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Towards achieving programme level and module level learning outcomes through the adoption of Total Quality Management

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Outline



The Bologna Process

2nd cycle, Stakeholders

**Learning outcomes – Tuning
Methodology**

Programme Level (What, Who, Why)

Module Level (What, Who, When, Why)

Total Quality Management (How, Why)



Total Quality Management



Total quality management (TQM) is an integrated effort designed to improve quality performance at every level of the organisation.

Important aspects of TQM include

**customer-driven quality,
top management leadership and commitment,
continuous improvement,
fast response,
actions based on facts,
employee participation (empowerment) ,
and a TQM culture.**



Bologna aspirations



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"In the decade up to 2020 European higher education has a vital contribution to make in realising a **Europe of knowledge** that is highly **creative and innovative**... Europe can only succeed in this endeavour if it **maximises the talents and capacities** of all its citizens and fully engages in **lifelong learning** as well as in widening participation in higher education."

Ministers responsible for Higher Education in the countries participating in the Bologna Process, Leuven/Louvain-la-Neuve Communiqué, April 2009

{<http://www.ond.vlaanderen.be/hogeronderwijs/bologna/>}



Global Knowledge Society



Building the Global Knowledge Society requires:

Systemic and Institutional Change in HE

Culture Change

- knowledge sharing
- comparability
- diversity
- autonomy
- transferability



Total Quality Management (how)



- We assume that there is an acceptance at least at high level (eager or reluctant) to work towards European and (ultimately) global integration and harmonisation.
- Commitment to Quality from Senior Management is imperative if procedures, tools, and databases are to be developed, supported and financed (who)



The right team for successful implementation



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- For successful implementation, the right team, work-group and task force must be appointed and supported. **(who)**
- People in the Quality groups (process improvement team, process review team, knowledge improvement team, knowledge transfer team, quality assurance team (also undertaking audits)) are required to be highly mature and capable in terms of understanding Quality so that they can champion quality, plan and execute the plan successfully **(how)**



Roles and responsibilities (who, what)



The roles and responsibilities of each team and of the individuals in each team must be unambiguous.

It is these teams that will raise the motivation, basic knowledge, understanding, and maturity for each and every member of the organisation.

For this purpose, organisation-wide training should be arranged.



How/Why?



The experienced trainer should impart training in order to minimise resistance and to motivate staff to embrace quality initiatives.

This will ensure that, people in the organisation are on the same wavelength when they are dealing with Quality.

Training, group discussions, sharing of knowledge are essential to bring the change. Also motivation, exchange of ideas, and quality awareness are the cornerstones of a quality culture and critical to 'institutionalise' the change.



Culture change requires Knowledge Management (KM) and knowledge sharing



The development and adoption of a new QA system will inevitably bring changes to the organisational structure and changes to the processes.

Knowledge Management has its origin in a number of related business improvement areas, such as Total Quality Management (TQM) and Human Resource Management (HRM)

(Metaxiotis et al., 2005)



TQM: A management philosophy



TQM is a management philosophy and a methodology that enables an organisation to focus on employee participation through **empowerment, teamwork, leadership** and **recognition** of each employee's contribution for achieving the goal of the organisation and maximising customer satisfaction (Deming, 1986).



Knowledge-based global economy

(why)



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The new knowledge-based global economy places great importance on creation, use and distribution of information and knowledge.

Organisations (and that includes HE institutions) are focusing on maintaining and enhancing their knowledge capital in order to be innovative and competitive.



Learn, Adapt and Change



The ability of organisations to learn, adapt and change becomes a core competency for their survival and successful organisations are those that create new knowledge, disseminate it throughout the organisation and swiftly embody it into new products and services.



Harnessing and sharing knowledge

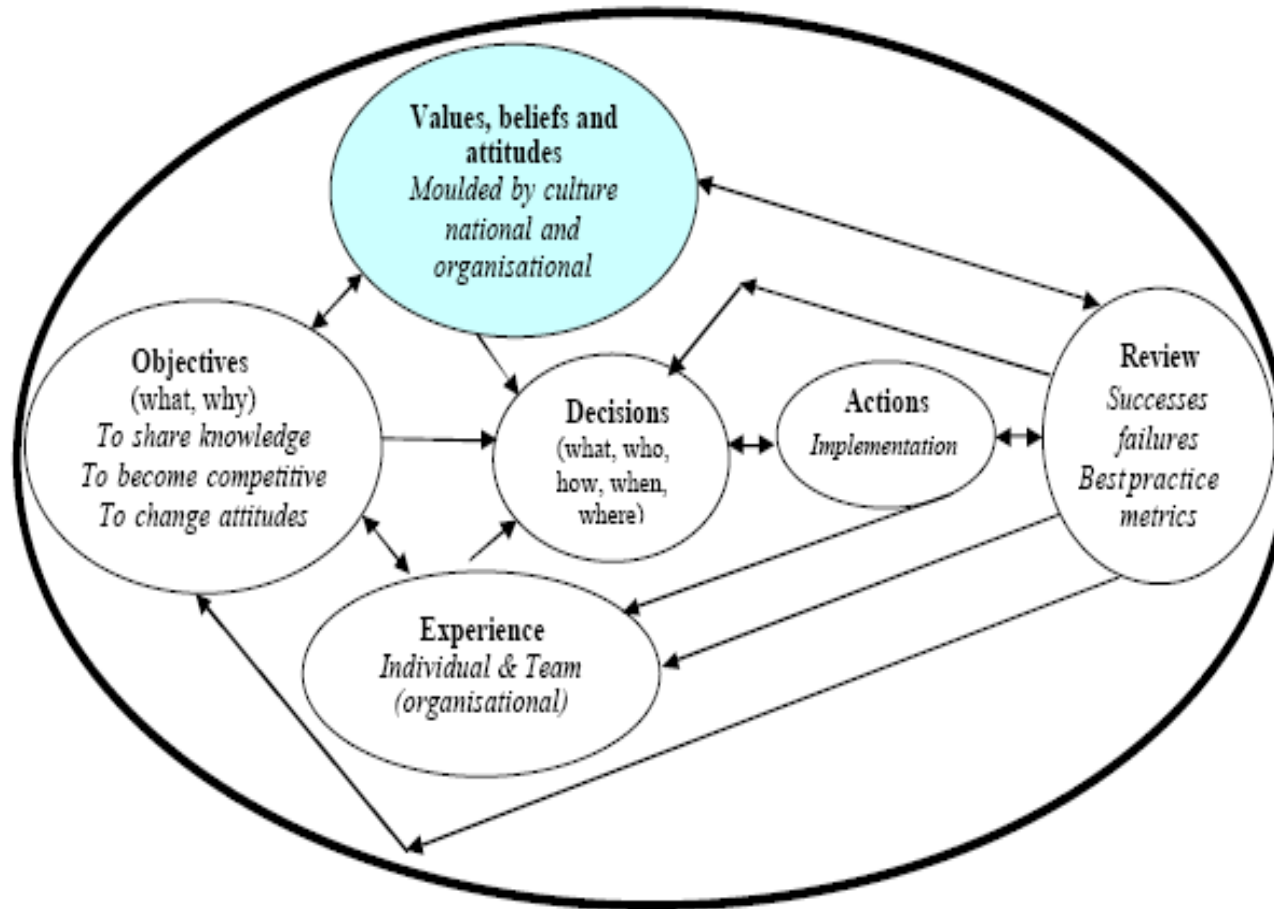


The European Higher Education mission embodied by initiatives such as that of Bologna translates into the primary objectives of KM through

- the identification and leveraging of the collective knowledge not only in individual HE institutions but also throughout the European Union and further afield.**



Continuous Improvement through TQM



Tuning Methodology



- Achievement of **learning outcomes and competences**
- General tendencies in higher education:
 - Shift of paradigm: moving from a staff oriented approach to a student centred approach
 - Less specialised academic education in the first cycle
 - More flexibility in first and second cycle programmes

What should a student know, understand and be able to do in order to be employable?



The Tuning Methodology objectives



- To implement the Bologna- Prague- Berlin process at university level
 - To find ways to implement the two cycles
 - To identify common reference points from discipline and university perspectives
 - To develop professional profiles and comparable and compatible learning outcomes
 - To facilitate employability by promoting transparency in educational structures (easily readable and comparable degrees)
 - To develop a common language which is understood
- by all stakeholders (Higher education sector, employers, professional bodies)

Programme Level Outcomes



- Generic, transferable skills
 - e.g. Managing time, working in groups,
- Core knowledge
 - Right level, complexity, amount
- Level of Achievement (2nd level in the case of our MSc)
 - Bloom's taxonomy: reflection, justification, discourse



Module Level Learning Outcomes



- **Subject/topic specific knowledge and skills**
- **Competencies**
- **Employability**



Assessment

- Strategy (underpinning theory and its application)
- Instruments
- Group and individual problem solving
- Skills and competencies

Open Source and Quality



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- What is Open Source?
- A piece of software (i.e. a software product) is F/OSS when its distribution license fulfils the “four freedoms” of F/OSS.
- To be more precisely, a software can be said that it is F/OSS when the receiver of the software can:
 - use it at wish
 - copy and redistribute it
 - modify it (which imposes the distribution of the source code along with the binary version of the software
 - The binary version of the software and the source code can be separately, but freely distributed)
 - distribute the modified versions



Open Source Development Practices



The majority of F/OSS projects, probably most of them, use development practices, models and methods which very far away from those recommended by the “classical” software engineering, for example software development life-cycle models like waterfall and the spiral.



F/OSS and Quality



All Open Source projects utilized web portals to encapsulate collaboration tools.

Attributes (Qualities) of Open Source Systems:

functionality, reliability, usability, maintainability, portability, and efficiency (ISO9126)iciency.



Open Source quality and dependability



- According to various studies the quality and dependability of today's open source software is roughly on par with commercial and government developed software.

What are the prospects for advancing to much higher levels of quality in open source software?

What attributes must be possessed by quality-related interventions for them to be feasibly adoptable in open source practice?



Conclusion

- **Integrating TQM principles and the Tuning Methodology will result in**
 - Continuous improvement
 - Harmonisation
 - Knowledge sharing
 - Culture change
 - EHEA integration
 - Competitiveness
 - Mobility, employability



Advantage through Knowledge Sharing and Collaboration

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