

TechMate

A Best Practice Toolkit for Gender Equality in Computing
Higher Education

By Alina Berry



PhD Research supervised by Prof. Sarah Jane Delany (TUD),
Dr. Susan McKeever (TUD) and Prof. Brenda Murphy (SETU)

The Problem

25%

of ICT students in
Ireland are women
(HEA, 2025)

Europe (Informatics
Europe Statistics, 2024)
- < **22%** students in
Informatics are women



400+ relevant publications

But scattered across disciplines & locations



Hard to find relevant work

Literature review needed



Implementation gap

Research might not reach practitioners



Toolkits/frameworks address it differently

...by addressing specific contexts/cohorts, providing
strategic (non-practical) guidance

What is TechMate?

A free, open-access web-based toolkit that consolidates research-driven gender equality initiatives (actions) into one platform.



Policy

Student/Staff Recruitment,
Cultural Change



Pedagogy

Curriculum based,
Delivery
Techniques, TAs



Influence & Support

Mentoring &
Role Models



Promotion & Engagement

Advertising, Events,
Industry Engagement

<https://ascnet.ie/techmate/actions/>

How to Use TechMate

Choose Your Scenario

1

Browse all actions by category /subcategory OR filter by goal, impact level, student cohort & your role

Explore an Action

2

Each page includes: what is the action, quick facts from research, implementation guide, evaluation approach, resources (where available) and references

Implement & Adapt

3

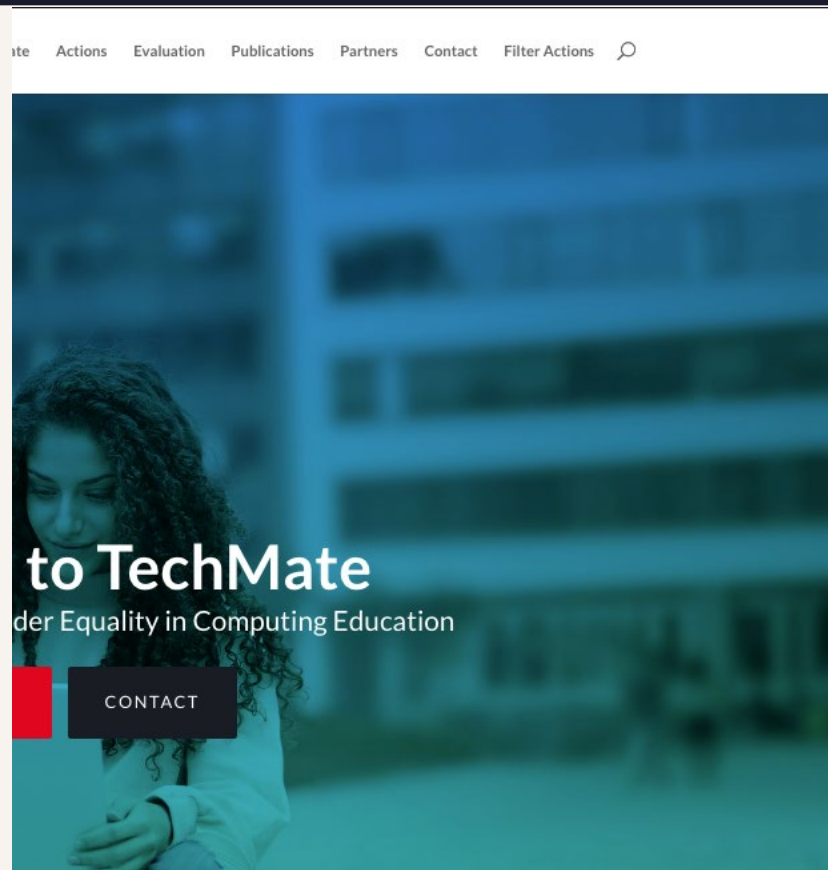
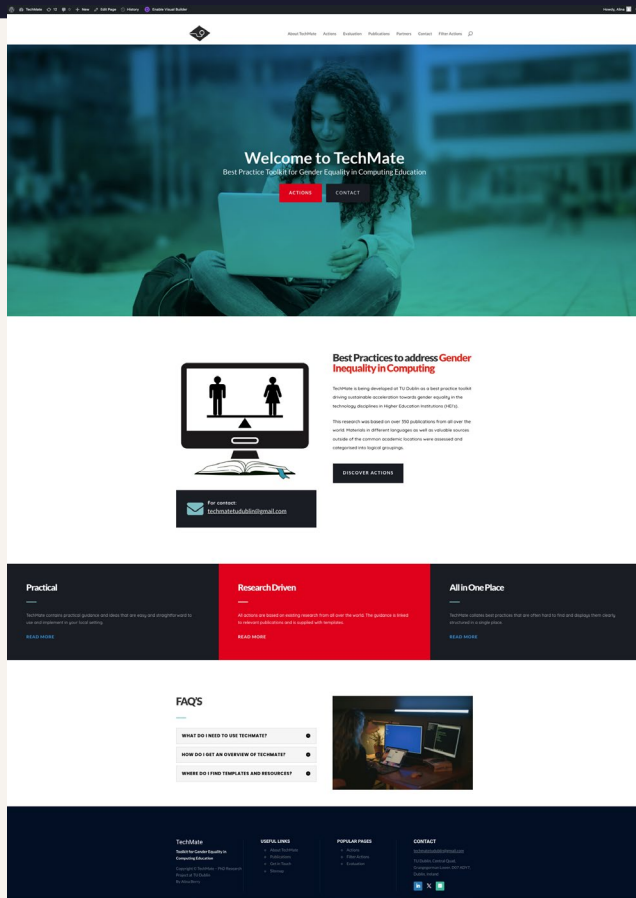
View templates, surveys, and guides. Customise for your context and put into practice

Share & Scale

4

Document what works. Share insights back via the feedback form (on Contact page) to help grow the toolkit

How to Use TechMate



How to Use TechMate



About TechMate **Actions** Evaluation Publications Partners Contact Filter Actions

Actions

Actions are practical ways to address gender imbalance in computing education. In other words, they are gender initiatives with a research driven guidance.

Search/Filter Actions

Policy ▼

Pedagogy ▼

Influence & Support ▼

> Mentoring

> Role Models

Promotion & Engagement ▼

Buddy Systems

Invite undergraduate female students to support more junior female students in a computing course.

[View Action](#)

Professional Support Sessions

Short Meetings with First Year Students



About TechMate **Actions** Evaluation Publications Partners Contact **Filter Actions**

Filter Actions

Search

Undergraduate Student TAs – Action

To use a diverse pool of undergraduate students as teaching assistants (TAs) in computing labs. [Read more...](#)

Revising Modules – Action

To revise the order of practical and theory material in modules. For example, where multiple theory lectures normally delivered in a row, consider changing the order by mixing in practical/project classes in-between instead. [Read more...](#)

Buddy Systems – Action

Invite undergraduate female students to support more junior female students in a computing course. The aim is to support junior female students in a strongly technical and often male oriented environment. This action is particularly... [Read more...](#)

Are you looking to recruit or retain underrepresented gender groups?

- Recruit
 Retain

What level of impact is required?

- Short-term impact
 Longer-term impact

What student cohort is being targeted?

- New students
 Undergraduate students (any level)
 Postgraduate students

Who needs to be involved to start a gender initiative?

- Lecturer/Academic
 Managerial role
 Policy maker
 Other (external role possible)

Search

How to Use TechMate



Buddy Systems

[Back to All Actions](#)

What is the Action?

Quick Facts to Support this Action

Ways to Implement this Action ▼

> How and how often to meet?

> Recruitment

> Matching

Training & Support

Ways to Encourage Participation

What is involved at an administrative level to implement this action?

Evaluation Approach

References

Matching

There are a number of options for pairing buddies and mentees:

> Interests

Based on [common interests](#), e.g., [outside of academia](#).

> Randomly

[Randomly](#), e.g., with random matching of applications, or in drop-in sessions, where buddies can be matched without arranging beforehand.

> Choice

Student mentees choose buddies.

> Preferences

If there is a limited number of buddies and a larger number of new female students to be supported, [a few students can be assigned per buddy](#).

Real-World Examples

The Lecturer

No approval needed

Finds evidence-based inclusive classroom strategies under Pedagogy → Delivery Techniques and uses those that are applicable with no faculty approval needed

The Department Head

Systemic change

Addresses declining female enrollment with Policy actions: rebranding courses, budgeting outreach events, implementing family-friendly policy

The Student Advocate

Evidence-backed proposals

Proposes peer support, with research citations to build credibility

TechMate: Your Feedback Matters



ascnet.ie/techmate/contact