

Subject-specific Teacher mentoring – Can it help retain early career chemistry teachers?

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Event participant agreement: *we agree to....*

- ...foster equal participation 
- ...not tolerate bullying, harassment, or discrimination 
- ...maintain privacy/confidentiality 
- ...respect people's identities & experiences 
- ...engage with kindness and respect 
- ...keep communication professional 
- ...consider diverse cultural backgrounds 
- ...contribute constructively. 



Teacher Mentoring – what are your experiences?

Poll 1 - What is your experience of mentoring, tick all that apply...

Poll 2 – How helpful did you find that mentoring with regards to the support it offered you?

Chat – Why did you find the mentoring helpful/unhelpful?

Chat – How much training did you get before you were asked to mentor someone?

Chat – if you didn't have training, did you feel like you knew what you were doing as a mentor?



Why Mentoring?

The RSC already run an award winning member mentoring programme

We know that mentoring can have enormous benefits to both the mentor and mentee including...

- Gaining greater self-confidence and self belief
- Better communication skills
- Improving performance in their current role
- Pursuing personal and professional development opportunities



Why Teacher Mentoring?

‘Judgementoring’¹ often compromises the mentoring relationship for trainee and early career teachers.

Research by the Gatsby Foundation² emphasised that external teacher mentoring could be a way to support early career teachers to stay in the profession.

Earlier research by Gatsby, looking at the effect of external mentoring on teachers of physics,³ highlighted that non-specialist teachers of physics and chemistry participating in physics subject knowledge programmes benefitted from external mentoring.



Scotland – Probationer mentoring 2017/2018

Royal Society of Chemistry worked in collaboration with Scottish Schools Education Research Centre (SSERC)

Independently evaluated by the Robert Owen Centre (ROC) at the University of Glasgow.

30 Probationer teachers (teachers in their first year of teaching after training) were paired with experienced chemistry teachers (> 5 years teaching experience).



The programme

Training for both the mentors and probationers in September 2017 prior to matching

Expectation to meet once every 6 weeks from September 2017 – May 2018

Evaluation consisted of:

- Pre- and post-surveys conducted with both probationers and mentors alongside focus group discussions
- Survey of comparison group of probationer teachers in May 2018

Outcomes we evaluated

Primary Aim: To investigate the contribution of having an external mentor to teacher retention

We also explored:

- Impact of the support from the mentor scheme
- Attitudes towards teaching
- Job satisfaction
- Career aspirations
- Intention to remain in teaching in the longer term



What we learnt?

Poll 3 – What do you think the top three outcomes were for the mentees?

Mentees (N=24):

Increased my subject confidence (71%)

Improved my general teaching skills (66%)

Improved my Chemistry teaching skills (66%)

7 = Encouraged them to stay in teaching (46%)

Mentors (N=12):

Increased enthusiasm for teaching (75%)

Encouraged them to stay in teaching (42%)

Thoughts from participants

I got what I asked for and I got a lot. So if I asked for something, my mentor went over and above to make sure that all the boxes could be covered if I had a question. Like you were saying, I could have asked for more help, but I didn't feel like I needed to and so when I did ask for it I got exactly what I needed. Mentees (focus group)

I suppose I feel I gained a wee bit of knowledge about what probationers are going through, because I graduated quite some time ago and I went through a different system, so I feel I maybe got more awareness of probationers and how difficult it is. it gave me an indication that I am knowledgeable and I do know and I can support people. Mentor (focus group)



Recommendations for future mentoring schemes:

Match mentors and mentees before their initial meeting to allow them to meet at the training and arrange initial contact

Starting mentoring from year 2 of teaching (not NQT or probationer year)

Possible targeting of support to areas where Chemistry teacher retention was poor or there was only one chemistry teacher in a school.

Background information about the programme could be sent before the initial training



England – Mentoring for early career chemistry teachers (MECCT) 2019/2020⁴

Funding from the Education Endowment Foundation and Wellcome
Independently evaluated by NFER

Built on the findings from the Scottish mentoring work

Focusing on teachers with between 1 and 5 years teaching experience

Paired with mentor with > 5 years teaching experience

40 mentoring pairs from the East of England and the Midlands



The programme

Initial training session for mentors and mentees

Pairing happened, where possible, before the training sessions so they could meet then.

Specified a minimum of 6 mentoring sessions between February 2019 and February 2020

Method of meeting wasn't specified, although we encouraged the mentees to initiate the meetings

Mentors and mentees received check-in emails from Education Coordinators every 6 weeks

Theory of change

The intervention aimed to help participating early career teachers (ECTs) feel more supported by:

- Boosting their confidence
- Expanding their chemistry-specific pedagogical knowledge
- Helping them to manage their workload and stress
- Supporting them to stay in teaching

It also aimed to provide mentors with the skills required to implement flexible and personalised mentoring

Research Methods

Pre and post-intervention questionnaires

Fidelity logs after each mentoring session

Interviews with mentors and mentees



What we learnt?

Mentors signed up relatively easily

Recruitment of the early career teachers was much more challenging

The MoU process wasn't straightforward and again led to delays

Some delays in getting mentor pairs matched

Whilst monitoring of the relationships was undertaken every 6 weeks, responses were very limited and we lost some mentees through the process

Topics discussed during mentoring sessions

Poll 4: What were the top 3 topics of discussion during mentoring sessions?

1. Classroom and behaviour management (58%)
2. Lesson planning, paperwork and bureaucracy (54%)
3. Day-to-day teacher experiences (54%)
4. Time and workload management (50%)



Findings

The biggest improvement from the start of the project was having a wide repertoire of teaching approaches to draw on (81% improvement)

Pitching lessons at the right level and being able to differentiate lessons also saw improvements from the start of the project

Confidence levels also increased

Ability to manage workload, bureaucracy and stress were areas that didn't see as much improvement over the course of the programme.

As with the Scotland mentoring, there was limited evidence to suggest whether this would support teacher retention

Also meeting face-to-face was found to be difficult in many cases, either because of time or geographical locations

Thoughts from participants...

‘When I first met with [my mentor] I was in a bit of a rut and I didn’t know whether my future lay in teaching ... It’s revolutionised my teaching and pushed me outside of my comfort box which has helped me make things a bit more interesting which has helped me enjoy things a bit more’ (ECT 4).

‘I love to teach and I think it’s what I’m supposed to do, but having someone that reminds you that you love it and having conversations that are positive and constructive to your practice gives you less reason to consider throwing in the towel’ (ECT 2).

‘It’s not only him learning from me, I’m learning from him ... I’ve learned the different style of resources he uses ... I’ve learned about the different syllabuses and books they use in their school and what’s good and bad about them’ (Mentor 3)



Conclusions

Neither the Scotland Probationer, nor the MECCT mentoring in England showed a clear indication that teachers would remain in teaching because of the intervention.

We did see an increase in confidence of the ECTs who participated, as well as improved subject knowledge and pedagogy.

Teachers in both studies appreciated having a mentor who was non-judgemental and from outside their school

It increased many of the mentor's enthusiasm for teaching

Face-to-face meeting was preferred

Over to you...

Were there any questions that we should have asked but didn't in either of these two projects?

Was there anything that surprised you in our findings?

Is there another approach to teacher mentoring that we should/could take?



What now?

We have set up our own early career teacher mentoring strand as part of our member mentoring.

Advertised in May 2020 for mentors and got an immediate response

In 2021 we aim to have training sessions throughout the year so we have a pool of experienced teacher mentors who can be paired with early career teachers as needed.

Although the scheme will be open to all, we want to encourage teachers in schools that are in challenging circumstances to participate as both mentors and mentees.

Apply now – Leadership mentoring

We are inviting heads of science or chemistry at secondary schools in the UK to form mentoring partnerships with RSC members working in industry.

Mentoring partnerships are a great way to work collaboratively to enhance leadership skills, by discovering new ways of looking at leadership and learning new techniques.

The scheme is primarily aimed at heads of department working in schools where at least 25% of pupils are eligible for free school meals.

If you would like to find out more about the scheme, you can [visit our website](#). There are limited spaces, and the closing date for applications is 28 January 2021. If you have any questions or would like to apply, please [email Katie Nuttall](#).

Any questions?

Links:

1. [Judgementoring and other threats...](#), Andrew Hobson and Angi Malderez, Sheffield Hallam University, 2013
2. [The Mentoring Across Professions \(MaP\) project](#), Gatsby Foundation, September 2016
3. [The nature, impact and potential of external mentoring for teachers of physics and other subjects in England](#), Gatsby Foundation, 2012
4. [Mentoring for early career chemistry teachers](#), EEF, November 2020
5. [Factors affecting teacher retention: qualitative investigation](#), DfE, March 2018
6. [The impact of mentoring on teacher retention](#), R. Ingersoll and J.M. Kralik, University of Pennsylvania, 2004

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