural Education & Technology Journal (METJ), 6(4), 261-286. https://doi.org/10.1108/17504971211279527

[56] Eckstein, K., Scheer, L., Volk, H. (2013), Datengrundlage für die Evaluierung des Masterstudiums Global Studies [Database for the evaluation of the Master's Curriculum Global Studies]. Curriculumsevaluierung des MA Global Studies im Studienjahr 2012/13. Abteilung Lehr- und Studienservice: Evaluation, Karl-Franzens-Universität Graz.

[57] EuroLeague (2010), Guidelines for Curriculum Development and Quality Assurance of Joint Master Programmes. Boku Vienna, https://www.iseki-food.net/webfm_send/1185.

[58] Finch, J. (1997), Power, legitimacy and academic standards. In: Standards and Quality in Higher Education, pp. 146-156. Brennan, J., de Vries, P. and Williams, R. (eds) London: Jessica Kingsley Publishers

[59] Fischer, A. R. H., Tobi, H., & Ronteltap, A. (2011). When natural met social: A review of collaboration between the natural and social sciences. Interdisciplinary Science Reviews, 36(4), 341-358. https://doi.org/10.1179/030801811X13160755918688

[60] Fischer, K., & Hödl, G. (2007). Perspectives on development studies: A short introduction. Journal für Entwicklungspolitik, 23(2), 4-11. https://doi.org/10.20446/JEP-2414-3197-23-2-4

[61] Fischer, K. (2009). Globalisierung und transnationale Akteursnetzwerke: Big business, neoliberale intellektuelle und Zentralbanker. Journal für Entwicklungspolitik, 25(4), 42-45. https://doi.org/10.20446/JEP-2414-3197-25-4-42

[62] Fu Jen (2012), Teaching Excellence Project. Fu Jen Catholic University, Taipei, Taiwan, see http://140.136.240.107/english_fju/index.php/features/features-curriculum-design.

[63] GSC (2019), Global Studies Consortium. International platform of developmental curricula. https://globalstudiesconsortium.org/

[64] Gokhale, A.A. (1995), Collaborative Learning Enhances Critical Thinking. Journal of Technology Education, 7(1). https://doi.org/10.21061/jte.v7i1.a.2

[65] Gorton, W., & Havercroft, J. (2012). Using historical simulations to teach political theory. Journal of Political Science Education, 8(1), 50-68. https://doi.org/10.1080/15512169.2012.641399

[66] Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. Teachers College Record, 103(6), 942-1012. https://doi.org/10.1111/0161-4681.00140

[67] GS (2010), Master curriculum "Global Studies". Karl-Franzens University Graz, https://online.uni-graz.at/kfu_online/wbMitteilungsblaetter.display?pNr=186789.

[68] GS (2012), website "Global Studies Graz", available at https://globalstudies.uni-graz.at/de/masterstudium/.

[69] GS site (2010), Global Studies web site (older version) at http://www-classic.uni-graz.at/vre1www/; new version at http://www.uni-graz.at/globalstudies/.

[70] Haller, M., Ressler, R. (2006), National and European identity - A study of their meanings and interrelationships. Revue française de sociologie, 47(4), 817-850. https://doi.org/10.3917/rfs.474.0817

[71] Harvey, L., Green, D. (1993), Defining Quality. Assessment and Evaluation in Higher Education, 18(1), 9-34. https://doi.org/10.1080/0260293930180102

[72] Harvey, L., & Williams, J. (2010). Fifteen years of quality in higher education (part two). Quality in Higher Education, 16(2), 81-113. https://doi.org/10.1080/13538322.2010.485722

[73] Healey, R. L. (2012). The power of debate: Reflections on the potential of debates for engaging students in critical thinking about controversial geographical topics. Journal of Geography in Higher Education, 36(2), 239-257. https://doi.org/10.1080/03098265.2011.619522

[74] HigherKOS (2012), University Didactics and Curriculum Development Centres for Kosovo, World University Service WUS, http://www.higherkos.info/hk/index.php?option=com_content&view=article&id=70%3Auniversity-didactics-and-curriculum-development-centres-dcdc&catid=39%3Acol2&Itemid=1.

[75] Huntoon, J., & Baltensperger, B. (2012). Increasing expertise in earth science education through master's education. Journal of Geoscience Education, 60(2), 147-158. https://doi.org/10.5408/11-224.1

[76] IHERD (2012), Innovation, Higher Education and Research for Development. See http://www.oecd.org/sti/innovation-highereducationandresearchfordevelopmentiherd.htm.

[77] IHME (2012), Institutional Management in Higher Education. Retrieved at http://www.oecd.org/edu/imhe/#d.en.192220. Example: the IMHE "What Works" Conference, Managing Quality Teaching in Higher Education (Mexico, 2011) http://www.oecd.org/edu/imhe/imhewhatworksconferencemanagingqualityteachinginhighereducationmexicalimexico5-6december2011.htm.

[78] Jordens, J.Z., & Zepke, N. (2009), A Network Approach to Curriculum Quality Assessment. Quality in Higher Education, 15(3), 279-289. https://doi.org/10.1080/13538320903399125

[79] Kennedy, R.R. (2009). The power of in-class debates. Active Learning in Higher Education, 10(3), 225-236. https://doi.org/10.1177/1469787409343186

[80] Koklanaris, N., MacKenzie, A. P., Fino, M. E., Arslan, A. A., & Seubert, D. E. (2008). Debate preparation/participation: An active, effective learning tool. Teaching and Learning in Medicine, 20(3), 235-238. https://doi.org/10.1080/10401330802199534

[81] Kumpfmüller, K.A. (2007), Which targets for Global Studies? – Fundamental deliberations for the inauguration of the master study's curricula commission at Graz University, Institute for International Law, Memo to the Senate of Karl-Franzens University Graz.

[82] Kumpfmüller, K.A. (2009), Draft Curriculum Global Studies, Curricula Commission, Graz University, Graz.

[83] Lantis, J. S. (2004). Ethics and foreign policy: Structured debates for the international studies classroom. International Studies Perspectives, 5(2), 117-133. https://doi.org/10.1111/j.1528-3577.2004.00162.x

[84] Lattuca, L. R., Voight, L. J. & Fath, K. Q. (2004). Does interdisciplinarity promote learning? theoretical support and researchable questions. Review of Higher Education, 28(1), 23-48. https://doi.org/10.1353/rhe.2004.0028

[85] Lattuca, L. R., Knight, D. B., & Bergom, I. M. (2012). Developing a measure of interdisciplinary competence for engineers. Chapter presented at the ASEE Annual Conference and Exposition, Conference Proceedings.

[86] Lime (2012), Suggested Process for Curriculum Development. The Lime Network, Leaders in indigenous medical education, see http://www.limenetwork.net.au/content/suggested-process-curriculum-development.

[87] Manathunga, C., Lant, P., & Mellick, G. (2006). Imagining an interdisciplinary doctoral pedagogy. Teaching in Higher Education, 11(3), 365–379. https://doi.org/10.1080/13562510600680954

[88] Masembe, C.S. and Nakabugo, M.G. (2004), Quality Assurance in curriculum development. A presentation made at the NPT Programme on "Building a Sustainable ICT Training Capacity in Four Public Universities in Uganda" Curriculum Development Workshop, Institute of Computer Science, School of Education, Makerere University, 18th-22nd October 2004, available at http://ahero.uwc.ac.za/index.php?module=cshe&action=downloadfile&fileid=81806115511821580815495.

[89] Mayer, P. et al. (2011), Challenges for faculty management at African higher education institutions. University of Applied Sciences, Osnabrück, see http://www.international-deans-course.de/idc-resources.html.

[90] Miller, M., & Mansilla, V. B. (2004). Thinking across perspectives and disciplines. Harvard Graduate School of Education, Boston, MA.

[91] Monarca, H. A. (2012). The influence of national systems of evaluation in curriculum development. [La influencia de los sistemas nacionales de evaluación en el desarrollo del currículo] Perfiles Educativos, 34(135), 164-176.

[92] Moody-Corbett, F. (1996). Debate: A tool for teaching graduate students. American Journal of Physiology, 271(6 PART 3), S45-S47. https://doi.org/10.1152/advances.1996.271.6.S45

[93] Mwinyipembe, M. (2012), Quality Assurance and Standards. Ministry of Education of Kenya, see http://www.education.go.ke/ShowPage.aspx?department=5&id=260.

[94] Nuninger, W. & Chatelet, J.-M. (2016), Introduction. In: Handbook of Research on Quality Assurance and Value Management in Higher Education, IGI Global, Hershey, PA, USA, pp. 1ff. https://doi.org/10.4018/978-1-5225-0024-7

[95] Omelicheva, M. Y., & Avdeyeva, O. (2008). Teaching with lecture or debate? testing the effectiveness of traditional versus active learning methods of instruction. PS - Political Science and Politics, 41(3), 603-607. https://doi.org/10.1017/S1049096508080815

[96] Osborne, A. (2005). Debate and student development in the history classroom. New Directions for Teaching and Learning, (103), 39-50. https://doi.org/10.1002/tl.202

[97] Perry, W. (1968). Forms of intellectual and ethical development in the college years. Holt, Rinehart, and Winston, New York.

[98] Peterson, S. L., Wittstrom, K. M., & Smith, M. J. (2011). A course assessment process for curricular quality improvement. American Journal of Pharmaceutical Education, 75(8). https://doi.org/10.5688/ajpe758157

[99] Piascik, P., & Bird, E. (2008). Creating and sustaining a culture of assessment. American Journal of Pharmaceutical Education, 72(5). https://doi.org/10.5688/aj720597

[100] Pirsig, R. (1974), Zen and Art of Motorcycle Maintenance: An Inquiry Into Values. William Morrow & Company, New York.

[101] Pirsig, R. (2011, 4th ed.), Zen and the Art of Motorcycle Maintenance. Random House, London, UK.

[102] Prager, S. D., & Plewe, B. (2009). Assessment and evaluation of GIScience curriculum using the geographic information science and technology body of knowledge. Journal of Geography in Higher Education, 33(SUPPL. 1), S46-S69. https://doi.org/10.1080/03098260903034012

[103] Reeves, S. (2009). An overview of continuing interprofessional education. Journal of Continuing Education in the Health Professions, 29(3), 142-146. https://doi.org/10.1002/chp.20026

[104] Reeves, S., Tassone, M., Parker, K., Wagner, S. J., & Simmons, B. (2012). Interprofessional education: An overview of key developments in the past three decades. Work, 41(3), 233-245. https://doi.org/10.3233/WOR-2012-1298

[105] Ried, L. D. (2011). A model for curricular quality assessment and improvement. American Journal of Pharmaceutical Education, 75(10), 196. https://doi.org/10.5688/ajpe7510196

[106] Rocca, K. A. (2010). Student participation in the college classroom: An extended multidisciplinary literature review. Communication Education, 59(2), 185-213. https://doi.org/10.1080/03634520903505936

[107] Rowlands, J. (2012). Accountability, quality assurance and performativity: The changing role of the academic board. Quality in Higher Education, 18(1), 97-110. https://doi.org/10.1080/13538322.2012.663551

[108] SAQA (2000), The National Qualifications Framework and Curriculum Development. Publication of the South African Qualifications Authority, see http://www.saqa.org.za/ structure/nqf/docs/curriculum_dev.pdf.

[109] Saunders-Smits, G., & de Graaff, E. (2012). Assessment of curriculum quality through alumni research. European Journal of Engineering Education, 37(2), 133-142. https://doi.org/10.1080/03043797.2012.665847

[110] Schmidt, T. M., & Shaw, M. (2008). A New Model for OnLine Doctoral Course Development with Faculty Quality Assessment. International Journal of Information and Communication Technology Education (IJICTE), 4(3), 69-80. https://doi.org/10.4018/jicte.2008070108

[111] Schuurman, F. J. (1993). Beyond the impasse: New directions in development theory. Zed Books.

[112] Scottish Government (2011), Building the Curriculum 5: Quality assurance and moderation. See http://www.educationscotland.gov.uk/publications/b/publicatio n_tcm4617374.asp.

[113] Simmons, B., & Wagner, S. (2009). Assessment of continuing interprofessional education: Lessons learned. Journal of Continuing Education in the Health Professions, 29(3), 168-171. https://doi.org/10.1002/chp.20031

[114] Spelt, E. J. H., Biemans, H. J. A., Tobi, H., Luning, P. A., & Mulder, M. (2009). Teaching and learning in interdisciplinary higher education: A systematic review. Educational Psychology Review, 21(4), 1-14. https://doi.org/10.1007/s10648-009-9113-z

[115] Stensaker, B. (2003), Trance, Transparency and Transformation: The impact of external quality monitoring on higher education. Quality in Higher Education, 9 (2), 151-159. https://doi.org/10.1080/13538320308158

[116] Stokols, D., Fuqua, J., Gress, J., Harvey, R., Phillips, K., Baezconde-Garbanati, L., et al. (2003). Evaluating transdisciplinary science. Nicotine & Tobacco Research, 5, S21–S39. https://doi.org/10.1080/14622200310001625555

[117] Sumaedi, S., Bakti, G. M. Y., & Metasari, N. (2012). An empirical study of state university students' perceived service quality. Quality Assurance in Education, 20(2), 164-183. https://doi.org/10.1108/09684881211219424

[118] Suskie, L. (2004) Assessing Student Learning: A Common Sense Guide. Anker Publishing, Boston, MA.

[119] Teagasc (2012), Curriculum Development & Standards. Agriculture and food development authority in Ireland, see http://www.teagasc.ie/curriculum/index.asp.

[120] Towell, E., McFadden, K. L., McCoy, W. C., & Buhrow, A. (2012). Creating an interdisciplinary business ethics program. Journal of Academic Ethics, 10(2), 93-112. https://doi.org/10.1007/s10805-012-9160-9

[121] Uchiyama, K. P., & Radin, J. L. (2009). Curriculum mapping in higher education: A vehicle for collaboration. Innovative Higher Education, 33(4), 271-280. https://doi.org/10.1007/s10755-008-9078-8

[122] UNEVOC (1993), International Project on Technical and Vocational Education. International Workshop on Curriculum Development in Technical and Vocational Education, Final report, Turin, Italy, see http://www.unesco.org/education/ pdf/23_85.pdf.

[123] Vanasupa, L., McCormick, K. E., Stefanco, C. J., Herter, R. J., & McDonald, M. (2012). Challenges in transdisciplinary, integrated projects: Reflections on the case of faculty members' failure to collaborate. Innovative Higher Education, 37(3), 171-184. https://doi.org/10.1007/s10755-011-9199-3

[124] Vilgats, B., & Heidmets, M. (2011). The impact of external quality assessment on universities: The estonian experience. Higher Education Policy, 24(3), 331-346. https://doi.org/10.1057/hep.2011.7

[125] Wagner, C. S., Roessner, J. D., Bobb, K., Klein, J. T., Boyack, K. W., Keyton, J, Rafols, I.,. Börner, K. (2011). Approaches to understanding and measuring interdisciplinary scientific research (IDR): A review of the literature. Journal of Informetrics, 5(1), 14-26. https://doi.org/10.1016/j.joi.2010.06.004

[126] Western Cape Government (2012), Curriculum Development, Quality Assurance and Research. South Africa, see http://www.westerncape.gov.za/eng/jobs/256797.

[127] Wolf, M. (2011). Mapping the field: Sociological perspectives on translation. International Journal of the Sociology of Language, 207, 1-28. https://doi.org/10.1515/ijsl.2011.001

[128] Wolverhampton (2012), Curriculum, Learning and Teaching, and Academic Quality Assurance. University of Wolverhampton, see http://www.wlv.ac.uk/default.aspx? page=11717.

[129]   Woods, C. (2007). Researching and developing interdisciplinary teaching: Towards a conceptual framework for classroom communication. Higher Education, 54(6), 853-866.
https://doi.org/10.1007/s10734-006-9027-3

[130]   Wuchty, S., Jones, B. F., & Uzzi, B. (2007). The increasing dominance of teams in production of knowledge. Science, 316(5827), 1036-1039.
https://doi.org/10.1126/science.1136099