An Chomhairle Mhúinteoireachta
The Teaching Council

Report of the Review Panel to the Teaching Council following a review of the proposed Initial Teacher Education programme at University of Limerick

Bachelor of Science with Mathematics and Computer Science, University of Limerick

March 2020

Table of Contents

1. *Background*

1.1 The Teaching Council's Review and Accreditation Function

The Teaching Council is the statutory body charged with setting the standards for entry to the teaching profession and ensuring that these standards are upheld.

In accordance with Section 38 of the Teaching Council Act, 2001, the Council shall:

(a) review and accredit the programmes of teacher education and training provided by institutions of higher education and training in the State,

(b) review the standards of education and training appropriate to a person entering a programme of teacher education and training, and

(c) review the standards of knowledge, skill and competence required for the practice of teaching,

and shall advise the Minister and, as it considers appropriate, the institutions concerned.

The Teaching Council's role in relation to the review and accreditation of programmes of Initial Teacher Education (ITE) is distinct from the academic accreditation which programmes also undergo. Academic accreditation is based on the suitability of a programme for the award of a degree/diploma, whereas professional accreditation for any profession is a judgement as to whether a programme prepares one for entry into that profession.

The review and accreditation of programmes of ITE by the Teaching Council provides an opportunity for Higher Education Institutions (HEIs) to demonstrate that they offer quality programmes of teacher education. It is expected that the graduates of such programmes will achieve programme aims and learning outcomes which are aligned with the values, professional dispositions, and the standards of teaching, knowledge, skill and competence that are central to the practice of teaching.

1.2 Review and Accreditation Strategy

In order to guide its review of programmes, the Teaching Council has published *Initial Teacher Education: Strategy for the Review and Accreditation of Programmes* (hereinafter referred to as the Council's review strategy). That document sets out the process by which programmes are reviewed.

1.3 National Policy Framework

In carrying out reviews, the Council is mindful of its *Policy on the Continuum of Teacher Education* which sets out its vision for teacher education at all stages of the continuum – ITE, Induction, and Continuing Professional Development. Published in 2011, the policy highlights the evolving and dynamic context for teaching and the increasingly complex role of teachers in Ireland today. The policy states that "…the time is now right for a thorough and fresh look at teacher education to ensure that tomorrow's teachers are

competent to meet the challenges that they face and are life-long learners, continually adapting over the course of their careers to enable them to support their students' learning." It further states that innovation, integration and improvement should underpin all stages of the continuum.

In parallel with the development by the Council of its *Policy on the Continuum of Teacher Education*, the Minister for Education and Skills initiated a national consultation process on the theme of improving literacy and numeracy. This culminated in 2011 with the publication of *Literacy and Numeracy for Learning and Life* as the national strategy to improve literacy and numeracy standards among children and young people in the education system. The strategy emphasised teachers' professional development and proposed that the duration of initial teacher education (ITE) programmes should be extended and that programme content should be reconceptualised.

1.4 Accreditation Criteria

The Teaching Council, having established an Advisory Group on Initial Teacher Education, developed criteria to be observed and guidelines to be followed by providers in reconceptualising programmes of initial teacher education at primary and post-primary levels. They were approved by the Council and published in June 2011 as *Initial Teacher Education: Criteria and Guidelines for Programme Providers* (hereinafter referred to as the Council's criteria). These relate to a range of areas, including programme design, areas of study, the duration of programmes, the numbers and qualifications of staff, facilities and resources. As such, they form the bridge between the Council's policy and the development and implementation of reconceptualised programmes. Significantly, the criteria:

- prescribe those areas of study which will be mandatory in programmes, including numeracy and literacy, behaviour management, parents in education, ICT and inclusive education
- set out for the first time the expected learning outcomes for graduates of all ITE programmes
- propose raising the minimum requirements for persons entering programmes of ITE at primary level and a literacy and numeracy admissions test for mature entrants
- require a 15:1 student-staff ratio
- call for the development of new and innovative school placement models, involving active collaboration between HEIs and schools, and an enhanced role for the teaching profession in the provision of structured support for student teachers
- require that student teachers should spend at least 25% of the programme on school placement, and that such placements should be in a minimum of two schools
- require increased emphasis on research, portfolio work and other strategic priorities.

While recognising the inter-related nature of all aspects of programmes of teacher education, the criteria and guidelines are categorised under Inputs, Processes and

Outcomes. All three dimensions have an important bearing on the quality of teacher education. The required Inputs and Outcomes are clearly elaborated in the document, while the Processes are less prescriptive to allow HEIs the freedom to develop the processes which best suit their individual situations.

Providers of existing programmes have been asked to reconceptualise their programmes in line with the revised criteria and to submit them for accreditation.

1.5 Particular requirements for post-primary programmes

In November 2011, the Council published *Teaching Council Requirements for Entry onto a Programme of Initial Teacher Education,* which set out the Council's subject criteria. They also guide providers of post-primary consecutive programmes in determining suitability of entrants and which curricular subjects entrants can ultimately be registered to teach. They will also guide PME providers in matching students appropriately to methodology modules.

1.6 Programme overview

This report relates to the review of the following programme provided by **University of Limerick – Bachelor of Science in Education with Mathematics & Computer Science** - hereinafter referred to as 'the programme.

2. *The Review Process*

The review of **University of Limerick – Bachelor of Science in Education with Mathematics & Computer Science** took place between June 2019 and January 2020 in accordance with the Council's review strategy. The process was formally initiated when the Review Panel (hereinafter referred to as 'the panel') was appointed by the Teaching Council's director, with Professor Anne O'Gara as Chairperson.[1] The panel was supported in its deliberations by external subject experts and by the Director and staff of the Teaching Council.

Documentation relating to the application was submitted to the Teaching Council by University of Limerick in May 2019. Due to the ongoing process to devise subject criteria for Computer Science, the School of Education at the University of Limerick requested that the Teaching Council consider accrediting the Mathematics and Education components of the BSc in Education (Mathematics and Computer Science) programme. The panel was formed and met initially on 19 June 2019 to give preliminary consideration to the submission. Following this meeting and a further call on 25 September 2019 a letter requesting clarifications on a number of points was issued to the University of Limerick on 11 November 2019. A response was received on 3 December 2019. The panel met for a final assessment of the programme on 27 January 2020 and recommended it to Council for accreditation on 09 March 2020.

The Panel commends the programme's aim of providing fully qualified teachers of the new curricular subject Computer Science. However, until such time as approved subject specific criteria for Computer Science are available, the Panel cannot accredit the Computer Science component of the programme. As the Education and Mathematics components of the programme have been recommended for accreditation, the programme would meet the registration requirements for Education and one curricular subject, therefore graduates of the programme will be eligible to register as post-primary teachers with the Teaching Council.

The Panel noted that when the Computer Science criteria are finalised and published by the Teaching Council, the Computer Science component of the programme, as currently submitted, will then be assessed for accreditation.

[1] Details of the Review Panel membership are included in Appendix I

3. *Publication of this Report*

The Teaching Council routinely makes information available to the public in relation to its functions and activities and, in line with that practice, this report will be available on the Council's website, www.teachingcouncil.ie.

4. *Documentation*

The documentation submitted in May 2019 by the University of Limerick was in accordance with the template provided by the Teaching Council in the Pro Forma and Guidelines which accompany the Council's review strategy. Key areas of focus were:

4.1 Inputs

- Conceptual Framework
- The Programme
- Programme Aims
- Programme Design
- Areas of Study
- Teaching, Learning and Assessment Strategies
- School Placement
- The Duration and Nature of the Programme
- Student Intake
- Staffing
- Facilities
- Student Support and Guidance Systems
- Communication and Decision-Making Structures
- Financial Resources

4.2 Processes

- Teaching, Learning and Assessment Approaches
- Engagement of Student Teachers with the Programme
- Engagement of Student Teachers with Staff and with other Student Teachers
- Progression within the Programme
- Personal and Social Development
- Development of Professional Attitudes, Values and Dispositions
- Lifelong Learning
- Reflective Processes

4.3 Outcomes

- Knowledge-Breadth/Knowledge-Kind
- Know-How & Skill-Range/Know-How & Skill-Selectivity
- Competence-Context/Competence-Role
- Competence-Learning to Learn
- Competence-Insight

5. *Overall Findings*

Having regard to the documentation that was initially submitted, together with the supplementary documentation that was provided, the panel adjudges that the programme satisfies the criteria set down by the Teaching Council in its *Criteria and Guidelines* and in its curricular subject requirements for the curricular subject of Mathematics. Accordingly, it recommends to the Teaching Council that the programme be granted accreditation.

The commendations in Section 6 below relate to areas of particular strength which the panel has identified. The Panel request that the University submit an updated Pro Forma document to the Council to include the additional and clarified information.

With regard to the recommendations in Section 7, the panel submits that the Teaching Council should require the University to set out, within twelve months of receiving the final review report, its detailed proposals for implementing the recommendations. It further recommends that the Teaching Council should prioritise those areas to be accorded particular attention when the programme falls due for re-accreditation.

In the case of the national issues raised in Section 9 of this report, the panel recommends that the Council engage in dialogue on those issues at national level.

The panel proposes that accreditation of the programmes would have a lifespan of five years.

6. *Commendations*

Having regard to:

1. the Pro Forma documentation which was submitted
2. the supplementary material which was submitted and
3. advice received from the curricular subject specialists who supported the review process

the panel has noted a number of particular strengths of the programme, as follows:

6.1 Engagement with the review process

The University of Limerick (UL) co-operated fully with the review process. The module descriptions provided are informative and the programme protocols comprehensive. The Panel commends the manner in which the University responded to clarifications sought by the Panel.

6.1.1 Conceptual Framework

The Conceptual Framework for the programme provides clear evidence of an integrated and holistic approach to theory and practice in Initial Teacher Education underpinned by a developmental approach to critical reflection.

6.1.2 Programme Design

An appropriate balance between subject content knowledge and the development of professional competencies underpins the programme design and ensures an integrated experience for the student teachers.

6.1.3 Areas of Study

The Mathematics programme is comprehensive and is judged to meet all of the specific curricular subject requirements.

6.1.4 Teaching, Learning and Assessment Strategies

The Panel commends the developmental approach to critical reflection across the four year programme as evidenced by the iterative design process and integrated portfolio.

6.1.5 School Placement

The panel commends the University's approach to the evolving School-University Partnership with local schools, its provision of on-site continuing professional development for cooperating teachers and the online platform for schools to interact with the institution in the placing of student teachers.

6.1.6 Student Support and Guidance Systems

The Panel commends the range of structured evaluative opportunities provided by the Centre for Teaching and Learning at UL where faculty can evidence their teaching through peer observation, video observation, focus groups, portfolios and student evaluation of teaching (SET) and a voluntary and confidential service where students have the opportunity to evaluate lecturers and tutors.

6.1.7 Communication and Decision-Making Structures

The oversight role of the University Teacher Education Board (UTEB) as the formal recommendating body to the Academic Programme Review Committee overseeing teacher education programmes at UL is noted. It is commendable that the Head of the School of Education represents this programme at Academic and Management Councils of the University of Limerick.

7. Recommendations

Having regard to:

1. the Pro Forma documentation which was submitted
2. the supplementary material which was submitted
3. advice received from the curricular subject specialists who supported the review process

The panel has noted a number of areas of the programme which it believes should be developed. They are as follows:

7.1 Engagement with the review process

The Panel acknowledges and commends the way in which the University of Limerick responded to clarifications sought by the Panel.

7.1.1 Teaching, Learning and Assessment Strategies

The panel recommends that the prime texts and other relevant texts detailed in the module specifications are periodically reviewed and updated to reflect current research and practice.

7.1.2 Engagement of Student Teachers with Staff and with other Student Teachers

The panel acknowledges the richness and diversity of initial teacher education programmes at the University of Limerick and suggests that consideration be given to the further development and enhancement of cross disciplinary learning.

7.1.3 Reflective Processes

The panel believes that research element of the programme could be more practitioner explicit within the module structure.

8. *Stipulations*

Having regard to:

1. the Pro Forma documentation which was submitted
2. the supplementary material which was submitted and the
3. advice received from the curricular subject specialists who supported the review process

the panel has noted the following area of the programme which it considers must be addressed as a matter of priority.

8.1. *Computer Science Requirements*

The subject criteria for Computer Science have, at the date of submission of their Proforma, not yet been finalised. The University of Limerick must ensure all prospective students and students commencing studies on the Bachelor of Science with Mathematics and Computer Science are aware that only the Mathematics and Education components of the programme are accredited. The University of Limerick must ensure that students will be notified when accreditation for the Computer Science element is obtained.

The Teaching Council is currently working towards publication of subject specific requirements for Computer Science and the Council will arrange as soon as is feasible for a review of the Computer Science elements of the programme by the Panel (with the advice of a subject specialist) after these criteria are published.

9. *National Issues*

Having regard to:

1. the Pro Forma documentation which was submitted
2. the supplementary material which was submitted and the
3. advice received from the curricular subject specialists who supported the review process

the panel has noted the following issues which it believes merit further attention by the Teaching Council and/or other national stakeholders.

9.1. *Staff Resourcing*

The University should be mindful that in order to continue to adhere to the staff student ratio additional academic staff may be required.

9.2 School Placement

The opportunities and challenges of establishing meaningful school-university partnerships require further development to ensure a national coordinated approach.

Appendix 1 - Review Panel Membership

Independent Review Panel Chair

Professor Anne O'Gara
Professor O' Gara is Adjunct Professor, School of Education, Trinity College Dublin. Formerly President of Marino Institute of Education from 2006-2018, Anne had a long and distinguished career in education as an Inspector of Schools with the Department of Education and Skills, Assistant National Coordinator of the Home School Community Liaison Scheme and as a primary teacher serving schools in designated areas of disadvantage for twenty years. She was a member of the Teaching Council on two occasions from 2007-2012 and 2016-2018. Anne is currently Deputy Chair of the Board of the Child and Family Agency (TUSLA) and a Board member of The Ark.

Dr Mary Fleming
Dr Fleming is Adjunct Senior Lecturer in NUI Galway. She was Head of the School of Education, NUI Galway from 2013-2016 and member of the Teaching Council 2016-2018. As Director Teacher Education within the School of Education from 2012, she had primary responsibility for the development and accreditation of Initial Teacher Education (ITE) Programmes and was academic Director of the Professional Master of Education. Mary lectured and taught modules in the areas of Leadership and Policy development, Curriculum Studies and Professional Practice. Her research interest areas are concerned with the dynamics of teaching and learning within classrooms, leading learning and policy developments within the system and leadership practices within educational contexts**.**

Mr Patrick McVicar
Patrick Mc Vicar is a former post-primary school principal and a former member of the Teaching Council, where he served on the Education and Registration committees. Currently a member of the Association of Community & Comprehensive Schools (ACCS) executive, he has served on a number of NCCA and NCSE committees and working groups.

Appendix 2 – Subject Specific Criteria Mathematics

Mathematics
*In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of Mathematics, an applicant must meet **all** of the following criteria:*

1. (a) Applicants must hold a degree-level qualification, with Mathematics studied up to and including third-year level or higher (or modular equivalent).

   (b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass1 result in all examinations pertinent to the subject of Mathematics.

   (c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Mathematics comprising at least 60 ECTS credits (or equivalent) and with not less than 10 ECTS credits (or equivalent) studied at third-year level or higher (or modular equivalent).

2. The study of Mathematics during the degree must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Mathematics syllabuswww.curriculumonline.ie). To meet this requirement, the degree must include the study of all of the following essential areas to a minimum of 40 ECTS credits (or equivalent): 2 to the highest level in post-primary education (see

Essential areas of study
(a) Analysis3 - minimum of 10 ECTS credits
(b) Algebra4 - minimum of 10 ECTS credits
(c) Geometry5 - minimum of 5 ECTS credits
(d) Probability and Statistics6 - minimum of 5 ECTS credits

The remaining 20 ECTS credits (or equivalent) may be in any of the above essential areas, or be drawn from the following optional areas:

Optional areas of study
(e) Dynamical Systems and Chaos
(f) Calculus of Variations
(g) Numerical Analysis or Computational Mathematics
(h) Mathematical Modelling
(i) Discrete Mathematics
(j) History or Philosophy of Mathematics
(k) Mathematical Logic
(l) Set Theory and Cardinality

3. Applicants must also have completed a programme of post-primary initial teacher education (age range 12-18 years) carrying a minimum of 120 ECTS credits (or equivalent)7. The programme should include a module(s) on the teaching of Mathematics carrying a minimum of 5 ECTS credits (or equivalent)8.

1 which includes pass by compensation.

2 as approved by the Minister for Education & Skills, and published by the National Council for Curriculum and Assessment (NCCA).
3 This must include modules in Differential and Integral Calculus in one and several variables, and may include modules in Differential Equations, Complex Analysis, Abstract Analysis, Measure and Integral, or Topology.
4 This must include modules in Linear Algebra, and may include modules on Abstract Algebra (Groups, Rings, and Fields), Cryptology, Coding Theory, or Number Theory.
5 This must include a module or modules in Euclidean and Non-Euclidean Geometry and may include modules in Differential Geometry, Algebraic Geometry, or Topology.
6 This must include modules in Probability and Statistical Inference and may include modules in Combinatorics or Stochastic Processes.
7 Applicants who have commenced a programme of initial teacher education prior to 01/09/2014 carrying less than 120 ECTS credits may be exempted from this requirement at the Council's discretion.
8 Applicants who have completed a specialist concurrent degree in Mathematics must meet all of the requirements as detailed above. This course should be equivalent to a minimum of 240 ECTS credits.