ERASMUS+ Project
SUSTAINABLE QUALITY ENHANCEMENT IN HIGHER EDUCATION LEARNING AND TEACHING. Integrative Core Dataset and Performance Data Analytics (Acronym: SQELT)

Key Action: Cooperation for innovation and the exchange of good practices / Action Type: Strategic Partnerships for higher education

SQELT EURO-REGION WORKSHOP GERMANY
Elements of Performance Data Governance in Higher Education Learning and Teaching: Management Structures, Performance Indicators and Data Privacy

Time and Place:
1 October 2020 – Online Event – Zoom Video Conference (evalag, Mannheim, Germany)

Theme of the Multiplier Event:
The quality of education and higher education is understood in contemporary knowledge societies as an essential factor of social, economic and ecological, i.e. sustainable, development. Accordingly, learning and teaching are to be seen as the basic performance area of universities. At the same time, evaluating the quality of learning and teaching is much more difficult than in other service areas such as research and third mission. The reasons for this are manifold and range from the heterogeneity of the students to the complexity of learning processes to the difficulties in making learning outputs and the learning gain measurable at all.

It is all the more necessary to systematically develop the sustainable quality development of learning and teaching. An important perspective approach here is performance data management on the basis of performance indicators. Universities are thus pursuing their fundamental educational mandate, which is based on the following three main goals: personality development; Imparting academic knowledge and methods; Imparting knowledge and skills that enable you to practice your profession.

Aims of the Multiplier Event:
In this Erasmus+ Multiplier Event, key elements of performance data governance in learning and teaching at universities are presented and discussed in extracts. These include governance guidelines for performance data management (Performance Data Governance and Management Policy), a comprehensive set of performance indicators for learning and teaching, and an ethical code of conduct for handling performance data. The components presented were developed as part of the Erasmus+ project “Sustainable Quality Enhancement in Higher Education Learning and Teaching” (SQELT), which was coordinated by evalag. Ten partner institutions from the European Higher Education Area are involved (partner countries: Austria, Belgium, Germany, Italy, Netherlands, Norway, Poland, Portugal, United Kingdom).
The basic objectives of the workshop are to provide an insight into the elements of performance data governance in learning and teaching at universities and to raise awareness of the complexity of the topic. Against this background, the participants should reflect on and develop their basic understanding of the goals, functions and possibilities of performance data management in learning and teaching, including the use of performance indicators and the data protection regulations to be observed.

Target Audience:
The workshop is primarily aimed at employees who are responsible for the university’s own performance data management, who critically reflect on the current status and who want to take the next step towards further development. It is also aimed at people who generally deal with the development of performance indicators and the further development of university quality management in learning and teaching. The target audience comprises:
- HEI representatives and members (e.g. leadership, quality management, teaching staff, students)
- Further HEI stakeholders (e.g. quality assurance agencies, auditors and accreditors, HE politics)
- HE researchers (e.g. performance assessment, performance data management, teaching and learning models)

Activities and Contents:
- Three presentations (SQELT project methodology; Performance data governance in learning and teaching; Good practice example)
- Two working group phases
- Discussions in the plenum

Keywords
Data privacy | Performance data governance | Performance indicators of learning and teaching | Quality in learning and teaching | Quality management
THURSDAY, 1 October 2020

9:45 -10:00 h Log in to Zoom and an optional technology check
10:00 -10:30 h Welcome; Round of introductions and clarification of expectations; Explanations on the course of the workshop seminar
10:30-11:15 h Presentation and then open questions:
Prof. Dr. Dr. Theodor LEIBER (evalag, Mannheim, Germany)

**The Erasmus+ Strategic Partnership SQELT (“Sustainable Quality Enhancement in Higher Education Learning and Teaching”): Motivation, Goals and Approach**

11:15-11:30 h Break
11:30-12:00 h Short active work phase in small groups (breakout rooms) and presentation of a short conclusion:

**Exchange of Experiences on the Development Status of Performance Data Governance at the Participating Universities**

12:00-13:00 h Presentation and then open questions:
Prof. Dr. Dr. Theodor LEIBER

**The Most Important Elements of Performance Data Governance in Learning and Teaching: Governance Guidelines, Performance Indicators, Data Ethics**

13:00-14:00 h Lunch Break
14:00-15:15 h Extended active work phase in small groups (breakout rooms) and presentation and exchange of the results in the plenum:

**What Strengths and Desiderata Do You See in the Way Your Universities Deal with the Subject of Performance Data Management? Which Failure/Success Factors Can You Identify?**

15:15-15:30 h Break
15:30-16:00 h Presentation and then discussion:
Prof. Dr. Dr. Theodor LEIBER

**Good Practice Example of Performance Data Governance and Management**

16:00-17:00 h Final round:
Plenum

**Open Questions and Online Questionnaire on Selected SQELT Performance Indicators**

17:00 h End of event
CONTACT

Prof. Dr. Dr. Theodor Leiber / Project coordinator
evalag (Evaluationsagentur Baden-Württemberg)
M7 9a-10, D-68161 Mannheim, Germany
Mobil ++49(0)1752305824 / leiber@evalag.de
Tel ++49(0)621/128545-25 / https://www.evalag.de/sqelt

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Sustainable Quality Enhancement in Higher Education Learning and Teaching

Integrative Core Dataset and Performance Data Analytics

Acronym: SQELT

Grant co-funded by European Union (Erasmus+ Projects)
Key Action: Cooperation for Innovation and the Exchange of Good Practices
Action: Strategic Partnerships
Main objective of the project: Development of Innovation

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Elements of Performance Data Governance in Higher Education Learning and Teaching: Management Structures, Performance Indicators and Data Privacy

Theodor Leiber

evalag (Evaluation Agency Baden-Wuerttemberg),
Mannheim, Germany

5th Multiplier Event – Euro-Region Workshop Germany
Evaluationsagentur Baden-Württemberg, Mannheim, Germany, 1 October 2020

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The Erasmus+ Strategic Partnership SQELT
(Sustainable Quality Enhancement in Higher Education Learning and Teaching):
Motivation, Goals and Methodology

- SQELT strategic partnership & case study & goals & methodology
- Basic Elements of Performance Data Governance & Management (PDGM) in Learning and Teaching (L&T)
## Strategic partnership and case study

<table>
<thead>
<tr>
<th>Country</th>
<th>University</th>
<th>Characteristics</th>
<th>No. students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Danube University Krems</td>
<td>Further education</td>
<td>9,000</td>
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<tr>
<td>Belgium</td>
<td>Ghent University</td>
<td>Comprehensive university</td>
<td>41,000</td>
</tr>
<tr>
<td>Italy</td>
<td>University of Milan</td>
<td>Comprehensive university</td>
<td>63,000</td>
</tr>
<tr>
<td>Poland</td>
<td>Jagiellonian University Kraków</td>
<td>Comprehensive university</td>
<td>44,000</td>
</tr>
<tr>
<td>Portugal</td>
<td>University of Aveiro</td>
<td>Natural, social, engineering, medical sciences; polytechnics profile; Public</td>
<td>15,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>foundation under private law</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Birmingham City University</td>
<td>Health social, engineering sciences; business and law; art, media and design;</td>
<td>24,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Polytechnics roots</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>evalag</td>
<td>HE research, evaluations, accreditations, counseling</td>
<td>n/a</td>
</tr>
<tr>
<td>Netherlands</td>
<td>M. Beerkens, Uni Leiden</td>
<td>External expert</td>
<td>–</td>
</tr>
<tr>
<td>Norway</td>
<td>B. Stensaker, Uni Oslo</td>
<td>External expert</td>
<td>–</td>
</tr>
<tr>
<td>Portugal</td>
<td>C. Sarrico, CIPES</td>
<td>External expert</td>
<td>–</td>
</tr>
</tbody>
</table>
Goals and methodology

Workflow (schematic main steps) of SQELT project (updated)

SQELT Project Group (SPG)

Project partners
- evalag (Evaluation Agency Baden-Württemberg)
- Six (pilot) HEIs from six European countries (incl. students, leadership, QA managers, teachers)

External experts
- International experts in HEI research, performance data management (PDM) and performance data analytics (PDA)
- European Networks in Higher Education (e.g. ENQA, EUA, EURASHE, ESU)
- Representatives of Higher Education Politics (e.g., ministries of education, science and arts)

Check of match with laws and regulations in higher education (e.g., national law, federal law, accreditation regulations, ESG)

Tried and tested software models of HEIs
Check of market software offers, if applicable

Collecting & analysing existing definitions of PIIs in L&T (e.g., AHELO; Creative Classroom Research Model; U-Multirank; HEC Reports; Teaching Excellence Framework Criteria/HEFCE; Program Accreditation; research literature)

Development of initial integrative PI data set & other basic elements of PDGM

Discussion & (self-)evaluation of SQELT results (feedback proc.)

Further improvement of basic elements of PDGM based on feedback

Set up of PDGM model

Six pilot HEIs

Implementation of PDGM model in pilot HEIs

Collecting feedback (surveys) on PDGM model implementation from pilot HEIs & refinement of model

Publications: Practice-Manual on PDGM Model(s); academic publication(s)
Goals and methodology

- **Literature analysis and review** (qualitative content analysis & material inference)
- **Document analysis** (qualitative content analysis & material inference)
- **Six European university case studies**
- **Focus group discussions** (Structured interviews)
- **Online survey**

- **Addressed stakeholders**
  - Students
  - Teachers
  - Leadership
  - QM staff
  - (HE politics)
Goals and methodology

- Two main goals: individual benchlearning at partner HEIs & intensive case study including generic results (e.g. SQELT Manual; publications) (e.g. Leiber, 2019b)

- Aims at comprehensive set of performance indicators (PIs) for L&T and their PDGM framework (comprehensive: of large scope; covering or involving much; inclusive; thorough; far-reaching; broad; widespread; detailed; cross-disciplinary; different from “perfect”)

- Builds on available scholarly models of PDGM in L&T, research literature, benchlearning and surveys with respect to PDGM models of sample HEIs, and external experts’ knowledge

- Builds on various PI models (e.g. AHELO; Creative Classroom Research Model (Uni Leuven); U Multirank; HEC Reports; TEF/HEFCE; Program Accreditation; NSSE Engagement Indicators; QILT (Australian Quality Indicators for L&T); …)

Outputs of SQELT project

<table>
<thead>
<tr>
<th>O20</th>
<th>O1</th>
<th>O3</th>
<th>O4</th>
<th>O5</th>
<th>O6</th>
<th>O7</th>
<th>O8</th>
<th>O9</th>
<th>O10</th>
<th>O11</th>
<th>O12</th>
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</thead>
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Goals and methodology: Benchlearning around PDGM

Benchlearning is a way of monitoring and assessing the strategies and performance of an organization against comparable, good-practice competitors; it includes an ongoing performance improvement strategy and change management process.

“Best practice is a myth” (Fernie and Thorpe, 2007, p. 328)
Goals and Methodology:
Areas of Benchlearning around PDGM

Dimensions of benchlearning object (pragmatic selection at beginning of SQELT)

- Performance data governance & management (PDGM) policy
- **Stakeholder participation** (SP)
- **Performance indicators** (PIs), quantitative & qualitative, of various complexity
- Learning Analytics
- IT resources and software solutions
- Human and financial resources
- Ethics of PDGM

→ SWOTs of PDGM & their Strategy Matrices
   – important for Strategic Partnership & Benchlearning & Joint Development of PDGM Approach(es) –
Basic elements of PDGM

For the pursuit of these goals the following is “helpful”:

- **Identification of Stakeholders & usage of performance data** – generic –

- **Actionable Performance Data Governance & Management Policy (PDGMP) (& its various supporting documents)** – generic –: Indispensable for HEIs as autonomous, multiple-hybrid organisations: regulates issues of governance & strategy; ethics & responsibility, including sustainability; quality, accessibility & usability of information & data (about student lifecycle); investments of human & financial resources.

- **(Digital) PDM System** is required that makes performance data/information operational and coherent. – ‘quasi-generic’ –

- **Suitable set of PIs** to monitor, measure & report information & data related to L&T – ‘quasi-generic’, comprehensive –

- **Systematic & ongoing reflection** of methodological & ethical issues of PDGM is essential to secure validity, reliability, moral values – (theoretically) generic (in the EU) –

- **Vivid PDGM culture**; sufficiently widespread understanding of PDGM ownership & related interpretation capabilities & evidence-based decision-making
(Widespread) Anecdotal opinions & ‘misunderstandings‘ around PIs in (L&T of) higher education (bring motivation)

- Unclear/vague/diverse concepts of: quality, performance, indicator, learning, teaching, etc.

- Unclear or even questionable whether PIs are related to/grasp quality/the degree to which quality performance objectives [can be or] are being met

- Unclear how PIs are/can be measured

- Related: “There are hundreds of L&T theories”

- (Tacit) Assumption that isolated PIs are sufficient for evidence-informed decision-making

- (Tacit) Assumption that a few core PIs suffice for decision-making and governance

- No overview available in the form of a comprehensive PI set

- PIs are quantitative PIs only

- Assumption that performance measurement issues can be communicated within 1:30 min
Thank you very much for your attention!
References

References


References

References

References

References

The Most Important Elements of Performance Data Governance & Management (PDGM) in Learning and Teaching: Governance Guidelines, Performance Indicators, Data Privacy

- Stakeholders & Usage of Performance Data – generic –
- (Digital) PDM System – ‘quasi-generic’ –

- Governance Guidelines / PDGM Policy (& its various supporting documents) – generic –
- Performance Indicators (selected from comprehensive PI set) – ‘quasi-generic’ –
  - Theories of Learning and Teaching (TOLT) and Their Models
  - Justification and Contextualisation of Performance Indicators (PIs) of L&T: The complicated interweaving of types of performance, indicators and learning theories

- Data Privacy/Ethics of PDM – generic (in the EU) –
# Stakeholders and usage of L&T performance data

<table>
<thead>
<tr>
<th>Stakeholders – groups &amp; individuals</th>
<th>Areas and tasks for using performance data of L&amp;T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching staff</td>
<td>Instructional processes; action research; assessment practices; learning processes; teaching effectiveness; teaching evaluation</td>
</tr>
<tr>
<td>Students</td>
<td>Learning processes; self-monitoring of own academic progress (Learning Analytics)</td>
</tr>
<tr>
<td>Researchers</td>
<td>Student-centred research initiatives; pedagogy research; learning-related research</td>
</tr>
<tr>
<td>Department heads/ Programme directors</td>
<td>Teaching effectiveness; teaching evaluation; programme evaluation; student flow-through; student dropout rates &amp; failure; student retention strategies</td>
</tr>
<tr>
<td>Deans</td>
<td>Empowering education research; enhancing reputation; improving accountability</td>
</tr>
<tr>
<td>Government &amp; policy makers</td>
<td>Improving accountability; assessing impact of policy changes</td>
</tr>
<tr>
<td>Community &amp; donors</td>
<td>Educational outreach</td>
</tr>
<tr>
<td>Executive officers</td>
<td>Process optimisation; improving graduation rates; improving retention rates; empowering education research; enhancing reputation; improving accountability</td>
</tr>
<tr>
<td>Survey supervision staff</td>
<td>Improving user experience; improving survey usability &amp; performance; improving survey design</td>
</tr>
<tr>
<td>Administration staff (Student Affairs)</td>
<td>Monitoring student progress, student flow-through; managing student intervention (at-risk students); developing retention strategies</td>
</tr>
</tbody>
</table>

Dealing with/handling of PIs? Usage on which organisational levels?
(Digital) **PDM System:**
Operationalise stakeholders' usage of valid and reliable performance data
Regulate collecting, processing, categorising, aggregating of PD & info
Match different PD(M) systems & databases?
SQELT project
https://www.ev
Core purposes of PDGM Policy:

- Define **roles and responsibilities** for different data creation & usage types, cases or situations, & to establish clear lines of accountability;
- Develop good quality practices for effective **data management & protection**;
- Protect the HEI’s data against internal & external threats; particularly assure **protection of privacy, academic freedom, intellectual property, information security & compliance**;
- Ensure that the HEI’s data handling **complies with applicable laws, regulations, exchange & standards**;
- Ensure that a **data trail is effectively documented** within the processes associated with accessing, retrieving, exchanging, reporting, managing & storing of data.

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Governance Guidelines/PDGM Policy

Full version will be available after end of SQELT project (https://www.evalag.de/sqelt/)

Template

Performance Data Governance and Management Policy (PDGMP)
of [insert name of higher education institution]
With Focus on Performance Data of Learning and Teaching, including Learning Data Analytics, to be Accompanied by Supporting Documents

Content
Policy Statement ................................................................. 3
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References ................................................................. 18
e.g., Leiber, T. (2019b) “A general theory of learning and teaching and a related comprehensive set of performance indicators for higher education institutions.”

*Quality in Higher Education* 25(1), 76-97.

**Abstract**

… performance indicators are an indispensible element ... learning and teaching quality in higher education should be approached in a holistic way, namely across the four subdomains of learning and teaching environment, teaching processes, learning processes, and learning outcomes and their assessment. Performance indicators related to these areas must align with a synoptic understanding of learning and teaching comprising behavioural, information processing, cognitive, social (constructivism) and humanistic theories of learning. Selected issues from a comprehensive set of about 280 performance indicators for learning and teaching are presented and contextualised. The indicators set resulted and emerged from critical reflection of research literature and explorative surveys of various informed and engaged stakeholders, from 14 public European universities, and a general theory of learning and teaching.
Few selected arguments for PIs:

‘PIs can be defined as concepts that represent qualitative and quantitative information and data, which indicate functional qualities (‘performance’) of institutional, organisational or individual performance providers. As such, PIs provide information about the degree to which quality performance objectives [can be or] are being met. This modelling perspective seems to be indispensable for any systematic approach to QM, particularly development-oriented QM in HEIs’ (Leiber, 2019b, 77).

- PIs are (only) indicating aspects about their related performance; PIs are not “complete or perfect images” of their related performance

- ‘PIs reflect the quality goals (‘targeted performance’) of institutions, institutional units and programmes’ (Leiber 2019b, 77), in more direct or more indirect ways

- PIs can ‘open the way to objectify communication and operationalisation of quality relevant features and, in the case of quantitative PIs, measure them’ (Leiber 2019b, 77)
Performance Indicators

Few selected arguments for PIs:

- ‘PIs are used by HEIs for two primary reasons
  - to facilitate monitoring, assessing and evaluating their performance for the purposes of internal or external QM (for example, in audits, evaluations and accreditations)
  - to provide information to the financiers (e.g., government, taxpayers) and potential beneficiaries (e.g., students, broader public) for accountability and reporting purposes’ (Leiber 2019b, 77).

- ‘PIs are used at the national and international level mainly
  - to ensure accountability for public funds
  - to facilitate national and international comparisons of HEIs, e.g., by [...] [benchmarking], ratings and rankings, which are based on PIs’ (Leiber 2019b, 77)

- ‘ [...] single PIs, or single types of PIs will usually sketch trends and reveal interesting questions. Due to the performance complexity of the social multiple-hybrid organisations called HEIs, single PIs do not, as a rule, provide objective explanations that exhaustively cover a certain performance area or achievement. [...] the measurement of single PIs normally does not permit immediate conclusions for quality improvement measures to be drawn in the sense of the Deming quality cycle. [...] PIs need to be interpreted and contextualised in light of manifold information concerning strategies, purposes and operation at institutional and programme levels. Accordingly, multiple sources of both quantitative data and qualitative information are needed to make PIs really informative about quality performance and make them a source of evidence for implementing enhancement measures’ (Leiber 2019b, 77-78).
### Performance Indicators

Full version will be available after end of SQELT project (https://www.evalag.de/sqelt/)

<table>
<thead>
<tr>
<th>Performance types</th>
<th>Performance subtypes</th>
<th>PI's and their measures/performance measurement methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching staff workload</td>
<td>Official teaching commitment in average semester or trimester or year hours per week per subject field and/or study programme</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teaching staff workload (according to relevant quality criteria to be identified, e.g. number of teaching hours per semester week; number of courses) that could be assessed by satisfaction surveys of relevant groups of teaching staff (e.g. of a subject field, study programme)</td>
<td></td>
</tr>
<tr>
<td>Teaching skills</td>
<td>Proportion of teaching staff who participated in pedagogical training (according to relevant quality criteria to be identified, e.g. didactics of Transformative and Holistic Continuing Self-Directed Learning (THCSDL))</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of teaching staff who participated in support activities for their adaptation of technology-enhanced L&amp;T (e.g. e-learning, flipped classroom) (according to relevant quality criteria to be identified)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of teaching staff who participated in peer support systems for teaching staff (according to relevant quality criteria to be identified)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of teaching staff who participated in teaching observation (according to relevant quality criteria to be identified)</td>
<td></td>
</tr>
<tr>
<td>Quality of teaching staff, teaching and teaching staff engagement</td>
<td>Quality of teaching courses of recruitment candidates for teaching staff (according to relevant quality criteria to be identified, e.g. didactics of Transformative and Holistic Continuing Self-Directed Learning (THCSDL)) that could be assessed by (satisfaction) surveys of students and teaching staff</td>
<td></td>
</tr>
<tr>
<td>Teaching staff recruitment</td>
<td>Quality of recruitment procedures (according to relevant quality criteria to be identified, e.g. procedural responsibilities; recruitment and selection process; recruitment quality criteria) for lecturers/associate professors/full professors (according to relevant quality criteria to be identified, e.g. teaching skills, pedagogic skills, research activities) that could be assessed by (satisfaction) surveys of students, surveys of teaching staff and assessment reports by experts/peers (other than students and teaching staff) (SUSTEX)</td>
<td></td>
</tr>
<tr>
<td>Publications and presentations</td>
<td>Number and/or percentage of non-refereed publications during a certain time period (e.g. three years) per FTE (full-time-equivalent) member of teaching staff and/or per subject field and/or per study programme</td>
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</tr>
<tr>
<td></td>
<td>Number and/or percentage of refereed publications during a certain time period (e.g. three years) per FTE (full-time-equivalent) member of teaching staff and/or per subject field and/or per study programme</td>
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<td></td>
<td>Number and/or percentage of double-blind refereed publications during a certain time period (e.g. three years) per FTE (full-time-equivalent) member of teaching staff and/or per subject field and/or per study programme</td>
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<td></td>
<td>Number and/or percentage of non-refereed presentations at academic conferences during a certain time period (e.g. three years) per FTE (full-time-equivalent) member of teaching staff and/or per subject field and/or per study programme</td>
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In practice and theory, the ethics of why and how which (performance) data are collected and used is a core issue: HEIs (and other social organisations as well) are required to develop ethical codes of practice for (performance) data management and to adopt them explicitly as part of their governance approach.

Various legal or regulatory requirements already exist for handling data and information at national, European and international levels, that must be observed by HEIs.

So far not very many HEIs have addressed ethical issues in their comprehensive complexity at the organisational levels. Therefore, it is important for any HEI to develop clear principles and guidelines on ethical data use.

Although, the responsibility for data ethics ultimately rests with an organisation’s leadership, ethical behaviour in collecting, accessing, interpreting and using data, particularly education data, is the responsibility of every individual member of an educational organisation. To make this a reality, comprehensive organisational structures, responsibilities and practices must be established which encourage ethical conduct.
Ethical Code of Practice for (Performance) Data Management (ECPDM) (SQELT project)

- ECPDM clarifies who and what it applies to
- Seven ethical principles of data management are presented
- Six moral and lawful bases for data management are characterised
- Eight individual rights related to data management are described

- Insights and recommendations: The six partnership universities – UA; BCU; Ughent; JU in Kraków; DUK; UNIMI – already achieved to implement most of the GDPR principles. All partnership universities have an institutional digitalised information and data system. The majority of universities has important constituents of ethical data management (in L&T) in place.

The six universities also identify weaknesses, opportunities and threats.
Data Privacy/Ethics of PDM

**Ethical Code of Practice for (Performance) Data Management (ECPDM)** (SQELT project)

- Omnipresent *weaknesses* reported by all partnership universities:
  - Deficiencies in dissemination and implementation of good data ethics conduct ("institution-wide quality culture of data ethics")
  - Practical incompleteness of institutional digitalised information and data systems

- Three main *opportunities*:
  - Improve on compliance with ECPDM and thus improve on compliance with GDPR
  - Learn from national and international ethical codes of practice for data management
  - Learn from national legislation on information and data management

- The big *threats*:
  - There is always the risk of hacker attacks to the university’s digitalised information and data system
  - Omnipresent risk of unduly use of data that breaches the GDPR and this ECPDM
Data Privacy/Ethics of PDM

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- The right to be informed ........................................
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- The right to data rectification ........................................
- The right to data erasure ........................................
- The right to restrict data processing ........................................
- The right to data portability ........................................
- The right to object data processing ........................................
- Rights in relation to automated decision-making and profiling ........................................
INSIGHTS AND DEVELOPMENT OPTIONS FROM THE SQELT CASE STUDIES .......... 12

Full version is available on SQELT project website
(https://www.evalag.de/en/research/sqelt/intellectual-outputs/)

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Table 3: Project Workbook Framework on Data Ethics (PWFDE)

<table>
<thead>
<tr>
<th>PRINCIPLES OF DATA HANDLING ETHICS AND ASSOCIATED TASKS</th>
<th>LICKERT SCALE FOR THE ASSESSMENT OF TASKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clarify the project goals that are oriented at user need and stakeholders’ benefit</td>
<td>Project goals are not well defined</td>
</tr>
<tr>
<td>Describe the project goals with supporting evidence</td>
<td></td>
</tr>
<tr>
<td>Orienting questions:</td>
<td></td>
</tr>
<tr>
<td>How do the project goals benefit various users and stakeholders and clients?</td>
<td></td>
</tr>
<tr>
<td>How is it achieved that everyone in the project team understands the project goals?</td>
<td></td>
</tr>
<tr>
<td>2. Obey the relevant legislation, ethical rules and codes of practice</td>
<td>Obeyance of relevant legislation, ethical rules and codes of practice is not given</td>
</tr>
<tr>
<td>Obey the pieces of legislation, ethical guidance and codes of practice that apply to the project.</td>
<td></td>
</tr>
<tr>
<td>Orienting questions:</td>
<td></td>
</tr>
<tr>
<td>How is it achieved that evidence is given that all Ethical Principles of Data Management, Moral and Lawful Bases for Data Management and Individual Rights related to Data Management of the above ECPDM are respected in the project, if applicable.</td>
<td></td>
</tr>
<tr>
<td>How is it achieved that everyone in the project team understands which legislation, ethical guidance and codes of practice referring to data handling apply in which ways to the project?</td>
<td></td>
</tr>
</tbody>
</table>
**Strengths, Desiderata, Success Factors of Performance Data Management in HE**

*(SWOT Analysis)*

- Notorious **success factors** of QM and OD are non-trivially (also) relevant for successful **PDGM**, among them
  - To foster and disseminate personal characteristics for **ethical behaviour**, including **self-competences** and **social competences**
  - To oblige **leadership**
  - To assure data and reporting quality including proper **design**, tested **validity**, **reliability** and **communicated purposes** of data collection
  - To **involve relevant stakeholders** in all PDGM development and application phases (**participative approach**)
  - To **close the quality** (Deming) **cycles** (**PDCA**)  
  - To **restrain the various biases** of applied surveys 
  - To **invest sufficient resources** (time, money, competences, human workforce)

**Strengths, Desiderata, Success Factors of Performance Data Management in HE (SWOT Analysis)**

- **Benchlearning** and **strategic SWOT analyses** exhibit the **need of several EBOCD initiatives** to further develop, **improve** and refine the **PDGM models** of the case study universities.
- Thus, PDGM in L&T have the following **organisational transformation needs**:
  - Procedures of data processing & communication, software platforms & responsible bodies for collecting and interpreting PIs must be (further) developed to improve **quality** as well as **usability** and **accessibility** of data & information. Particularly, there is a need for better organising PDGM systems that **avoid multiple island solutions** & unnecessary resources’ consumption.
  - The ‘real’ **performance monitoring needs** of HEIs must be **balanced** with various **policy demands** originating from traditional disciplinary attitudes as well as from education politics.
Strengths, Desiderata, Success Factors of Performance Data Management in HE (SWOT Analysis)

- Processes, bodies and human resources for fostering participative responsibility for PDGM including more efficient decision-making of collegial bodies must be established.
- Educational strategies (mission, values, vision) must be established, including the prospects and ambiguities of PDGM and learning analytics.

• Currently, the following success factors of PDGM can be identified:
  - Justifiable belief in success promises of PDGM;
  - Leadership engagement;
  - Reflected understanding and practice of PD(G)M based on adequate/sufficient & self-determined PI sets;
  - Participatory, transparent PDGM Policy comprising a reflected PDGM ethics;
  - Adequate financial climate.

(It is one of the goals of the SQELT project to improve on these factors in the Strategic Partnership’s HEIs.)
L&T Performance Data Governance and Management: Example of Good Practice

- The University of Aveiro Internal Quality Assurance System – SIGO_UA
- Learning and Teaching Quality Assurance at the University of Aveiro
- University of Aveiro Performance Data Management (PDM)
  - The Model
  - SWOT Analysis
The University of Aveiro
Internal Quality Assurance System – SIGO_UA

• **1973**: UA founded
• Since **1997**: Implementation of an internal QA system (SIGQ_UA – Sistema Interno de Garantia de Qualidade); gives consistency and coherence to the set of actions the UA is developing
• **1997**: creation of Vice-Rectory for Quality: strategic goal to fulfil the institutional policy for the assurance of the established quality and its continued enhancement in the various core mission areas, in line with national and European quality benchmarks in higher education
• **2009**: UA became a Foundation, introduced a **new management model** and clearly assumed QA as one of the institution’s strategic vectors
The University of Aveiro Internal Quality Assurance System – SIGO_UA

Three interconnected levels: strategic, core and support processes

Integrate the quality component in the institution’s own activity: SIGQ_UA is run and managed within the existent decision-making bodies and services of the UA – no specific bodies or units responsible for managing and running SIGQ_UA have been created (although tasks, responsibilities and resources of individuals and bodies have been defined)
L&T Quality Assurance at the University of Aveiro

UA’s institutional strategy comprises:

• Commitment to the permanent consolidation of the quality of educational offer
• With special attention to the needs of society and of the job market
• And the processes of formal accreditation
• And the academic success and social well-being of its students.

• Vice-Rectors with responsibilities for educational matters
• Doctoral School, which coordinates activities in the 3rd cycle
• A Pro-Rector with specific competences for the evaluation and accreditation of study cycles
L&T Quality Assurance at the University of Aveiro

In the creation and revision of study cycles, the participation of internal and external stakeholders is guaranteed through

- the Scientific Council (SC)
- the Pedagogic Council (PC)
- the Council of Organic Unit (OUC)
- the Self Evaluation Committee
- Consultation with external partners (e.g. businesses, local authorities, schools, HEIs)
L&T Quality Assurance at the University of Aveiro

Used in these processes (monitoring, revising, creating and closing study cycles):

- **Indicators** of attractiveness, student success and satisfaction, employability
- Results of the Quality Assurance Subsystem _course_ (SubGQ_UC) and the Quality Assurance Subsystem _study cycle_ (SubGQ_curso), generated every semester
- Results of **self-evaluation** and of **external evaluation/accreditation**, occurring periodically,
L&T Quality Assurance at the University of Aveiro

Basic areas of QA in L&T at the University of Aveiro (general scheme)
(Digital) **PDM System:**
Operationalise stakeholders' usage of valid and reliable performance data
Regulate collecting, processing, categorising, aggregating of PD & info

Match different PD(M) systems & databases?

SQELT project
https://www.evalag.de/sqelt
University of Aveiro PDM: The Model

UA Performance Data Management Model in L&T (general scheme)
University of Aveiro PDM: The Model

Different PIs are calculated mainly under the SubGQ_UC (since the other subsystems are still in an early stage of implementation). The UA collects PIs of participation, process and results.

- **Participation PIs**
  - % of students participating in the SubGQ_course
  - % of teaching staff participating in the SubGQ_course

- **Processes PIs**
  - % of PMO
  - % of BP
  - % of voluntary PM
  - ECTS nominal/ECTS real

- **Results PIs**
  - UCs performance (average score)
  - Teachers performance (average score)
  - Approval rate 1 – approved/evaluated students (%)
  - Approval rate 2 – approved/total enrolled (%)
Regarding **L&T outcomes**, the UA collects data and uses PIs on academic performance for the entire population. It also collects employability data and determines employability indexes through surveys to its graduates.
University of Aveiro PDM: The Model

**L&T Environment** is monitored through PIs designed for characterizing the student population, aspects of staff composition, and the HEI’s facilities and teaching capacities. Student population indicators include access and enrolment in the study programmes, as well as characteristics of the actual students enrolled in them.

- **Enrolment**
  - n° of vacancies
  - n° of candidates/n° vacancies
  - % of candidates by preference option
  - n° of students enrolled by n° of vacancies (%)
  - n° of students enrolled in 1st option by n° of students enrolled

- **Enrolled Students**
  - n° of students
  - n° of students in post-graduation
  - n° of 1st year students
  - n° of 1st year international students
  - n° of international students
  - minimum mark of students enrolled
  - average mark of students enrolled
University of Aveiro PDM: The Model

Staff monitoring is accomplished through PIs for academic and non-academic staff.

**Academic staff**
- n.° of academics FTE/total n.° of academics
- n.° of academics with doctorate/n.° of academics FTE
- n.° of students/n.° of academics FTE

**Non-academic staff**
- n.° of non-academic staff/n.° of students
- n.° of non-academic staff/n.° of academic staff FTE
University of Aveiro PDM: The Model

SubGQ_UC
- students questionnaire: adequacy and modernity of equipment (laboratories, computer rooms, etc.)
- teachers questionnaire: assess the resources available for the course; students number by course was adequate

SIG-UA (WebGIS) + Patrimony
- all buildings, between buildings and within buildings areas are geographically referenced
- all equipment within buildings are referenced

PIs for L&T Environment – capacity
University of Aveiro PDM: SWOT Analysis

**Strengths**

- A consolidated QA sub-system for the course units (SubGQ_UC), which is recognised and appropriate for the institution;

- A consolidated Information System (SIUA), with a high level of maturity, capable of providing an adequate response to the demands of the L&T internal QA system;

- A Data Portal with essential information for the management and decision-making;

- An Information System developed using the skills and knowledge of the personnel at UA, which permits it to grow and adapt itself to the specificities of the institution.
University of Aveiro PDM: SWOT Analysis

Weaknesses

- **Not all the data** that could be **relevant** for L&T quality improvement is **collected** and/or **treated**;

- **Some interesting PIs** are **not yet incorporated** in the Data Portal;

- Some of the subsystems which constitute the UA Information System need to be reviewed in order to **improve factors of usability, accessibility and the quality of information search**;

- **Some relevant data and PIs are still not available** to the UA community at large.
University of Aveiro PDM: SWOT Analysis

**Opportunities**

- The institutional capacity to change (by adapting the information systems to current technological trends and greater involvement of users in the design and validation processes of the improvements to be implemented);

- Favourable climate for the consolidation of the internal QA system and the broadening of the procedures of performance analysis;

- The degree of maturity and consolidation of the SubGQ_UC which contributes to reinforce the actors’ involvement;

- Participation in international rankings and research projects (e.g. SQELT).
University of Aveiro PDM: SWOT Analysis

**Threats**

- The monitoring of performance quality **centred on multiple numerical data** may lead to an excessive and not necessarily positive quantitative analysis regarding the measurement of L&T quality;

- The danger of not being able to **adequately relate the PIs with the real functioning of the institution.**
University of Aveiro PDM: SWOT Analysis

**Future outlook**

UA attempts to gain knowledge and information relevant for the improvement of its PDM model regarding the following aspects:

- **Identification of the most important data** to be collected and **PIs** to be developed for adequately assuring and improving the quality of L&T;

- How to **assure** that the **data** collected (and the PIs defined based on it) is **accurate**, **consistent** and **kept secure** within the UA;

- **How to decide on who** in the institution **should have access** to the existent data and PIs and for **what purposes**; (ethical behaviour; competences; confidence)
University of Aveiro PDM: SWOT Analysis

**Future outlook**

UA attempts to gain knowledge and information relevant for the improvement of its PDM model regarding the following aspects:

- How to **improve internal actors’ capabilities to analyse and interpret the existent data** and **PIs** so they can actually be used to **support decision-making** and contribute to quality improvement;

- How to implement an **effective learning analytics system**, able to understand and optimize learning in the University, as well as the environment in which it occurs.
Final Round: Open Questions, Online Survey about Selected SQELT Performance Indicators

- We kindly ask you to participate in the SQELT online survey about a selected subset of PIs of L&T:

- The online **survey is available at**

You can interrupt answering the questionnaire at any time and temporarily save your entries. We **kindly ask you to respond no later than 15 October 2020.**

- ...
Final Round: Open Questions, Online Survey about Selected SQELT Performance Indicators

Goal and Privacy Policy

The partners of the Erasmus+ Strategic Partnership SQELT (“Sustainable Quality Enhancement in Higher Education Learning and Teaching”; https://www.evalag.de/sqelt/) would like to kindly invite you to participate in this survey about performance indicators in higher education learning and teaching. The survey will take approximately 20-30 minutes.

Through this survey the Erasmus+ Strategic Partnership SQELT would like to gather various stakeholders’ assessments about a selected subset of a larger comprehensive set of performance indicators that was developed in the SQELT project between 2017 and 2020. The survey results will be used for academic purposes only as a feedback to the SQELT performance indicator set. All collected data will be treated as confidential and in anonymised form and will not be processed for other purposes than those mentioned above. Information and data handling is carried out in accordance with the GDPR. Particularly, collected data will not be kept for longer than is necessary for data evaluation and interpretation.

We kindly ask you to respond no later than 15 October 2020.

If you have any questions or doubts, please contact Prof. Dr. Dr. Theodor Leiber (coordinator of Erasmus+ project SQELT) at: Evaluationsagentur Baden-Württemberg, M7 9a-10, D-68161 Mannheim, Germany or leiber@evalag.de

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Section A: General Questions about Your Affiliation

A1. Please name your organisation where you work or study (e.g. university, quality assurance agency, European higher education network):

Evaluation Agency Baden-Württemberg

Section B: Performance Indicators of Teaching Competences and Processes

B1. In your view, how important are the following performance indicators for the quality management of learning and teaching in higher education?

- Teaching Staff Workload (e.g. official commitment of teaching hours per semester/week, number of teaching hours per semester/week, number of courses)
- Proportion of teaching staff who participated in pedagogical training
- Quality of recruitment procedures for lecturers/associate professors/full professors (e.g. procedural responsibility, recruitment and selection process, recruitment quality criteria)
- Number and/or percentage of refereed publications during a certain time period (e.g. three years) per FTE (full-time-equivalent) member of teaching staff and/or per subject field and/or per study programme
- Teaching staff didactics competences and pedagogical knowledge and skills

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Final Round: Open Questions, Online Survey about Selected SQELT Performance Indicators

Section C: Performance Indicators of Learning Competences and Processes

CI. In your view, how important are the following performance indicators for the quality management of learning and teaching in higher education?

- **STUDENT WORKLOAD** (e.g. number of learning hours per semester week, number of courses)
- **AVERAGE DURATION PER STUDENT INTERACTION WITH COURSE ACTIVITIES** (e.g. solution of exercises, watching videos, listening to lectures, participation in working groups, etc.)
- **STUDENTS’ DISPOSITIONS, VALUES AND ATTITUDES TOWARDS LEARNING** (measured on the basis of learner data and pedagogical descriptors, e.g. learning-related emotions such as enjoyment, curiosity, frustration, anxiety; ability in deactivating negative learning emotions; learning strategies)
- **STUDENTS’ COMPETENCES WITH RESPECT TO LEARNING AND SELF-DIRECTED LEARNING (SDL)** (e.g. students’ knowledge and understanding of learning theories, own learning processes, problem-based learning, research-based learning, internships, online learning, mobile learning, blended learning)
- **OVERALL QUALITY OF STUDENT LEARNING EXPERIENCE**

Section D: Performance Indicators of Learning Outcomes and Learning Gain and Their Assessment

DI. In your view, how important are the following performance indicators for the quality management of learning and teaching in higher education?

- **PERCENTAGE OF CREDIT POINTS AWARDED IN SERVICE-LEARNING ACTIVITIES** (e.g. students in community service activities and social work) in relation to total number of credit points
- **NUMBER AND PERCENTAGE OF STUDENTS WHO DID NOT COMPLETE THE FIRST YEAR OF STUDY**
- **NUMBER AND PERCENTAGE OF STUDENTS WHO DID NOT COMPLETE THE UNDERGRADUATE PROGRAMMES WITHIN THE PLANNED PROGRAMME DURATION** (Bachelor graduation on time)
- **NUMBER AND PERCENTAGE OF STUDENTS WHO DID NOT COMPLETE THE GRADUATE PROGRAMMES WITHIN THE PLANNED PROGRAMME DURATION** (Master graduation on time)
- **STUDENT ATRITION (DROP-OUT)** (per year per higher education institution and/or per subject field and/or per department/institute and/or per study programme)
- **NUMBER AND PERCENTAGE OF BACHELOR STUDENTS PERFORMING AN INTERNSHIP** (per higher education institution and/or per subject field and/or department/institute and/or study programme)
- **NUMBER AND PERCENTAGE OF BACHELOR GRADUATES WHO WITHIN A CERTAIN TIME PERIOD AFTER GRADUATION** (e.g. six months and/or one year) ARE UNEMPLOYED (per higher education institution and/or per subject field and/or department/institute and/or study programme)
- **NUMBER AND PERCENTAGE OF BACHELOR GRADUATES WHO WITHIN A CERTAIN TIME PERIOD AFTER GRADUATION** (e.g. six months and/or one year) ARE INVOLUNTARILY EMPLOYED IN AN OCCUPATION WITH A QUALIFICATION FRAMEWORKS LEVEL BELOW THE ATTAINED LEVEL (per higher education institution and/or per subject field and/or department/institute and/or study programme)
- **NUMBER AND PERCENTAGE OF MASTER GRADUATES WHO WITHIN A CERTAIN TIME PERIOD AFTER GRADUATION** (e.g. six months and/or one year) ARE UNEMPLOYED (per higher education institution and/or per subject field and/or department/institute and/or study programme)
Final Round: Open Questions, Online Survey about Selected SQELT Performance Indicators

Section E: Performance Indicators of Learning and Teaching Environment

E1. In your view, how important are the following performance indicators for the quality management of learning and teaching in higher education?

- Students’ learning gain with respect to social competences (e.g., team skills, communication, and leadership competences; empathy; ability to cooperate; ability to solve conflicts)
- Students’ learning gain with respect to self-competences (e.g., self-determination; capability of decision and learning; flexibility of action; ability to reflect; sovereignty)
- Overall quality of study experience during the student life cycle

- Number and/or percentage of students with non-traditional background (e.g., interviews, non-academic families, disadvantaged ethnic and religious groups) (per higher education institution and/or per subject field and/or per department/institute and/or per study programme)
- Number and/or percentage of students who use networking options provided by the higher education institution that meet their study interests (e.g., student research groups)
- Number and duration of student interactions with teaching staff in the classroom (per semester or study period)
- Number and duration of student interactions with teaching staff on digital platforms (per semester or study period)
- Number and duration of student interactions with teaching staff during additional activities (e.g., research work, research camps, consultations, conferences) (per semester or study period)
- Students’ entrance grades (per study programme)
- Students’ grades of introductory courses and/or examinations (e.g., in mathematics, languages) (per study programme)
Final Round: Open Questions, Online Survey about Selected SQELT Performance Indicators

Section F: Two Final Questions about Your Assessment of the Role of Performance Indicators

Thank you very much for the time to respond. Please click on the Submit button to submit your answers.

F1. Which challenges and opportunities do you see when using performance indicators of learning and teaching at your institution (e.g. in quality assessments/evaluations; accreditation; benchmarking/classification; decision-making), if applicable? [max. 3000 characters]

With selected PI (according to common needs, profiles, wishes etc.) are indispensable in generation evidence-informed assessments about an organisation’s performance. Therefore, reliable and reliable PI information and data are required for any organisational improvement.

There is the risk and misleading thinking that still PIs are often considered as quantitative PIs only. A challenge is to develop and others relevant PI that report the internal phenomena/plausible and are not undermined way. Another challenge when using PIs is to take care of the individuals’ privacy according to GDPR or similar regulations.

It is a challenge (that has not been solved so far) that such PIs anyway do not make explicit nor transparent the use of PIs (although they make use of them).

F2. In your view, in which ways do performance indicators improve decision-making in higher education? [max. 3000 characters]

Decision-making is a lengthy and extended process based on information gathering, conceptual ordering and assessments which, ideally, ends with a list of ordered preferences. If performances shall be assessed, such decision processes require qualitative and/or quantitative performance indicators. (This does not imply the assumption that decision processes are always completely rationalised in the described sense. Instead, they may frequently occur irrational or irrational elements (e.g. imperfect analysis, selector preferences,-augmentations, dilemmas) that set limitations to rational decisions that cannot in general be overcome by the use of performance indicators only.)
Final Round: **Open Questions**, Online Survey about Selected SQELT Performance Indicators

- ...

- ...