

Culturally Relevant Pedagogy - what does it mean for our classroom practice? - *Keynote*

A secondary and primary teacher's experience of
introducing changes with Jane, Rohini and Rachael

Keynote introduction - 30 minutes

Then a follow up workshop - 50 minutes



About us



Jane Waite

Senior Research Scientist
Raspberry Pi Foundation



Rohini Shah

Part-time Secondary teacher at
Queens Park Community School,
London

Computing Subject Lead since 2017



Rachael Coultart

Part-time Primary teacher at
St Nicholas Primary School, Stevenage

Computing Subject Lead since 2016

Why look at culturally relevant pedagogy (CRP)?

In England ...

Since 2014, all children should be taught computing

2021 - 19% of IT specialists identified as female (BCS)

2021 - 3% of Tech workers identified as Black (Hired data)

2020 - 22% of CS undergraduates identified as female (UCAS)

2020 - 15% of CS A level students identified as female (Ofqual)

2020 - 21% of CS GCSE student identified as female (JCQ)

Fewer female, Black and ethnic minority students and workers in the CS field

(e.g. Kemp, 2019, UK Tech Workplace report)

Some terms (simplified!)

Culture:

A person's values, beliefs, norms,
language, artefacts, symbols -
understanding of the world

Culturally relevant pedagogy:

Framework for teaching that emphasises
the importance of learners' knowledge, way
of learning and heritage

Culturally responsive teaching:

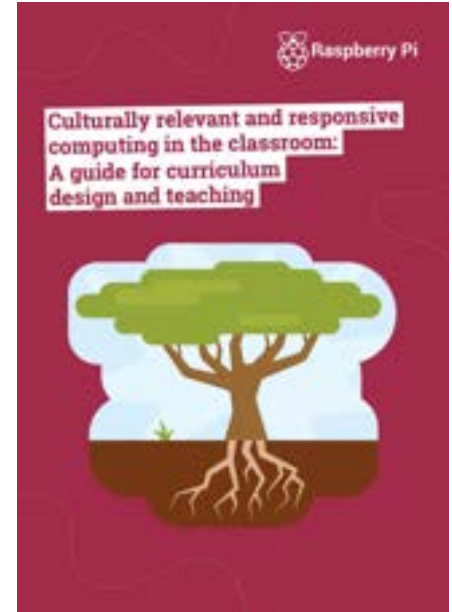
Teaching practices that draw on learners'
personal experiences and cultural identities to
make learning more relevant to them

Culturally responsive computing:

All students are capable of digital innovation, that the learning context supports transformational use of technology, learning about one's self allows for innovation, technology can be a vehicle to reflect on and understand one's identity, we should consider who creates technology for whom and to what ends
(Scott & White, 2013)

A set of guidelines

In 2021, the Raspberry Pi Foundation developed a set of guidelines in conjunction with a working group of teachers and academics.



Research in classrooms and areas of opportunity

To further investigate what CRP might look like for teachers in England with funding from Google ...

We operationalised the guidelines into a **framework of 10 areas of opportunity (AOs)**.

And worked with 19 teachers over six months, who adapted their teaching using these.

If you stay for our workshop, (after the keynote) we are going to share the 10 AOs with you, and look at what they might mean for your practice!

As a taster, Rachel and Rohini are going to share, a little, of how they have used AOs in class.

We are in the middle of publishing the research in this area. So please, don't tweet about the detail right now ;)

Choice - Area of Opportunity

Year 2



Year 4



Year 5



Challenges

- ❑ Managing my own and colleagues' anxieties around taking a risk and doing something different
- ❑ Managing children's expectations about what they could achieve
- ❑ Managing multiple projects with so many different ideas
- ❑ Remaining true to the learning objective
- ❑ Coping with not being totally in control

Benefits

- ★ Incredible levels of engagement (at home and school)
- ★ Improved quality of design (planning)
- ★ Persistence and perseverance
- ★ Meaningful and memorable outcomes
- ★ Sense of success and achievement
- ★ Perceptive self-evaluation comments
- ★ Children all believed they could become digital storytellers and computer programmers
- ★ Space and time to discuss pedagogy and practice with colleagues
- ★ Provided a tool to "interrupt inequality"

Getting to know your students and contexts - areas of opportunity

Year 9 - HTML coding Context - My Culture and Heritage



HTML Pages



Challenges

- ❑ Teaching coding challenges remained
- ❑ More work needed in pedagogy
- ❑ First year so more time was spent on planning and discussing culture and heritage, therefore websites were not brilliant
- ❑ Some pupils felt they had no culture - so we told them to do youth culture
- ❑ Ran out of time



Benefits

- ★ Very supportive team and HOD and other teachers loved the idea
- ★ Ended up being a whole school initiative and we had a culture day - everyone dressed up
- ★ Felt like a real sense of community in school
- ★ Students who normally would not engage were engaged
- ★ Showed that Computer Science is engaging, creative and is a tool
- ★ Good take up for GCSE Computer Science
- ★ Got more girls too!

Follow up workshop

If you would like to find out more, stay for our follow up workshop.

Or read our publications!

Watch [a video about culturally relevant pedagogy in the classroom](#)

Read a [blog post](#) about our research so far

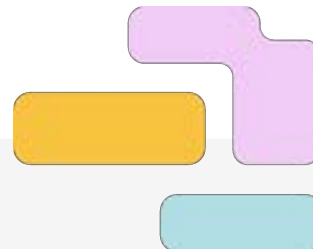
Look at a [poster](#) about our research.

Use the [guidelines](#) as created with teachers

Find out about [how the guidelines](#) were created

Read [a review of the research](#) about CRP

Watch out for our next publications!



Culturally Relevant Pedagogy - what does it mean for our classroom practice? - *Workshop*

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<https://bit.ly/ILoveCompCRP>

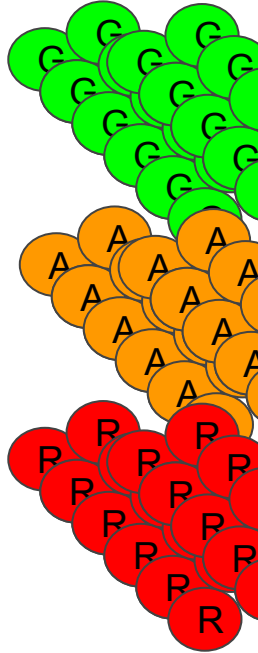


Objectives of this session

I know about and can start to use to review my classroom practice

- Culturally relevant pedagogy (CRP)
- Pedagogical content knowledge (PCK) amplifiers and filters
- Areas of opportunity (AoO)
 - Student Choice
 - Getting to know my students
 - Getting to know myself
 - Related curriculum content

RAG your current confidence for each

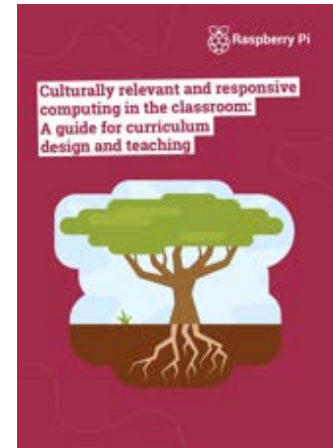


Background theory/ research

- o Culturally relevant pedagogy (Ladson-Billings, 1995)
- o Culturally responsive teaching (Gay, 2000)
- o Culturally sustaining pedagogy (Paris, 2012)
- o Culturally responsive computing (Scott et al. 2015)

Working with teachers and researchers we developed a set of guidelines.

And then took this a step further with a classroom study.



Some terms (simplified!)

Culture:

A person's values, beliefs, norms, language, artefacts, symbols - understanding of the world

Culturally relevant pedagogy:

Framework for teaching that emphasises the importance of learners' knowledge, way of learning and heritage (Ladson-Billings, 1995)

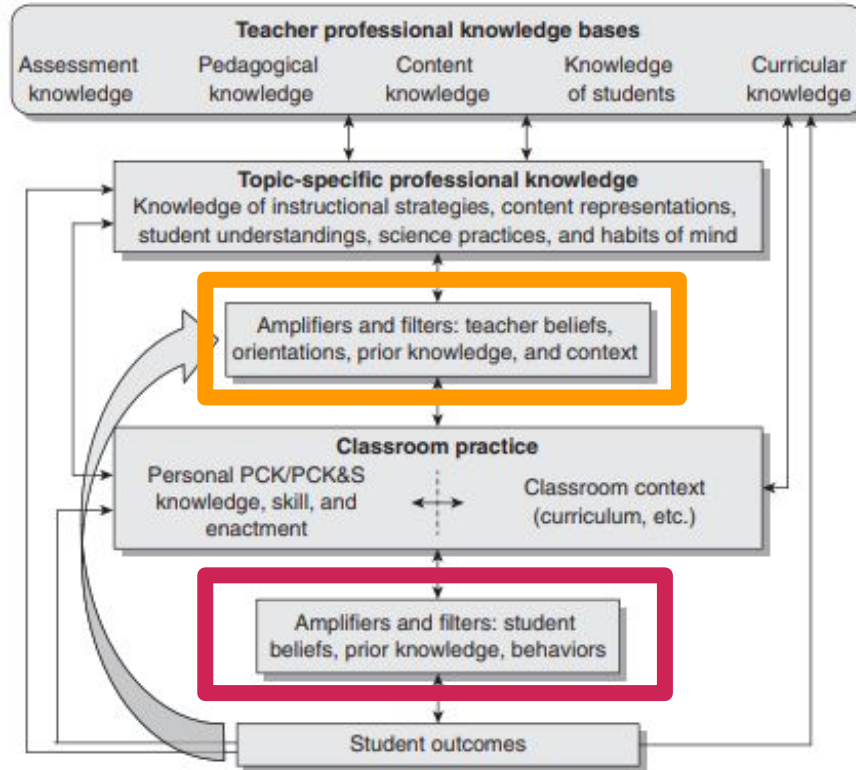
Culturally responsive teaching:

Teaching practices that draw on learners' personal experiences and cultural identities to make learning more relevant to them (Gay, 2000)

Culturally responsive computing:

All students are capable of digital innovation, that the learning context supports transformational use of technology, **learning about one's self** allows for innovation, technology can be a vehicle to reflect on and **understand one's identity**, we should consider **who creates** technology **for whom** and **to what ends** (Scott & White, 2013)

PCK - a new version



Model of teacher professional knowledge and skill including PCK and influences on classroom practice and student outcomes
(Gess-Newsome, 2015, p. 31)

Areas of Opportunity (AoO) framework

We operationalised the guidelines to support teachers to review and adapt their practice

#	Area of Opportunity	Description	#	Area of Opportunity	Description
1	Learners	Find out about learners in order to reveal opportunities to adapt our teaching	6	Activity	Participate in open-ended, inquiry led, or problem-solving activities.
2	Teachers	Find out about ourselves as practitioners – to reflect on one's cultural lens	7	Collaboration	Develop student oriented learning through collaboration and structured group discussion
3	Content	Review what is taught in terms of the content; and add in extra culturally relevant content (e.g., about social justice/ethics, data bias accessibility, user experience etc.)	8	Choice (Student Agency)	Develop student oriented learning through student choice
4	Context	Review contexts and examples used – to make teaching relevant, meaningful, to contextualise and make connections	9	Materials	Review the learning environment (including learning materials) – to increase accessibility, a sense of belonging and promote respect
5	Accessibility	Make the content accessible and relevant for all learners	10	Policy	Review related policies, process and training in your school and department



How can you reflect on your own values, beliefs and behaviours?

Please discuss with your partner and add ideas here

How can you find out about your students values and beliefs?

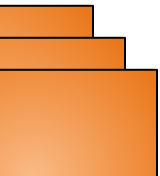
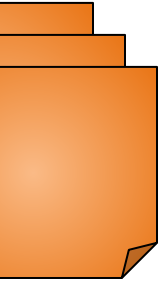
Consider youth culture vs student interest vs heritage.

Please ask Rohini questions about her school experience.





What content might be particularly relevant to CRP?



How can you promote choice? And what are the pros/ cons?

Please ask Rachel questions about her school experience.

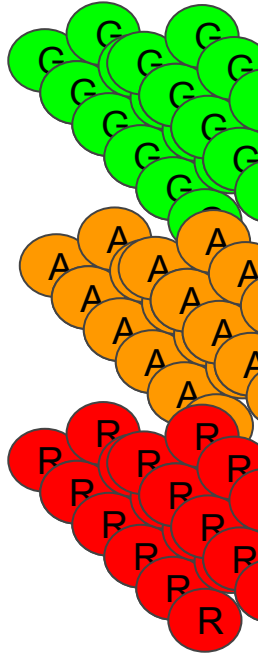


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Re RAG your current confidence for each





Q&A

Finding out more

Watch [a video about culturally relevant pedagogy in the classroom](#)

Read a [blog post](#) about our research so far

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Use the [guidelines](#) as created with teachers

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References

- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. Teachers College Press.
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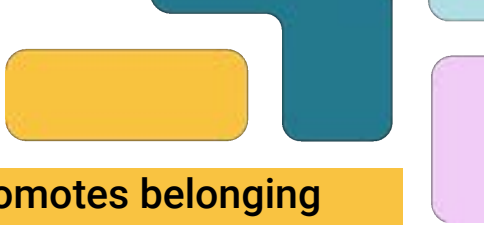


What contexts and examples might be particularly relevant to CRP?


Consider youth culture vs student interest vs heritage.



How do you incorporate collaboration e.g. structured discussion

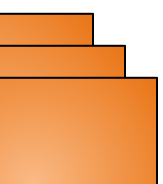
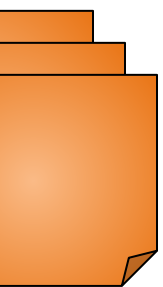
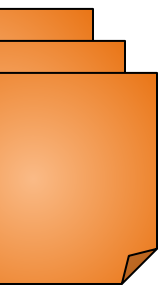


How do you create a learning environment, resources, posters etc that promotes belonging and respect?



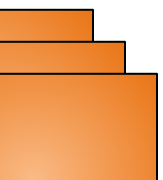
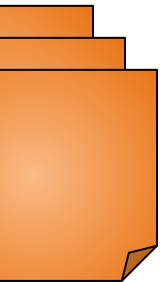
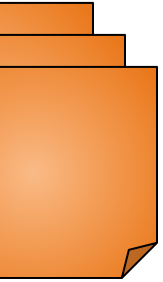


What related policies, processes and training is available in your school?



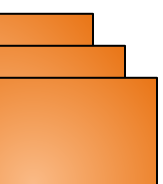
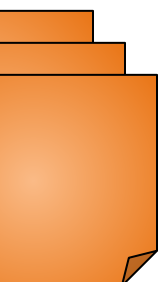
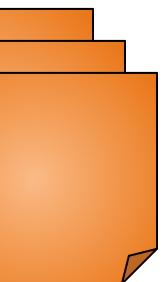


What instructional approaches (e.g. PRIMM) do you use to make learning accessible to all?

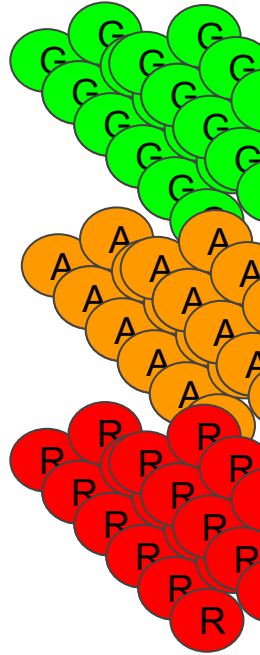
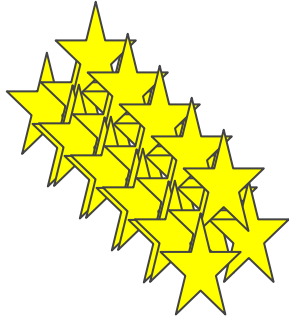




How do you include open-ended, inquiry, problem solving?



Working slide



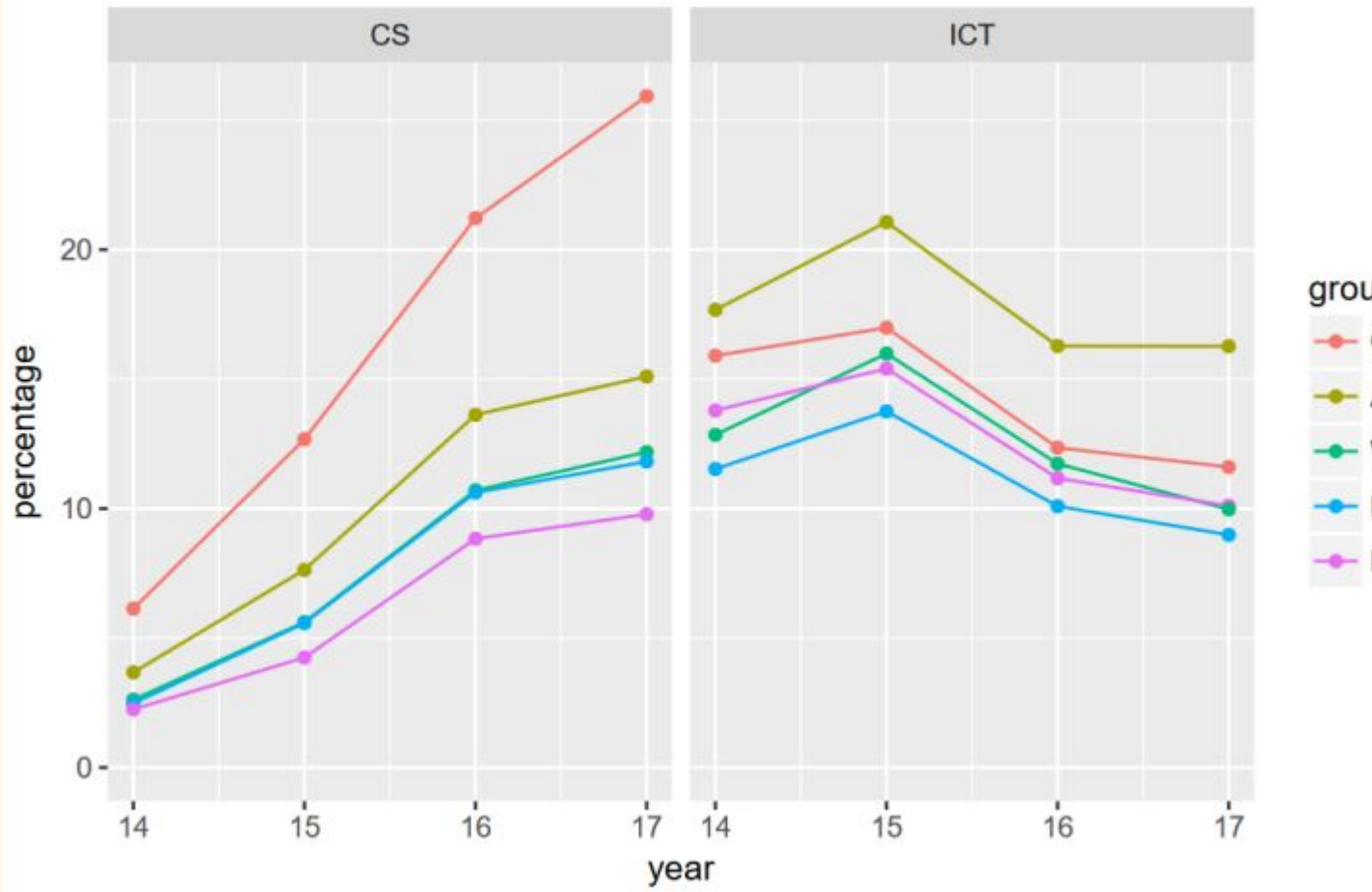
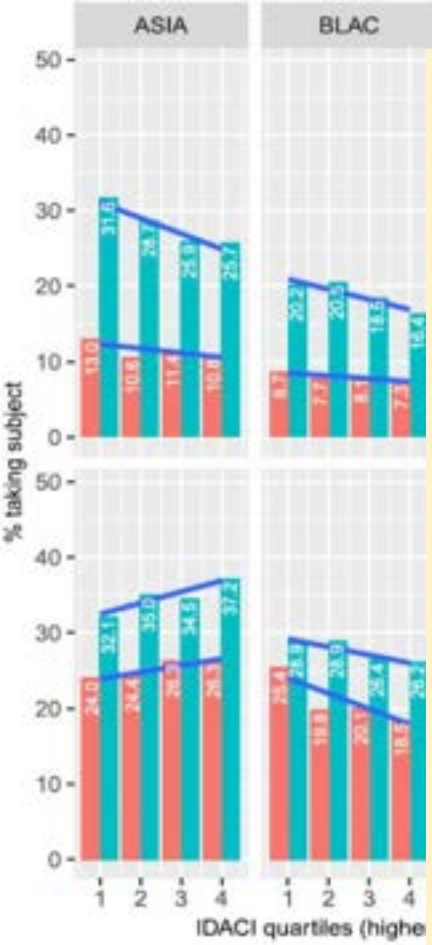
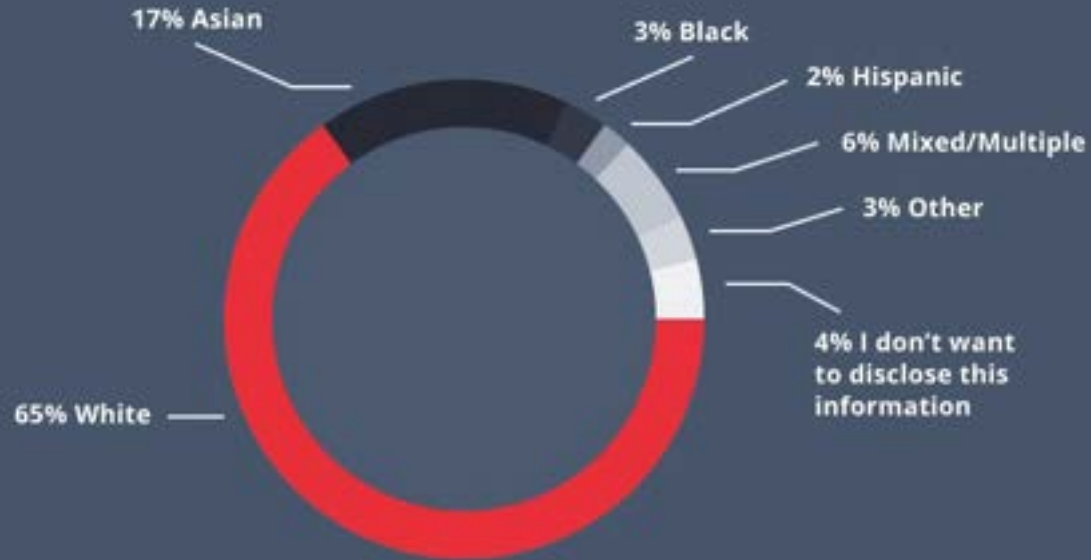


Figure 86: Longitudinal: GCSE uptake by ethnicity as % of those taking subject

Fig. 3. GCSE computer science uptake by ethnicity and IDACI quartiles

What Ethnicity Are UK Tech Workers?



Share

2021