



**Maynooth  
University**

National University  
of Ireland Maynooth

## **Quality Assurance in the context of Curriculum Reform in Maynooth University**

**4<sup>th</sup> June 2017**

**Czech Republic**

**QA Conference, Telc**

**Professor Jim Walsh**

Maynooth University, Ireland

Email: [Jim.walsh@nuim.ie](mailto:Jim.walsh@nuim.ie)



# Quality Assurance & Curriculum Reform

- Quality Assurance in Ireland
- Maynooth University Quality Framework
- Curriculum reform: international & national contexts
- Maynooth University Curriculum Reform process
- Evaluation of Curriculum Change – Framework design and implementation
- Conclusions

# HE Quality Assurance in Ireland

## National Strategy for Higher Education to 2030 (2011)

*“It is essential (for Ireland’s higher education) that its quality assurance structures and processes are **trusted** both nationally and internationally, and that **confidence** of students and prospective employers in the higher education system is maintained” (p.93)*

# HE Quality Assurance in Ireland

## Legal framework:

Universities Act (1997)

A university will “*promote the highest standards in, **and quality of**, teaching and research ....*”

Qualifications and Quality Assurance Act 2012

All providers will “***establish procedures in writing for quality assurance** for the purposes of establishing, ascertaining, maintaining and improving the quality of education, training and research, and related services*” that it provides.

# HE Quality Assurance in Ireland

## Implementation

Following 2012 Act, the agency **Quality and Qualifications Ireland (QQI)** was established

- Responsible for External Quality Assurance of all HEIs
- Preparation of Policy and Implementation Guidelines
- Management of periodic QA reviews of all HEIs *“to provide an independent external review of the institution’s own internal QA procedures”*
- Oversee implementation of ESGs

# Maynooth University



# Maynooth University Profile

## Maynooth University Context

- Established in 1997 on campus dating from 1795
- In tradition of Von Humboldt and Newman – Humanities, Social Sciences (incl. Business & Law) and Natural Sciences
- 11,500 students, fastest growing university in Ireland; 80% UG, 10% international
- Very strong research profile – FWCI of 1.74 in 2014/15
- Located on western edge of Dublin metropolitan region –3 other universities and an Institute of Technology in the region
- Appointment of new President, August 2011
- Maynooth University Strategic Plan 2012-2017 (2012)
- Ranked in top 50 Young Universities 2017 (*THE*) and in the band 351-400 in *THE* overall global ranking

# HE Quality Assurance in Maynooth

- Maynooth University (MU) operates within the national framework
- Formal internal QA reviews of units since 1996
- Institutional Quality Reviews 2004, 2009, 2018
- QA and QE are central to the achievement of the goals and objectives of the University Strategic Plan
- The **purpose** of the Maynooth Quality Framework is *“to continue to enhance the effectiveness of its core activities of teaching, learning, research and scholarship, and of all related support services”*



# HE Quality Assurance in Maynooth

## Objectives of MU Quality Framework

- To **demonstrate** to staff, students, governance bodies and external stakeholders **that QA procedures are in place in the University,**
- To **confirm** that the QA procedures are **effective,**
- To foster and sustain a **quality culture,** and facilitate Quality enhancement
- To maintain **public confidence** in the quality and standards of the University
- To demonstrate university **legal compliance** and alignment with the ESGs

# HE Quality Assurance in Maynooth

## Implementation of the MU Quality Framework

1. On-going implementation of extensive range of policies, procedures, institutional learning initiatives, and internal and external reviews, validation & audit processes that support QA & QE - **QA must be evident in every procedure of the university and responsibility widely shared**
2. Cyclical QA reviews of academic departments, support units, programmes and thematic issues

# HE Quality Assurance in Maynooth

## Model for QA reviews of academic departments and support units

1. Unit prepares **Self Assessment Report**
2. Establish Peer Review panel; facilitate 2-3 day visit by Panel, conclude with **Peer Review Report (PRR)**
3. Unit prepares **Quality Improvement Plan** to be agreed with President and relevant Vice-Presidents & Deans
4. **Publication of outcomes** from Review
5. **Follow-up:** Units required to provide progress reports to the Quality Committee

# Maynooth University Library



# Curriculum Reform

# The University undergraduate Curriculum

- The term curriculum represents a **concept that is often contested**
- The curriculum can be an important **medium to articulate and transmit** a particular set of **educational values and standards**

It can encompass

- **content material** deemed appropriate to enable students achieve internationally recognised standards
- **processes** by which programmes are organised over typically 3 or 4 years of study, including rules on progression
- **pedagogic practices** including a variety of approaches to teaching and learning; assessment procedures; and
- **anticipated outcomes** which may be expressed in a narrow sense as learning outcomes, or more broadly as graduate attributes.

# Curriculum Reform - international

## Drivers of Reform: External Context

- Strong international focus on reform of University undergraduate education
  - McAleese report (2013) to EC on *Improving the Quality of Teaching and Learning in European Higher Education Institutions*; critical academic reviews such as Arum and Roska, (2011) *Academically Adrift – limited learning on college campuses*
- International experience of reforms by leading universities: Harvard, Yale, Melbourne, King's College London, Warwick Blackmore and Kandiko eds. (2012) *Strategic Curriculum Change – Global trends in Universities*
- Feedback from external stakeholders – employer surveys
- *National Strategy for Higher Education to 2030*

# Curriculum Reform – KCL & Warwick

Report of King's College London and University of Warwick curriculum reform (2010) *Creating a 21<sup>st</sup> Century Curriculum*

***“Many universities have concluded that the curriculum in place does not meet, or could better meet, the needs of society and students”.***



# Curriculum Reform - Ireland

**The National Strategy for Higher Education (2011)** includes extensive discussion of the purpose, scope and content, and delivery of teaching and learning. It emphasises the *“need to stimulate active, not passive learning, and to encourage students to be critical, creative thinkers, with the capacity to go on learning after their college days are over”*.

Special attention given to

- The **first year experience and transition** into higher education
- Inclusion of **generic skills** to complement discipline specific knowledge and modes of enquiry
- **Engagement** of students and collation of **feedback**
- Work placements **and service learning**
- **Professional development** opportunities for academic staff

# Curriculum Reform – Maynooth University

## Maynooth University Strategic Plan 2012-17

- The **over-arching University goal** is to ensure that Maynooth offers *“an **outstanding university education...which challenges and supports all students to achieve their full potential, and prepares students for life, work and citizenship, and for complexity, diversity and change**”*.
- *“We will develop and deliver a **distinctive Maynooth model of liberal undergraduate education**, forming graduates competent in their chosen disciplines, with the fundamental intellectual skills of analysis, reflection and critical thinking, and fostering an appreciation of the breadth and richness of human knowledge and culture”*.

# Curriculum Reform –MU baseline

## Feedback from students

- Very positive on overall student experience (ISSE) but also scope for improvements: more small group teaching, more continuous assessment and timely feedback, generic skills, greater opportunities for experiential learning

## Feedback from staff

- Uncertainty re motivation to build further on prevailing excellence in Teaching & Learning; ambiguity of term *liberal education*
- current degree structures considered to be restrictive, complicated and unwieldy in practice;
- Concern re potential opportunity cost for academic staff

# Curriculum Reform – Guiding principles

## Maynooth University Curriculum Reform process

**Guiding principles:** The project is

- **Collaborative** – university leadership, staff and students
- **Inclusive** – extensive consultation, iterative feedback loops
- **Holistic** – included all factors impacting on quality of the student education experience
- **Incremental** – pilot testing, phased introduction of core elements
- **Long-term** – a new curriculum framework capable of adaptation to future needs over coming decades

# Curriculum Reform - Vision

## Maynooth University Curriculum Vision

- Striving for the best undergraduate education in Ireland
- Preparing graduates for a challenging & changing world
- This requires
  - Excellent grounding in core subject(s)
  - Thinking skills and working skills
    - critical thinking and clear communication
    - working alone and in teams
  - Confidence and creativity
  - Social, environmental and cultural awareness

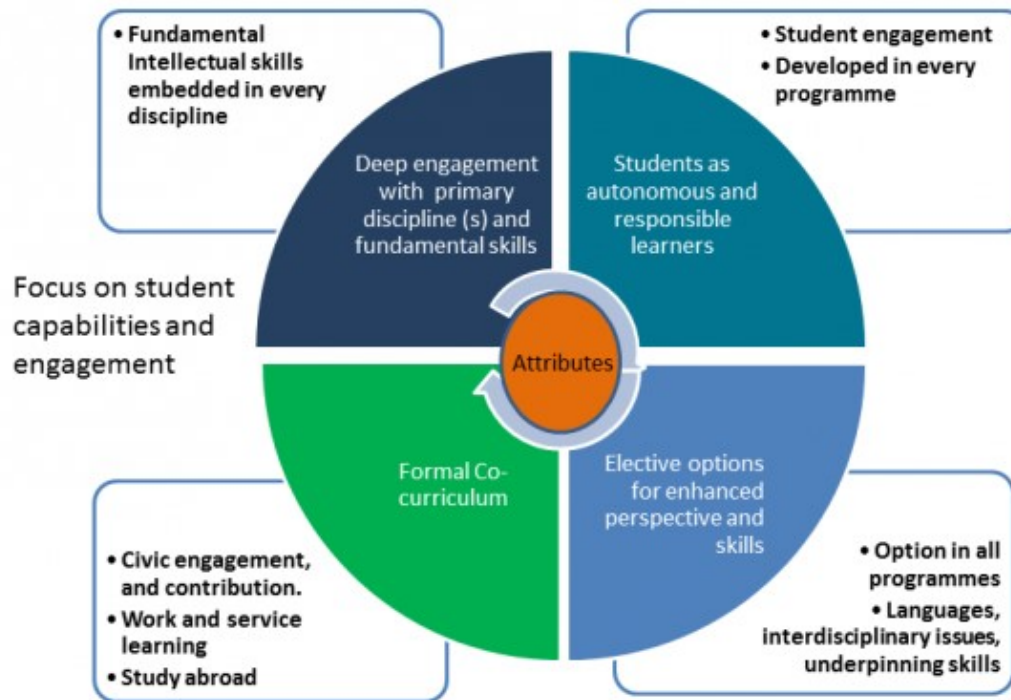
# Curriculum Reform – key components

## Distinctive components of reformed curriculum

- First year
  - Broad entry routes, transition, content, critical skills
- Flexibility, breadth, new subject combinations
  - Major-minor combinations
  - Elective streams
  - New subject combinations
    - Arts and Sciences subject combinations
    - A modern language within any degree programme
    - Liberal arts and sciences programme
- Co-curriculum
- Student E-portfolio

# Curriculum Reform – Maynooth Model

## Maynooth Curriculum Framework



# Curriculum Reform – Expected Outcomes

## **Maynooth University Graduate Attributes (Appendix A)**

- Competent in fundamentals of chosen discipline(s)
- Skilled for conceptual understanding, analysis, reflection and critique of issues related to life, work and citizenship
- Intellectually responsible, open-minded, adaptable & creative
- Numerate, literate and articulate
- Self-motivated, able to work independently, and in teams
- Values integrity, honesty, a sense of justice, and respect for human rights
- Appreciates cultural diversity
- Upholds high ethical and professional standards
- Has a love of learning & is prepared for a rich intellectual life



# Curriculum Reform – Leadership and Governance

## Leadership, Management and Governance of Curriculum Reform project

- Project sponsored by the University President, who chairs Project Board and Project Co-ordination Group
- Joint project leaders
  - Vice-President Academic and Deputy President
  - Vice-President for Innovation
- Programme Manager
  - Director of Strategic Planning and Quality

# Curriculum Reform - Milestones

## Maynooth University Curriculum Reform process

### Key milestones:

- 2012 Adoption of University Strategic Plan 2012-2017
- 2013 Establishment of Curriculum Commission
- June 2014 Final report from Curriculum Commission
- Oct. 2014 Governance and implementation structures
- March 2015 Public launch of summary document
- Dec. 2015 Maynooth University Graduate Attributes adopted
- Sept. 2015 Launch of pilot modules on Critical Skills & Electives
- Sept. 2016 Launch of new 1<sup>st</sup> and 2<sup>nd</sup> year programmes, new degree structures, new assessment rules, and new category of teaching posts
- Sept. 2017 New liberal arts and science programme

# Maynooth University



# CURRICULUM EVALUATION

# Curriculum Reform - Evaluation

## Conclusions from recent reviews

***“existing curriculum evaluation practices demonstrate a general lack of attention to scholarly approaches”*** (Hubball and Pearson, 2011, p.91)

***“at several institutions the change had been so arduous that there was little energy to spare for evaluation”***. Blackmore and Kandiko (2012, p.176)

# Curriculum Reform – Evaluation Qs

## Evaluation of Curriculum Change – Framework design and implementation: key generic Qs

- Purpose of monitoring and evaluation?
- What should be monitored & evaluated?
- How will evaluation be undertaken?
- Can ‘causality’ be established?
- Who should participate in the evaluation?
- When should evaluation occur?
- Who should carry out the evaluation?

# Curriculum Reform - Evaluation Principles

## Maynooth University Guiding principles (1)

- The purpose is to provide reliable and unambiguous evidence to support critical decisions in design and implementation, and to establish if the Curriculum is enabling students to achieve the outcomes expected
- Each of the key components of the revised Curriculum should be monitored and evaluated separately and collectively
- The evaluation should also assess if other procedures are aligned with the direction of change envisaged by the curriculum

# Curriculum Reform- Evaluation Principles

## Maynooth University Guiding principles (2)

- The evaluation process should commence from a well documented baseline position, and include both summative assessments and formative reviews to support an iterative on-going learning process
- Matched samples and multivariate statistical modelling may be required to establish causality, and to distinguish observable changes from trends that simply reflect continuity of 'business as usual'
- The evaluation should include students, staff at all levels (incl. academic, professional support and administrative), and external stakeholders



# Curriculum Reform – Evaluation Principles

## Maynooth University Guiding principles (3)

- Monitoring and evaluation should occur over a number of years, and be supported by annual benchmarking where possible
- Data compilation should draw as much as possible on existing sources. Additional data collection should not be a significant burden
- The evaluation should be undertaken by a researcher independent of the principal stakeholders, and report to the Director of Quality

# Curriculum Reform – Evaluation Framework

## Maynooth University Evaluation Framework (Appendix B)

- **Evaluation fields:** first year critical skills, curriculum flexibility, experiential learning, modern languages, e-portfolio, graduate attributes
- **Indicators:** hard and soft
- **Methodologies:** analysis of quantitative data from Student Records; compilation and analysis of new quantitative and qualitative data; matched samples; longitudinal analysis
- **Data sources:** existing and new sources; data management
- **Expected outputs:** measurable and tangible; short to medium term
- **Expected outcomes:** multi-dimensional and longer-term

# Curriculum Reform – Evaluation Implementation

## Maynooth University Evaluation Framework

### Implementation and Governance

- Full-time contract researcher at post-doctoral level appointed to lead the project
- Researcher reports to Director of Quality
- Oversight and advice provided by small expert committee with expertise in curriculum design and evaluation, and experience in both qualitative and quantitative social research methods
- Dean of Teaching and Learning is Chair of Expert Committee, and reports to the University Executive and Academic Council

# Curriculum Reform – Progress to date

- Surge in applications from new entrants
- Strong evidence of students selecting programmes with wider range of progression pathways – less specialisation in first year
- High uptake of Critical skills module by new entrants; strong positive feedback from students taking the module; likelihood of strong positive spill-over effects onto other modules
- Elective modules popular among staff and second year students
- Monitoring and evaluation research underway

# CONCLUSIONS

# Quality Assurance & Curriculum Reform

## Conclusions: Embedding Quality via Curriculum Reform (1)

- Quality assurance and continual enhancement of teaching and research is a core responsibility of all universities
- Objectivity and transparency in quality assurance requires a robust methodology in which independent peer review is a core requirement
- Public confidence and trust in universities relies on a willingness to publish the results from quality reviews

# Quality Assurance & Curriculum Reform

## Conclusions: Embedding Quality via Curriculum Reform (2)

- The university curriculum is an important medium to articulate and transmit a particular set of educational values and standards
- The quality of the teaching and learning experience in higher education can be strongly influenced by institutional approaches to curriculum, and in particular by the willingness & capacity to monitor & evaluate impacts of curriculum innovation & reform
- The design, structure, content, delivery and assessment of academic programmes, along with the analysis and use of student feedback on the curriculum, are mutually reinforcing elements of embedding a culture of sustained quality improvement in teaching and learning

# Quality Assurance & Curriculum Reform

## Conclusions: Embedding Quality via Curriculum Reform (3)

- Successful and effective implementation of comprehensive curriculum reform requires
  - clarity on vision and purpose,
  - strong leadership and pro-active governance,
  - extensive consultation with all stakeholders,
  - capacity to embrace multiple innovations simultaneously,
  - resources to incentivise innovation and sustain new model of T&L, and
  - resources to build institutional learning via monitoring and evaluation of impacts of individual and collective interventions



# Quality Assurance & Curriculum Reform

***Thank you for your attention***

# Maynooth University Graduate Attributes

## Appendix A

### **The objective is that each Maynooth University Graduate**

- Has deep understanding of fundamentals of chosen discipline(s)
- Has the fundamental conceptual, analytical, reflection and critical skills for life, work and citizenship
- Is intellectually responsible, open-minded, adaptable, curious and creative
- Is numerate, literate and articulate
- Is capable of gathering and critiquing information from a variety of sources

# Maynooth University Graduate Attributes

## Maynooth University Graduate Attributes continued

- Is self-motivated, able to work independently, and contribute effectively to team projects
- Behaves with integrity, honesty, a sense of justice, and respect for human rights
- Appreciates cultural diversity
- Upholds high ethical and professional standards
- Has a love of learning and a rich intellectual life

# Monitoring Curriculum Reform

Appendix B: Maynooth University Curriculum Evaluation Framework (draft)

Copy included in text file for paper on  
Evaluation of Curriculum Reform at Maynooth University

To be published in *Journal of the European Higher Education Area*, Autumn 2017

Evaluation Field	Indicators	Methodology	Data Source	Expected Output	Expected Outcome
First Year programme (a) Critical Skill (CS) modules	Actual number and percentage of students (head count) enrolling for critical skills (CS) modules	Module registration	Student Record System (SRS)	Gradual increase in participation in CS modules	More effective transition of students to university and enhanced acquisition of critical tertiary level skills at an earlier stage
	Profiles , motivations and experiences of participants in CS modules	Survey of participants and non-participants in CS modules	Student survey	Report on profiles of participant and non-participant students, and their motivations	Enhanced competencies on a range of graduate attributes
	Academic performance of students taking CS modules compared to other students (spill-over effects for CS students)	Matched samples from SRS	SRS	Evidence on whether students taking CS achieve better overall academic award	Improvement in retention, progression, completion and future employability
	Experience of staff teaching CS modules	Structured interviews with staff	Staff diaries/ portfolio	Evidence on pedagogic practices that work well	Sustained improvement in delivery of critical skills
	Experience of University tutors and graduate teaching assistants	Structured independent discussions with University Tutors & Graduate Teaching Assistants, and students	Focus groups	Evidence on effectiveness of UT & GTA roles and how they might be improved	Enhanced education experience for students, Improvement in student academic performance metrics as above
	Overall first year education experience	Student Engagement Survey – baseline 2015/16	ISSE questions on overall experience	ISSE Performance metrics for Maynooth and other universities	Absolute and relative improvement in ISSE metrics for Maynooth
	Percentage of new entrants that (a) withdraw from university before Summer examinations and (b) do not progress directly to second year	Review registration cancellations at critical dates; End of year non-progression rates	SRS	Performance metrics on withdrawals and non-progression by programmes	Absolute and relative improvement in ISSE metrics for Maynooth
	Recruitment of new entrants	Annual review of CAO data; monitor feedback to Admissions Office	CAO Admissions Office	Increase in MU share of Level 8 first & second preferences	Sustained recruitment of high calibre new entrants

First Year programme contd.	Indicators	Methodology	Data Source	Expected Output	Expected Outcome
(b) Impacts on depts.	Transition to 15 ECTS and single 15 credit module	Survey of HoDs to focus on content, delivery and assessment; Survey at start to gauge anticipated impacts; Survey after first cycle to reflect on experience; Seek views of External Examiners	HoD Survey 2015/16 Follow up surveys 2017/18 and 2019/20  External Examiner Rpts	Report on anticipated impacts, actual experience and possibly some unanticipated impacts, and on how each was managed	Greater confidence among staff on benefits from revised first year programme More effective; implementation for second and later cohorts of students; External validation that high academic standards are maintained
	FTEs movements between departments	Annual tracking of no. of credit based UG FTEs by year of study per dept	SRS	Report for UE and Faculty Executives; Some evidence of FTE redistribution linked to broader range of choices	Less variance in distribution of FTEs across depts
	Displacement of tutors / teaching assistants	Discussion with HoDs	HR	Report on how supports required for CS modules has impacted on availability and experience of tutors for remainder of academic programme	To be determined. Expectation is that demand for tutors can be managed without negative impacts on the students total education experience

Curriculum flexibility	Indicators	Methodology	Data Source	Expected Output	Expected Outcome
(a) Structure of degree programmes	Percentage of new entrants that choose: a) a double subject b) a double subject and Critical Skills module	Module registrations	SRS	Time series of enrolments by structure options with additional SRS data on profiles of students taking each option	Most departments with small cohorts taking double subject option Gradual increase in numbers taking Critical Skills modules
	Percentage of new entrants that progress via a: a) Double major b) Major with minor c) Single major	Annual review of student registrations  Use 2015/16 as baseline	SRS	Time series of enrolments by type of programme with additional SRS data on profiles of students taking each option	Gradual shift from baseline with fewer double major option
	Percentage of second year students taking an Elective module from another dept in same Faculty or from another Faculty	Annual review of student registrations	SRS	Time series of enrolments for elective modules	Gradual shift from baseline; increase in percentage taking elective modules;
	Profiles , motivations and experiences of participants in Elective modules	Survey of participants and non-participants in Elective modules	Student survey  ISSE	Report on profiles of participant and non-participant students, and their motivations	Students with an appreciation of the breadth and richness of human culture and knowledge
	Experience of staff teaching Elective modules	Structured interviews with staff/ Focus Group	Staff Interviews Outputs from Focus Group	Evidence in relation to what works well and also the challenges in design and delivery of Elective modules	Sustained improvement in design and delivery of Elective modules
	Pedagogic practice of all lecturers	Survey of all academic staff to document changes in academic practice linked to the Curriculum Initiative	Survey questionnaire	Periodic reports on how all academic staff are enhancing their pedagogic skills and practices	Culture of continuous staff development targeted at enhancing their pedagogic skills and practices for the benefit of students

	Indicators	Methodology	Data Source	Expected Output	Expected Outcome
<b>First Year programme contd.</b>  <b>(b) Impacts on depts.</b>	Transition to 15 ECTS and single 15 credit module	Survey of HoDs to focus on content, delivery and assessment; Survey at start to gauge anticipated impacts; Survey after first cycle to reflect on experience; Seek views of External Examiners	HoD Survey 2015/16 Follow up surveys 2017/18 and 2019/20  External Examiner Rpts	Report on anticipated impacts, actual experience and possibly some unanticipated impacts, and on how each was managed	Greater confidence among staff on benefits from revised first year programme More effective; implementation for second and later cohorts of students; External validation that high academic standards are maintained
	FTEs movements between departments	Annual tracking of no. of credit based UG FTEs by year of study per dept	SRS	Report for UE and Faculty Executives; Some evidence of FTE redistribution linked to broader range of choices	Less variance in distribution of FTEs across depts
	Displacement of tutors / teaching assistants	Discussion with HoDs	HR	Report on how supports required for CS modules has impacted on availability and experience of tutors for remainder of academic programme	To be determined. Expectation is that demand for tutors can be managed without negative impacts on the students total education experience
	<b>Indicators</b>	<b>Methodology</b>	<b>Data Source</b>	<b>Expected Output</b>	<b>Expected Outcome</b>
<b>(c) Orientation and transition support for students</b>	Effectiveness of Orientation and Induction programme	Survey of students and targeted focus groups	Surveys and Focus Groups	Annual report on effectiveness of co-curriculum initiatives	Enhanced co-curriculum experience for all students; Reputation gain for MU Improved attraction of MU for recruiting new entrants; Increase in no. of CAO first & second preferences and in new entrants



Experiential Learning	Indicators: Number and percentage of undergraduates that engage in at least one form of experiential learning	Methodology	Data Source	Expected Output	Expected Outcome
	a) Community based service learning b) Work / Professional placements c) Community engagement/ volunteering d) International study visit e) Undergraduate research	Add to each student record data on credit bearing experiential learning opportunities availed of; Benchmark MU Survey of participants and non-participants in experiential learning options	Amended SRS Commence 2015/16 Benchmark MU via ISSE Student survey	Annual report on take-up and scope of experiential learning opportunities Evidence on reasons for participation or non-participation	Enhanced education experience; More employable graduates; Improvement in comparative performance vis a vis other universities in Ireland Improvement in relevant ISSE metrics
Languages	Indicators: Percentage of students taking a modern language as part of their degree	Methodology	Data Source	Expected Output	Expected Outcome
	No. and % of all UGs taking a modern language a) as a degree subject b) as a minor in a major/minor combination c) a modern language in first year and continuing with a language elective module No. and % of all UGs taking a language skills course as part of the university programme Student engagement with languages	Review of registrations; Baseline 2015/16 Student Engagement Survey	SRS First destinations survey ISSE questions on languages	Profile of language acquisition by MU undergraduates Scores on relevant ISSE questions	Increase in number and percentage of students acquiring language skills; Enhanced employability of MU graduates Absolute and relative improvement in ISSE metrics for Maynooth students

Graduate Attributes	Self assessment by final year students of the opportunities they have had to develop a range of attributes that define MU graduates	Methodology	Data Source	Expected Output	Expected Outcome
	Understanding of fundamental concepts, practical skills, and appreciation of richness and diversity of current research in their disciplines	Modes of assessment benchmarked to international standards via External Examiners	Reports from External examiners Baseline 2015/16	Report on academic standards benchmarked to international practice by discipline	Confirmation that academic standards are high and that further enhancement may be achieved via the revised curriculum
	<p>Emphasis in curriculum on fundamental intellectual skills of analysis and reflection, making judgements, verbal and written communication, numeracy and digital literacy, conceptual and critical thinking applicable to a range of work and life situations;</p> <p>Capacity to organise and synthesise ideas and information into new and more complex interpretations;</p> <p>Capacity to work independently and in teams;</p> <p>Appreciation of cultural diversity</p>	<p>Survey of students The Irish Student Engagement Survey contains questions on most topics; Benchmark MU; Monitor trends over time; Feedback from external examiners where appropriate</p> <p>Student destination surveys one and three years post graduation</p>	<p>ISSE Baseline 2015/16</p> <p>Modified FDS</p>	<p>Annual report on performance in relation to fundamental skills</p> <p>Identification of areas requiring further attention, and areas of strength that need to be sustained</p> <p>Performance metrics on student destinations after graduation</p>	<p>Evidence to support assertions re defining attributes of MU graduates</p> <p>Enhanced competencies on a range of graduate attributes;</p> <p>Improvement in retention, progression, completion and future employability</p> <p>Improvement in performance metrics</p>