

# Meeting the employability agenda through an alternative 3<sup>rd</sup> year module: “maths in the classroom”.

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## Aims and Objectives

A final year mathematic degree module – Maths in the classroom (**MIC**) that enhances/provides:

- The student experience of preparation for training and employment
- The role universities can play in addressing the employment needs of students and society
- Flexible access to higher education and employment training

# Background Kingston University

- “[Kingston University] is seeking to address the issue of declining mathematical ability amongst students and the knock-on effects this has to wider society through a range of initiatives stemming from its mission as a civic university” (Atkins et al 2007)
- “To strengthen the University’s civic and community contribution to the Royal Borough of Kingston upon Thames and the wider South West London region” (Kingston University 2005)

# Background – Government Strategy

UK Government strategy for children and learners:

- “every primary school offering high standards in the basics..” (DFES 2004)
- “every secondary school offering excellent teaching...” (DFES 2004)
- “Closing the gap in educational attainment between those from low income and disadvantaged backgrounds and their peers” (DFES 2006)

The training and development agency for schools (see TDA 2007) was set up with a critical role in achieving these priorities

# Background – Training Development Agency (TDA)

Aims include:

- “that the diversity of the teaching workforce should reflect the diversity of the pupil population”

The TDA pledge to:

- “continue with [their] successful approach to attracting candidates from **under-represented groups** to teaching” through
- “contribution to the development of an **effective school workforce**”

# Setting up the MIC

- Collaboration between departments:  
Education and Maths and Academic Development  
Centre
- Collaboration between University and Schools  
Placement of students

# The MIC at Kingston University

- **Recruitment**
- **Curriculum Design**
- **Delivery**
- **Progression**

# Evaluating the MIC

Discussions with faculty staff yielded the following Course Success Criteria:

1. Students will gain insights into mathematics teaching
2. Students will further crystallise their career aspirations.
3. Students will develop generic employability skills.
4. Students will start to develop skills needed for teaching.

# ***Skills needed for teaching***

“I am more patient with self and in my explanations to others I think more of the concept of the topic” (focus group)

- Students experienced a range of teaching strategies first hand and reported that their allocation into sets, the selection and delivery of topics and the pace at which material was introduced all helped them to develop teaching skills.
- The opportunity to observe pupil and teacher behaviour over a period of time was identified as helpful, with perceptions of school age pupils changing as a result their being seen as individuals rather than gangs of young people.

# *Insights into mathematics teaching*

“I now think teaching is more than just delivering lessons”

- The module affords students a ‘sideways glance’ at teaching rather than placing them in a ‘trainee teacher’ role with opportunities for some ‘hands on’ experience is provided in a supported environment. When interviewed students report the insights it had given them into teaching and learning and policy issues such as the National Curriculum.
- One student reported that she “Realised benefits once in placement” and was able to “make connections” and that it “broadened my mind about what’s involved”.
- The course director felt that the course offered important insight in pedagogy.

# ***Generic employability skills***

- “All I did wrong in my oral I worked on – at interview recently got full marks for my presentation – so I learned from making mistakes”
- The placement experience encouraged students to adapt their behaviours appropriately. In unpredictable environments, students have developed responsive and flexible approaches for example to time management, teamwork and the application of ICT.
- Students commented on the value of developing the skills to communicate with a range of audiences – colleagues, managers and pupils. The effective deployment of time management skills was also been beneficial and readily transferable. Students reported that their self confidence was raised as a result of the experience.
- The course director made the point that the module provides evidence for students that they have taken their subject into another sphere outside the traditional mathematics environment.

# ***Career aspirations***

“[The module] offers a realistic view- I thought I’d be the cool teacher – needed the reality check”

“[My placement] Confirmed that I wanted to be a teacher – discipline problems haven’t put me off”

“[The module was] very good preparation for career and good experience personally – now not going to be taking up teaching from the experience ... pupils etc. not what I expected ....it was an eye opener”

- The placement offered students a realistic experience of an institution over a period of time and thus enables students to reach an informed decision about pursuing a career in teaching. From interviews it was clear that the module had helped students to start to crystallize their employment aspirations and that teaching was considered seriously by some immediately and for others in the longer term.

# Tentative conclusion

The evaluation suggests that the Maths in classroom module goes achieves and goes beyond it aims of providing students with insights into the work of a teacher and encouraging them to consider seriously the possibility of a career in teaching by providing additional skills and insights that are likely to increase employability and career prospects.

# Discussion points

- Transferability
- Alternative assessment
- Curriculum model
- Institutional evaluation

# References

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