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Transforming classroom observation and professional development with 360-degree video and mobile VR

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How to cite:

Cross, Simon; Wolfenden, Freda and Adinolfi, Lina (2018). Transforming classroom observation and professional development with 360-degree video and mobile VR. In: 8th Annual mEducation Alliance Symposium, 6-8 Nov 2018, Washington DC, USA.

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Transforming classroom observation and professional development with 360-degree video and mobile VR

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7 November 2018

mEducation Alliance Symposium

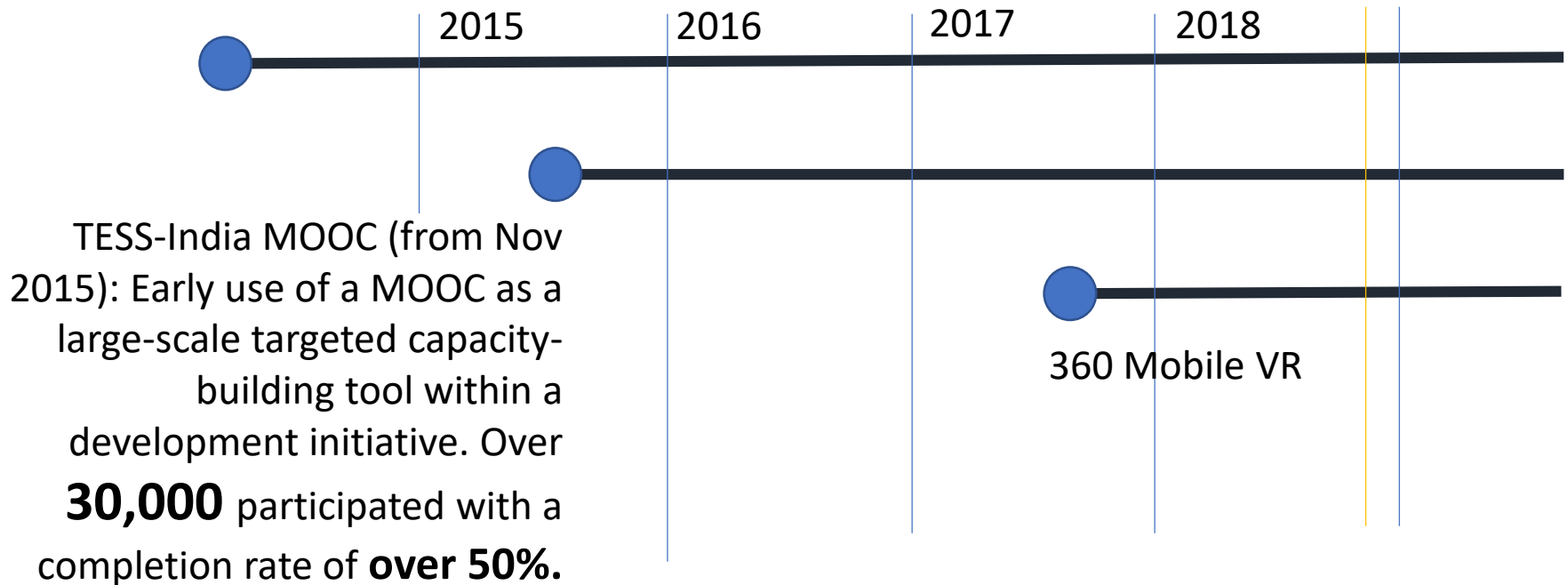
Washington DC, USA

Cite as: Cross, S., Wolfenden, F. and Adinolfi, L. (2018). Transforming classroom observation and professional development with 360-degree video and mobile VR, *mEducation Alliance Symposium*, Washington DC, 6-8 November 2018.

Background: TESS-India Programme



OER: Over 100 specially commissioned Teacher Development OER Resources (plus videos) adapted (linguistically and culturally) for the local context of each of the seven project states. Over **800,000** have engaged with the resources.





Examples of TESS-India activities in one state – Madhya Pradesh

- Localisation workshop for Hindi MOOC with state representatives
- Visits, discussions and interviews at Teacher Education Colleges
- Workshop with state education officials for mapping TESS-India OERs to Shaala Siddhi
- Meeting with RSK Director
- Digital badges knowledge sharing
- Visits to local schools



The Problem of Teacher Professional Development



- Pressing need for improving the quality of teaching, teacher training and professional development in low- and medium-income countries
- Projects struggle to achieve significant and permanent change in teaching practice and supporting structures
- Lack of solution-building from the teachers' perspective or with the technology they own
- Need to enthuse, engage, and give control
- Standard video has been very successful in supporting teacher training and development but has its limitations
- Virtual Reality (VR) offers unprecedented level of immersion but until recently has been expensive and bulky

The Focus of the 360 Mobile VR project



- Pressing need for improving the quality of teaching, teacher training and professional development in low- and medium-income countries
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Project aims

To improve the quality of teaching practice, pedagogic understanding, and engagement with professional development by developing research-validated practical approaches to, and a conceptual framework for, using 360-degree video recording and smartphone-driven mobile VR viewing.





Two of the key stages



Recording 360-degree video in the classroom

Camera fixed to tripod in the centre of room. Researchers monitor and control the recording from another room using an app



Viewing video on a VR headset

360-degree video transferred via Bluetooth to a smartphone which is then attached to a VR headset. Smartphone screen is viewed through the lenses in the headset. As the viewer turns their head, the portion of the classroom shown in the viewer corresponding to where they look changes.

Note: Original slide had more but smaller text/images. For legibility these have been re-written for this SlideShare version

Opportunities...



Teachers

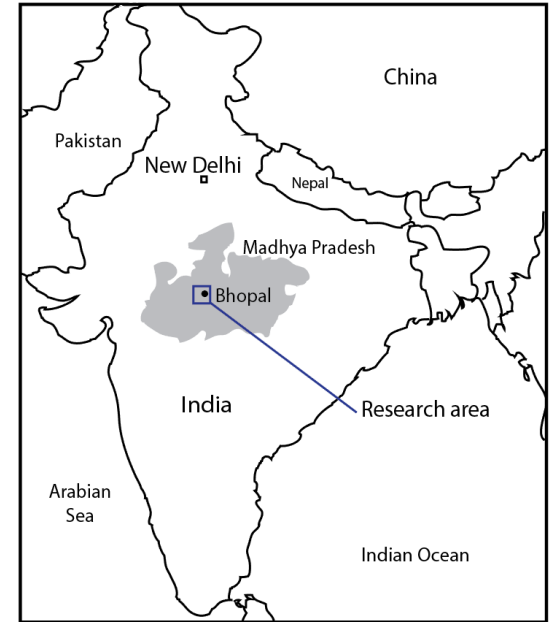
Teacher educators



Researchers

Madhya Pradesh Pilot

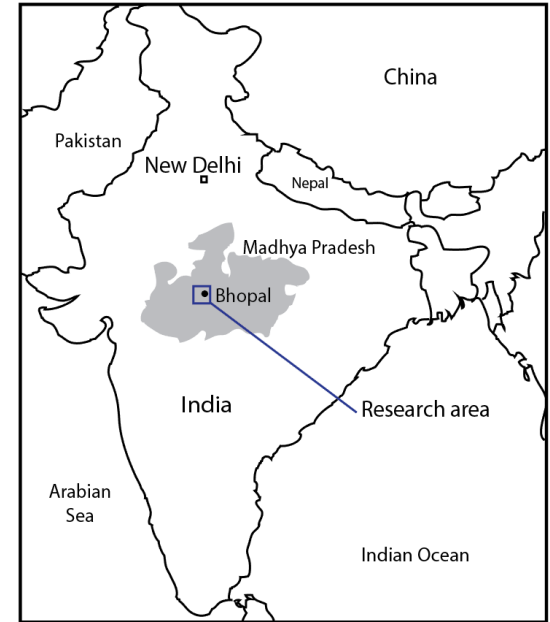
- Field trial: 4 in-service teachers
in 2 rural primary schools
- Interviews 2 pre-service teachers & 2 teacher trainers
- Workshop ~50 pre-service teachers
- Research ethics approved methodology



1

“It’s very different from seeing oneself on a mobile phone. It’s like being immersed inside. I have been involved in a lot of training of other teachers but never before seen myself *in* the classroom.”

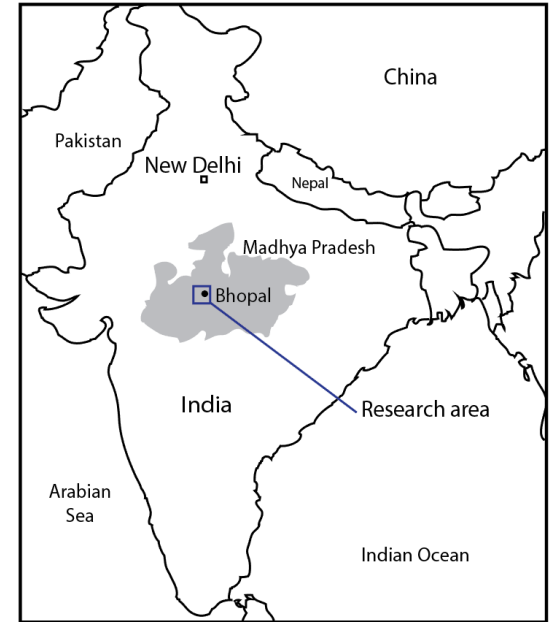
Madhya Pradesh Pilot



2

“[in the first viewing] I watched the children but not properly, but this [second] time I watched each and every child with more attention; what they were doing.”

Madhya Pradesh Pilot



“The [research] has revealed significant promise and enthusiasm among in-service teachers, trainee teachers and academic support officials... We are agreed to [explore opportunities to] take forward the research pilot by the Open University in two districts.”

Emerging opportunities

- Applicable to both low- to medium-income countries and high-income countries
- Step-change in how digital video could be used in teacher educational and in-service training
- Supports teachers in wide range of critical, reflective activities, engagement with OERs, and in other professional development
- Mediating artefact for use by teacher trainers when supporting teachers and in teaching programmes
- Means for sharing practice and building virtual teaching experiences
- Interest from State Department of School Education



Practice

- How can 360-degree mobile VR support teacher professional development?
- What advice and support should be given to teachers and teacher educators?

Research

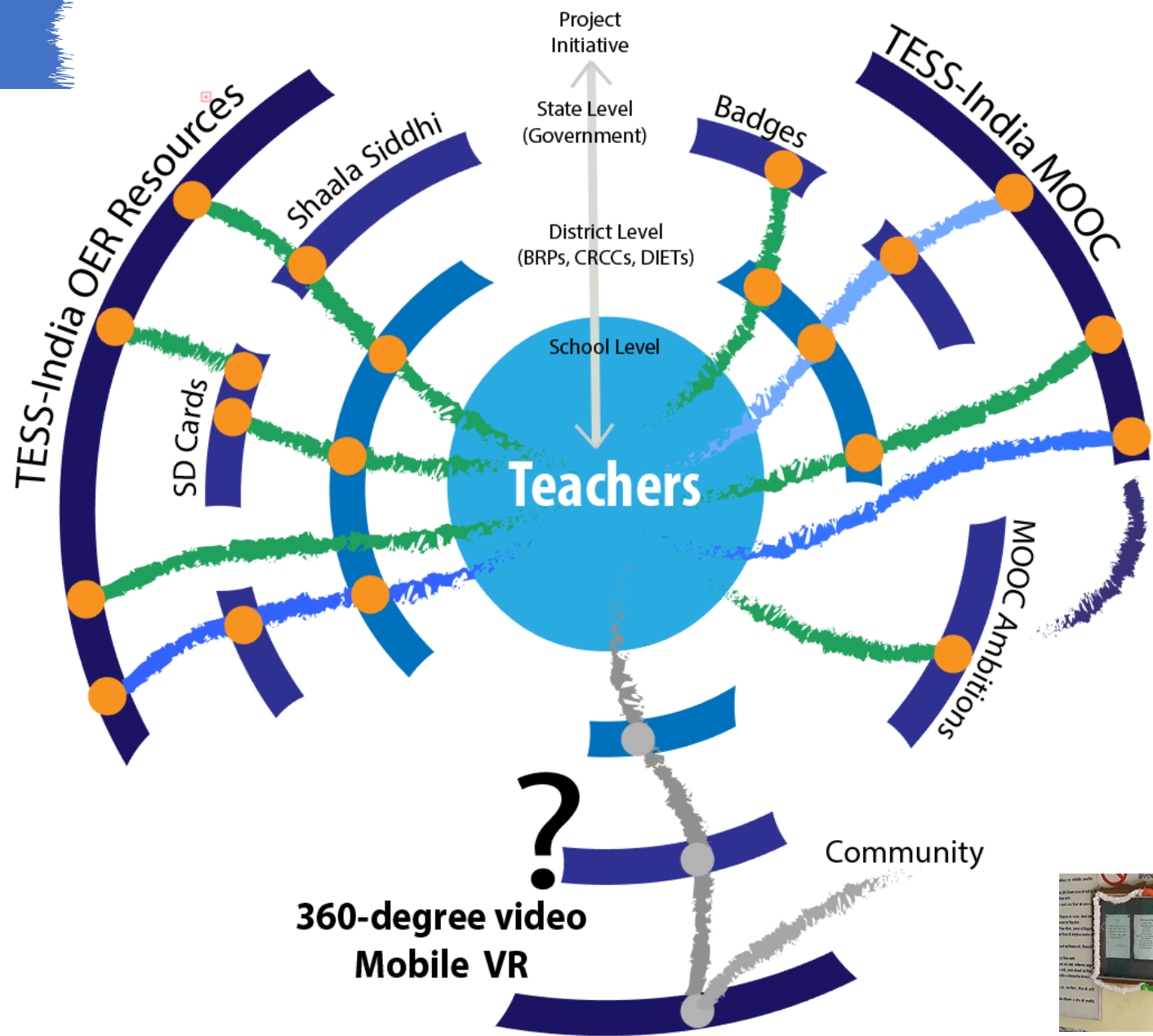
- What is distinct about this use of technology for teacher education?
- How should 360-degree mobile VR be theorised and represented in a framework for use by practitioners?

Technology

- How can these technologies work most effectively in challenging contexts?

Policy & Funding

- How can teachers be supported in utilising this technology?
- Who would be interested in collaborating or partnering with us?
- How can implementation approach adopted by the TESS-India Programme help scale this innovation?



What next?



The Open
University

360 Degree Mobile VR . Simon Cross . 2018

Visit the website **www.360mobilevr.co.uk**

Chat over a coffee



Take a postcard

Email me at **simon.j.cross@open.ac.uk**

Learn more about TESS-India

Moving towards more participatory practice
with Open Educational Resources

<http://oro.open.ac.uk/49631/>

Extending the MOOC footprint

<http://oro.open.ac.uk/48510/>

Thanks to...

TESSIndia

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