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Digital Badges for TPD at scale in the Global South: a framework for implementation and field study in Assam, India

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1. Introduction

Open digital badges are now becoming globally recognised as a means for structuring, acknowledging, rewarding and monitoring professional learning. However, there remain many important, yet unanswered questions about their role in TPD in India, and more broadly, across the Global South. Furthermore, while in such contexts resources may be more limited, the scale, geography and conceptual challenges associated with supporting and improving TPD can be much more significant.

The Digital Badges for Teacher Professional Development (TPD) in India project seeks to address this problem. It is a collaboration between The Open University and Tata Institute of Social Sciences India and over the last three years, we have conducted pilots, field trials and academic research to understand more about the role for digital badges in delivering effective and measurable change in classroom teaching practice at scale.

In particular, we have been interested in the following four questions:

1. How can digital badges be used as a strategy for teacher learning at scale and what is the value and significance of local context, enablers and challenges?
2. How should we best understand, frame and implement the potential benefits to teacher learning from using digital badges?
3. How can digital badges support greater personalising of TPD trajectories, transparency, inclusivity, authenticity and assessment at scale (such as peer and distributed assessment)?
4. What frameworks are needed for the implementation of TPD at scale in the Global South and how should they be applied?

This report presents an overview of the project and some headline findings from our research. Further analysis is, and will be, presented in academic papers whilst we have commenced dissemination activities with the view of helping to lead the emerging discourse around Digital Badges in India.

In summary, the project has achieved:

- Developed and delivered a field trial comprising three short Digital Badges in Assam, India with support of the state government.
- Teachers from over 220 schools, mostly unfamiliar with the concept of Digital Badges, successfully completed the TPD courses and badges. Teachers responded well: survey data shows 92% of teachers supported widespread use of digital badges in their state, 85.6% felt our badged courses would improve their job prospects, and 89% of teachers shared their badges with their peers and headteachers.
- Delivery of a high-quality research utilising a rigorous mixed-methods approach. Papers presented at international conferences and further analysis underway.
- Created a new three-stage theoretical framework for use of digital badges for TPD at scale. This framework will be of benefit to those seeking to implement digital badges and evaluate their impact.
- Hosted public events attended by over 200 teachers, teacher educators and national and state policy-makers (November 2020 and October 2021).
- Invitations to run a pilot in West Bengal and provision of evidence to widen our influence to new projects.

2. Background

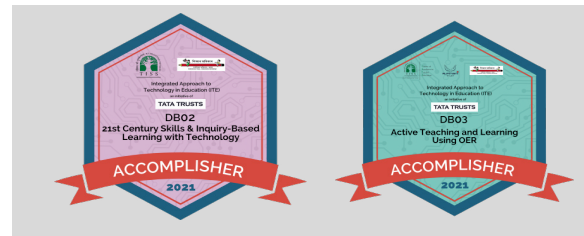
Delivery of high quality teacher professional development (TPD) at scale faces significant challenges yet in many contexts it will be critical to raising the quality of classroom teaching and learner outcomes and achieving Sustainable Development Goal 4 - Quality Education for All.

The conditions of the pandemic have accelerated the digitisation of teacher education programmes and highlighted how teachers' own mobile devices can become a means for supporting professional learning. As the process of relocating teacher learning into an expanding digital space increases, there is also a need to rethink how that learning and practice is assessed. Consequently, whilst digital delivery certainly enables learning at scale, it also requires effective conceptions and deployment of models for assessment at scale.

Our project identified open digital badges as an educational technology that appeared to align well with our interest in assessment at scale. The digital badge is a visual symbol that allows individuals and organisations to recognise and communicate skills, learning achievements, practice competencies, certifications, or other accomplishments. They are usually issued by an issuing platform and associated with metadata that contains information about who has earned the badge, the awarding criteria, learning evidence required, and who has endorsed it.

Digital badges could fulfill multiple, complementary roles in TPD such as:

- Enabling teachers to build and value portfolios of their TPD achievements.
- Enhancing the design of TPD programmes to better achieve authentic assessment of teachers' respective intended learning outcomes and classroom practice (rather than be limited to more basic assessment only of knowledge).
- Shifting the culture of professional development to give teachers greater agency.
- Informing the creation of locally or nationally recognised professional TPD programmes and individuals' personalised learning trajectories within them.



Badges represent a (potentially) disruptive and enabling technology that creates spaces for innovation that can support positive change in TPD. However, digital badges cannot operate independently of the context in which they are designed, employed and earned. Effective application of digital badge technology is therefore essential for its success.

Researching digital badges therefore provides us with insight and understanding that will prepare us for using these new technologies. In particular, what assessment 'for,' 'as' and 'of' teacher learning looks like when viewed through the lenses of scale, equity, personalisation, and the transition to digital.

Foundations

Our project team comprises researchers from the Open University (UK) and Tata Institute of Social Sciences (India) and was formed in 2019 following a meeting in Mumbai. The Open University team had been leading the award-winning TESS-India programme (Wolfenden et al., 2017) and had recently undertaken early trials of 360-degree video for TPD in Bhopal (Cross et al., 2022) and held a 3-day event with teacher educators in New Delhi about the potential opportunities of digital badges (Wolfenden et al., 2020). The TISS team, based in Mumbai, had successfully developed and delivered an Integrated Approach to Technology Education (ITE) Programme for teachers (Charania et al., 2022; also see Appendix 1).

Between 2019 and 2020 the project team conducted two initial digital badge pilots to understand more about how teachers in India respond to open digital badges. These were a self-paced course for teachers using distance learning technologies and a Community of Practice discussion forum for teacher educators. In parallel, we developed and piloted research instruments and undertook the technical development needed to enable the learning management system used by TISS to automatically issue badges. The project team also held two half-day online events titled 'Emerging Opportunities for Digital Badges in TPD in India' in November 2020. Over 100 teachers, teacher educators, faculty staff, and government administrators joined the event. The second day was attended by invited delegates with strategic or policy roles.

A key output of this exploratory phase was a report titled 'Teachers' Professional learning during and after Covid: a role for digital badges' (Cross et al., 2021). From our initial investigations we recognised at least six affordances of open digital badges for TPD. These were: flexibility, clarity, modularity, engagement, scalability and shareability (Cross et al., 2021). These six fundamental affordances align with stages in teaching: course design, course delivery and post-course sustainability (this is explained further in our Phase 1 report and summarised in the diagram below). This sets some context for the drive towards implementation of large-scale open digital badge use for TPD in India. We will return to these themes later.

Our analysis also identified a range of benefits to teachers in India that may be associated with the use of a digital badge on a course:

- Self-monitoring of TPD by incremental steps
- Demonstrating progress in TPD
- Building self-confidence as a practitioner
- Increasing engagement in learning
- Recognition and career progression
- Motivation to complete
- Sharing Achievement
- Use in own teaching

Overall, this initial phase of research found evidence for the promise of digital badges in performing a range of complementary pedagogic, cultural, social, and strategic functions and that the messaging and presentation of digital badges is challenging because most teachers are unfamiliar with the concept.

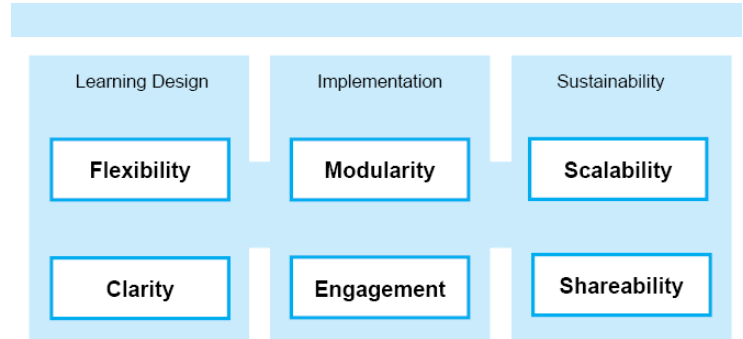


Figure 1. Six affordances of digital badges for TPD

However, once properly briefed, we found that most practitioners and policy makers began to make connections and recognise potential practical benefits for using digital badges. The pilots demonstrated that badges can be created and administered locally and that adaptation of existing learning systems and courses is possible. It also highlighted that robust learning design and assessment planning is required.

This research provided a practical and conceptual grounding for the field trials in Assam that we describe in this report.

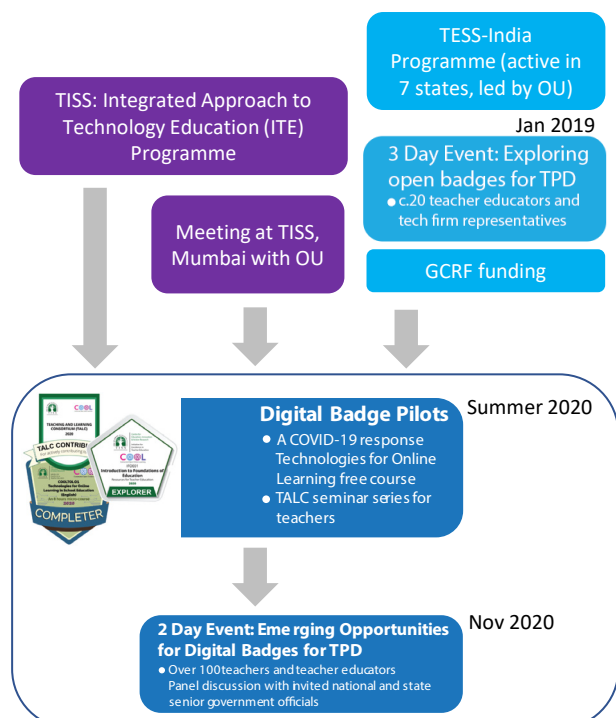


Figure 2. Project timeline

3. Introducing our field study

Our programme of three short (three to four week-long) online digitally badged courses for invited teachers in Assam, India was launched in January 2021. In each course, teachers had to complete several assessed learning tasks to achieve each digital badge. For example, the first assessed activity in the first course was a computer marked Multiple-Choice Quiz and this was followed by a VLE-managed peer assessment activity (for which the teacher first had to prepare the lesson plan that would be assessed) and a reflection activity that had to be completed after the teacher had responded to peer feedback and taught the planned lesson. This approach was intended to help foreground classroom practice, strengthen teacher agency and the sense of community, and support teachers in the move to online learning (Cross et al., 2022). Nine volunteer master trainers provided support to participants via social media, voice calls and course forums and assisted with the assessment of some aspects of the badges.

A total of 529 badges were awarded across the programme with around 40% of those who registered completing at least one badge. Assam state government representatives engaged in the project as stakeholders and provided strategic support and public endorsement of the badges. The project worked closely with the Assam state education department and consultation with their representatives helped to shape the topics chosen for the badges.

Learning design, activities and content for these was based on prior courses created by the TISS team for Indian teachers. CETE, TISS had been working in these geographies since 2016, implementing a certificate course on Constructivist use of Technology in Teaching and Learning (see Appendix 1). TISS staff

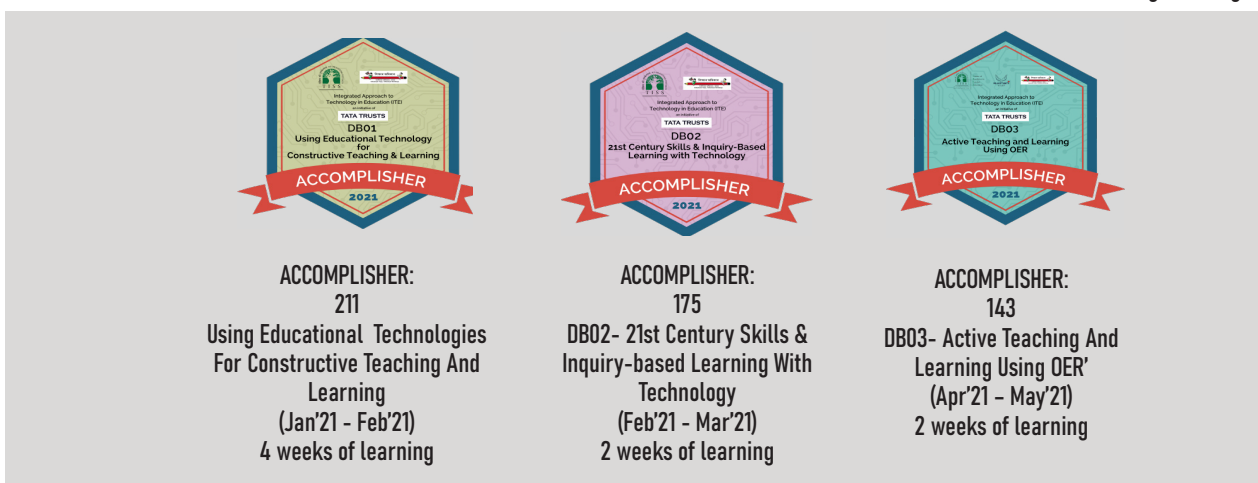
have engaged with the continuous professional development of teachers who completed this certificate course by supporting them to become mentors

By creating three short ‘chunked’ courses we hoped teachers would have a degree of flexibility in their decision about which badges to take (new teachers could join directly 2nd or 3rd badges), could better manage their learning around the stresses of Covid, and would feel motivated to continue to the next course. The courses focused on specific skills and included practice assignments to help teachers feel a sense of accomplishment and greater confidence.

The design and delivery of the courses involved a four-stage process (see diagram on next page). Pre-course activities included engagement with government stakeholders, orientation events for teachers to introduce them to the course and build a sense of community, and a pre-course survey. Support and capacity building is discussed later. Post course activities included a concluding online felicitation event to celebrate achievements and offer teachers support in how to collect and use digital badges. Technical development of the VLE had already taken place (in Phase 1) to enable it to record the progress of teachers through each course and trigger requests to the badge issuing platform to issue badges.

Each badge has two levels of award: ‘accomplisher’ and ‘expert’ (the accomplisher versions are shown above). Expert badges required the teacher to achieve a higher aggregate score for the course assessment.

Figure 3. Image, title, number of awards and dates of our three Digital Badges



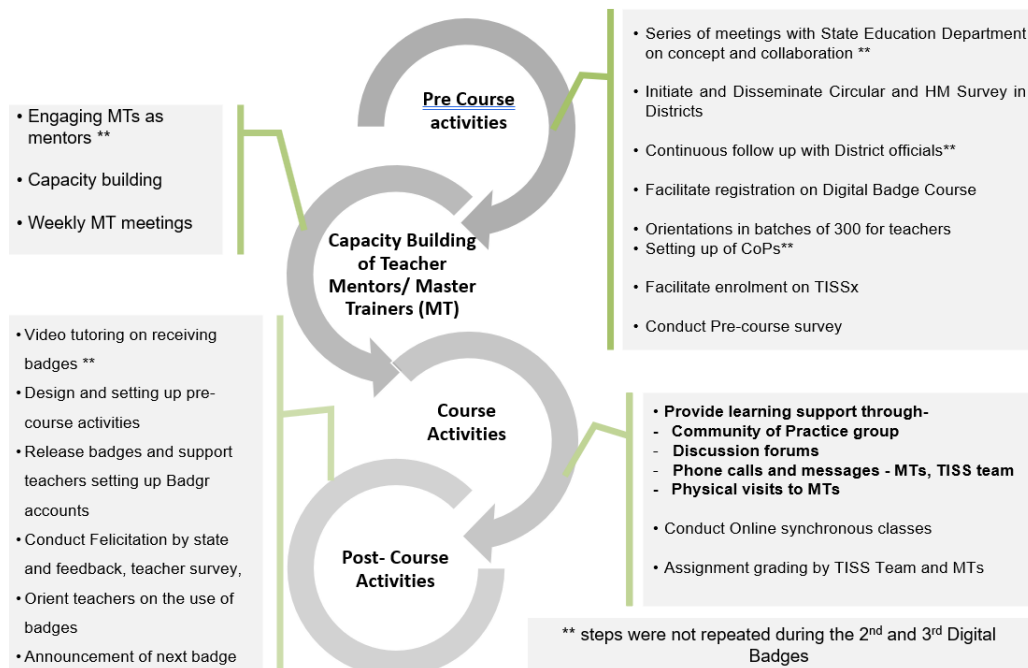


Figure 4. Implementation stages for digital badges: strategies adopted in Assam

Effective, authentic assessment design is essential for practitioners to implement TPD and the requirement for assessment outcomes to be made explicit to meet the standards for open digital badges aligned well with our pedagogic approach. Teachers need to experiment with new ideas with their students and the assessment should provide evidence of this. The properties and affordances of digital badges influence how we design such assessment by requiring: an articulation of the knowledge, skills and competency gains to be supported through the course, description of tasks completed, and automatic integration with the course assessment in the VLE and learner data.

Delivering at scale requires close consideration of available resources to determine how best to utilise resources within the course - be this teachers' own expertise, MTs' skills and expertise or other support. We also had to ensure assessments were sufficiently

flexible and inclusive to recognise and value teachers' different starting points and their unique and diverse practice contexts (classrooms, students, resources and location). Given the current Covid context, the assessment activities needed to work for teachers who are teaching online or outside their normal classroom context.

The diagram below presents the assessment design for digital badge 3 (Active Teaching and Learning Using OER). This combination of activities is not unique to digital badges, however, we found the 'pedagogic flexibility' of the format (Cross et al., 2021) helpful in focusing the course design to properly integrate these. The assessments were written such that they could be localised and personalised by participants to recognise the uniqueness of each teachers' classroom yet inclusive enough to support quality at scale.

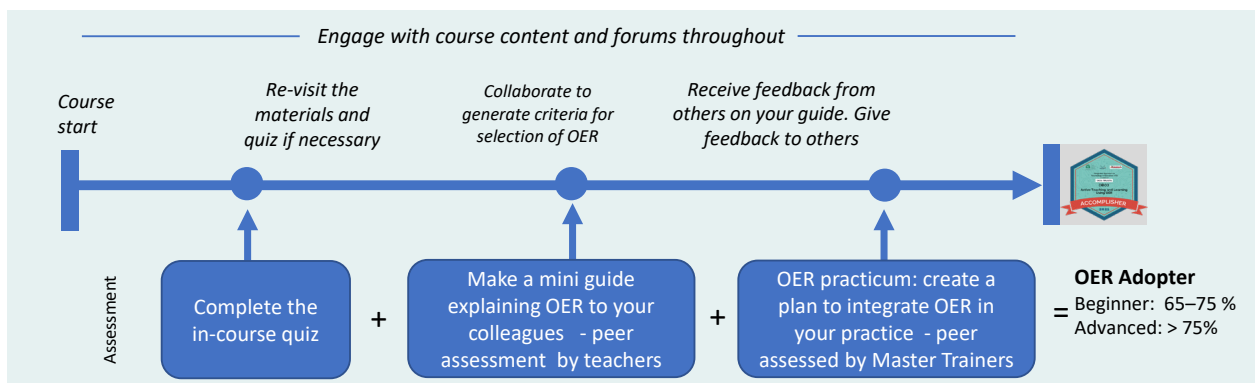


Figure 5. Assessment design of Digital Badge 3

4. Research Methodology

We adopted a robust mixed methods research approach. This included:

- Survey 1: Pre-course survey (over 200 responses)
- Survey 2: Post-first badge (mid-project) survey (over 120 responses)
- Survey 3: End of course (project) survey (almost 100 responses),
- Interviews with teachers who studied the courses (n=20)
- Master Trainers who mentored teachers (n=5)
- Logging of peer assessment comments (n>300)
- Recording of online events, and
- Monitoring of VLE data and forums.

The research instruments used were developed by the team with reference to the literature and earlier iterations (such as questions about what teachers value in their professional practice or prior use of technology

in teaching). Survey 1 focused on prior experience, attitudes and expectations, Survey 2 asked about what teachers valued in their professional practice, immediate experiences of the course including peer assessment, social learning, patterns of help seeking and attitudes about usefulness of digital badges, whilst Survey 3 asked about digital badge sharing practice and reaction from colleagues, impact on teachers' classroom teaching, and overall reflections. All received university ethics approval.

All surveys were available in English and Assamese so that all participants felt able to respond. Interviews were mostly conducted in Assamese and translated into English for analysis. A more detailed discussion of methods used and details of specific findings is found in our various research outputs including conference proceedings and journal papers.

5. Initial insights and findings

Digital tools were used to build a community of practice (CoP) around the course. Telegram (IMA) was used to answer queries and for broadcasting information and updates on the course. Preliminary analysis indicates a positive relationship between participation in CoP and success in the course. A discussion forum on TISSx (LMS) was used mainly to support content and pedagogy related discussions. Teacher Master Trainers (MT) and the TISS project team provided sustained support throughout. This included responding out-of-hours, taking telephone queries and even sometimes meeting in person at their homes.

Survey and interview data revealed that teachers mostly relied on Telegram/Whatsapp groups dedicated to the course for receiving information and answers to their queries, and that they contacted Master Trainers and TISS facilitators when they needed support with assignments and submissions.

A small number of teachers who has completed earlier TISS courses were invited to be Master Trainer volunteers (Charania et al., 2021; 2022). This process built on several years of capacity building and engagement which had prepared and sustained the expertise of those who volunteered to be Master Trainers.

| Questions | Often | Occasionally | Once | Never |
|---|-------|--------------|-------|-------|
| Read messages in the course Telegram or WhatsApp groups | 85% | 11.4% | 3.8% | - |
| Read messages on the TISS-x discussion forums (course website) | 81% | 15.2% | 2.5% | 1.3% |
| Asked for help or advice via the Telegram/WhatsApp groups | 45.5% | 35.4% | 12.7% | 6.3% |
| Asked for help or advice via the TISS-x discussion forums | 29.1% | 29.1% | 17.7% | 24.1% |
| Contacted a Master Trainer directly for help or advice | 39.3% | 19% | 25.3% | 16.5% |
| Contacted a TISS course facilitator directly for help or advice | 42% | 29% | 16.5% | 12.7% |
| Attended the Orientation event | 80% | 15% | 5.1% | - |

Table 1. Frequency of online course interactions (Source: post-course survey)

The roles of the Master Trainer mentors were:

- Provide technical support to teachers such as guiding them to operate required applications like zoom for video conferencing, TISSx platform.
- Provide support to teachers in the practice assignments, discussions on the platform; explain theoretical concepts such as 21st century skills, inquiry-based learning, etc.
- Answering their queries through phone calls, community of practice (CoP) online groups, and sometimes F2F visits
- Provide support in grading and feedback on practice assignments

Additional preparation was given to the Master Trainers about digital badges. This included: orientation and introduction to digital badges, weekly updates and regular meetings, taking the digital badges as a participant, and sessions on key skills such as grading and assessment activities. In interviews, Master Trainers expressed their expectations to receive recognition and promotion by the state, and opportunities to stay connected with the program and university, such as continuing their engagement by mentoring other teachers on technology integration.

A one MT explained “I would love to continue as a facilitator, as a master trainer for my students as well as my fellow colleagues, my teachers. Because I know that this transformation which has come within me, if it is not going to come within the total society it will not bring about the change...”

Master Trainers believed there to be a strong future role for digital badges in TPD. For example, one MT talked about how the process of earning and collecting badges over time would contribute to ongoing

“Being an MT (mentor teacher) keeps me connected to continued activities of ITE that has transformed students and has potential to impact many hundreds of my students over the years. Students’ confidence, their achievements, their smartness, English...”

“I received support every time I needed it, whether in the group or personal message. I contacted our master trainer also over the phone as I got stuck in one place. He explained everything to me in detail and I tried to follow him as he guided me.”

“Peer suggestions are so useful in the telegram groups and discussion forums that it helps to make my lesson plans and other activities better.”

continuous improvement- “if a system is built in the future that every teacher should collect 10 or 20 digital badges within their teaching span, then the teachers will be given a big award. I think teachers will be motivated to nurture themselves. If I don’t nurture myself, I can’t nurture my students.”

They also noted feedback from the teachers they had spoken to. These included:

- Suggestions that digital badges should be integrated in to curriculum such as the B.Ed. qualification.
- A scaling up of the course for other teachers in the state through government schemes and endorsement.
- Implementing a programme for teachers who would like to become mentors for the digital badged courses repeated in other states.

“Mentoring teaches me new things all the time which could be helpful in my classroom. For example, ITE was new but I learned through mentoring; now digital badge is new but I learn through mentoring. What motivates me is the fact that while I am mentoring ..., I’m learning too and I can use these learning in my work”

Our preliminary analysis suggests that digital badges hold affordances that could support teachers, teacher educators and policy-makers in achieving the scalable learning and assessment necessary for quality TPD. In particular:

- **Re-positioning of TPD into digital learning space:** the issuing and sharing of achievement recognition helps to align stakeholders towards the digital realm by embedding within a digital system and supporting sustainability.
- **Foregrounding of classroom practice** (broadening out from abstract knowledge to ‘knowledge in action’). The badge (1) increases practitioner valuing of a shift or movement in practice alongside the acquisition of abstract knowledge – ‘doing’ seen as part of learning and (2) appreciation of the relational aspect to teaching: peer assessment responses point to recognition of the need to adapt for the circumstances of each teacher and her students.
- **Promoting teacher agency in professional learning.** Badges provide flexibility in respect to what assessment is used. Our badges included: (1) multiple choice questions, with the option to repeat, to foreground important knowledge and guide teachers to where they might focus their future learning and (2) peer assessment activities to help highlight the value of each teacher’s expertise and move practice out of the individuals’ private realm.
- **Strengthening of community:** recognition of peer expertise and learning across the community (teachers and students). Peer assessment supports the process of building expertise, encourages a sense of joint action to address inequalities in access to and participation in learning and leads to collective achievements

“I liked the task of assessing others’ lesson plan assignments. . While doing that, even my interest towards it had increased quite a bit.”

“Under present circumstances, we are expected to be familiar with online modes of study like the back of our hands and Digital Badge can play a significant role here.”

“I learnt the most from peers’ assessment, because I learnt my mistakes after going through their works. I had ideas for my next assignments. I learnt what I should implement on students.”

“MCQ was very favourite...After going through [the course materials] how can I check myself that I am, whatever I have learned is correct or not. So by going through this MCQ at least I can judge myself that yes, this is clear to me... I am able to give the answer and this also not providing marks but also providing confidence to go further.”

As discussed earlier, scaling TPD with digital badges also requires the integration within infrastructure and state endorsements and the development of necessary digital competencies.

In research presented at the INTED’22 Conference (Cross et al., 2022) we looked at the relationship between teachers’ professional practice and their views about the utility of digital badges. Statistical analysis of data from this pilot identified four factors to Assamese teachers professional practice and found that teachers’ views about the potential usefulness of digital badges is predicted by the relative value and importance they give to these four aspects.

A second finding of this analysis was that, at least in the context of teaching in India, having a digital badge implementation that focuses on only extrinsically oriented aspects of teacher values (such as reputation and status) will likely appeal to only a sub-set teachers. Much better would be a digital badge implementation that appeals to the other three motivations as well: supporting teaching practice, professional development and engaging professional communities (Cross et al., 2022).

Social practice and interaction emerged as a distinct factor in our analysis of teachers' professional values (Cross et al., 2022). The post-course survey in particular presented a perfect opportunity to learn more about how participants had shared their digital badges. A high portion of those completing the course set up a digital badge account on Badgr and reported that they had shared their digital badge via social media or email. This indicates that the badges had some impact on the way teachers chose to digitally represent and communicate their professional learning.

Teachers' sharing was widespread with most teachers using the digital badge to share their achievement with teachers or other colleagues at their school and with friends and family. The most common platform used to share was WhatsApp (91%) and Facebook (75%). Telegram was used by 45% of teachers whilst email by just 26%. On completing the course 23% of teachers downloaded and printed the badge certificate (as well as sharing the digital version).

We asked teachers how others responded to them sharing their badges digitally. The reaction was overwhelmingly positive with colleagues posting congratulations, asking to know more about what badges were and expressing interest in studying a badged course themselves. Some reported that headteachers asked them to talk about their experience of achieving the badge and, in so doing, they had the opportunity to talk and share their learning.

These responses show that the digital badges were being operationalised in the digital social space as a mediator of recognition from peers, friends and parents. It also appears to have had a motivating effect on other teachers and sparked interest in digital courses.

83%

of respondents reported sharing the digital badge(s) link or graphic/image online via social media or email.

"I shared my [Digital Badge] with some friends residing in Guwahati via WhatsApp. They were very excited about it and wanted to know more about it. I shared my experiences with them."

"Some model school principals actually asked to give a presentation on how have they achieved this digital Badge. So, I went with the teacher and gave a presentation to the principal and other teachers in the school. Similar thing was practiced by other headmasters of few schools as well."



"Great ... [I] want to know how to scale it up to all districts ... hoping that the teachers will give me an idea ... The teacher from Nalbari was so good. I was really impressed by her clarity of expression. Thank you [to the project team]."

B. Kalyan Chakravarthy, IAS, Principal Secretary to the Govt of Assam, Education Department.

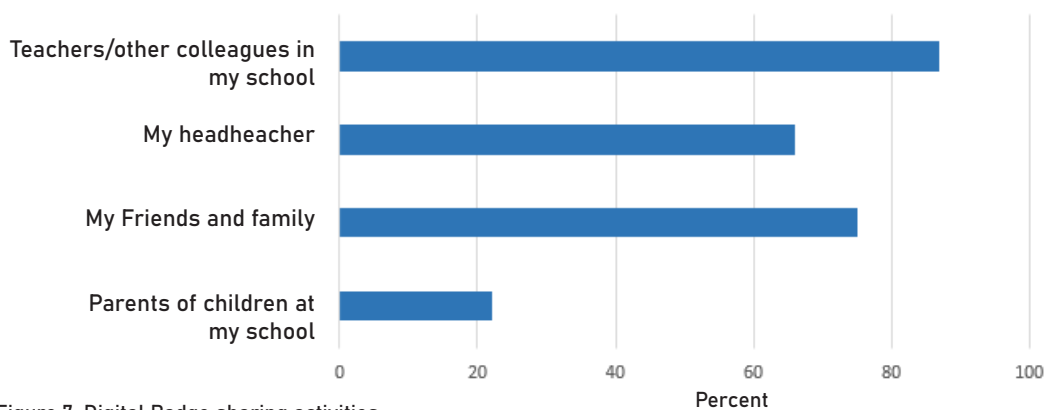


Figure 7. Digital Badge sharing activities

92% of respondents to our surveys supported the idea of widespread use of digital badges to award and recognise TPD in their stage. Inspection of the responses also revealed the following as practical affordances of digital badges as having value for the assessment and recognition of TPD:

- Ease of storage, access and sharing (including ability to store in one place)
- Permanency (no risk of damage)
- Information contained in the badge about how it was earned is available to others to see (something unavailable with paper certificates)
- Relevancy in an increasingly digital society
- Their recognition of practical accomplishments as well as more conventional knowledge-based ones.
- Ability to be chunked into smaller units of learning more appropriate to a busy professional context
- Ability to download or print out a digital badge certificate
- Availability of a public online record or list of everyone who has earned each badge
- Proof of professional development achievements
- User friendly
- Flexibility to be shared across multiple platforms
- Greater reach



of participants answering the mid-course (end of Badge 1) and end of course surveys supported the idea of widespread use of awarding digital badges for TPD in their state.

“It would be more interesting to collect small badges. Receiving 10 badges can be considered equivalent to one big badge. I was just talking in this perspective that I think this was helpful for the teachers. Because the teachers who joined this digital badge courses may be didn't have the time to complete [longer] certificated course[s].”

“I would prefer a digital badge because, of course, it is a digital platform and you are getting it digitally and you will be recognized digitally. Besides, The digital badge can be linked to anything...like it can be linked to your CV and if someone had to search for what are your credentials, they can just log in and they will be able view that the teacher has received this and it can also go globally”

Teachers also perceived a number of problems, or potential problems, with digital badges. Five of the issues highlighted were:

- They may have little meaning or value to those unfamiliar with the concept
- Trust may be an issue if seen as a novelty and if lack widespread recognition
- A certain level of digital literacy is required to use and share digital badges
- Conventional certificates can be shared in conventional settings at any time but digital badges require access to digital media (n.b. certificates of the badge can/were also be downloaded and printed by some)
- Digital badge do not provide the same 'physical satisfaction' as a paper certificate.

6. Towards framework for using digital badges at scale for TPD

In this report we have, through a lens of scalability, to trace how the structure, concept and technical requirements of an open digital badge influences decisions in the design process, in delivery, in considerations of assessment strategy, in the onward use of badges and in the construction of meaning and perceived value. Consequently, we have considered the badge from a range of scale-related perspectives and are in the process of working out how to articulate this diagrammatically. We have identified three stages of digital badge implementation for TPD. These are 'Innovation Wrapper', 'Innovation Enabler' and 'Enabler of scale.' Each stage presents a more integrated version of the last and builds to a framework for use of digital badges at scale for TPD (stage 3). The three stages highlights how scalability is not to be assumed when implementing digital badges but must be designed for. This remains work in progress but provides a working model.

Stage 1. Digital Badge as an 'Innovative Wrapper'

The nature of how digital badges are used will determine how deeply their impact is felt across the design, delivery and after-use of the course and its outputs. At the most rudimentary perhaps, digital badges can be introduced to a course as an 'innovate wrapper' - perhaps in an attempt to improve appeal, motivation or engagement, or because the technology is perceived as cutting edge. The primary and possibly only function is to influence the behaviour of the learner with little impact on course design and assessment or on increasing the scaling potential of the course.

Stage 2. Digital Badge as an 'Innovation Enabler'

A more thorough implementation of a digital badge will see it making an imprint on the design, learning, assessment and social support. So merely by being present the badge obliges the designer/teacher to re-evaluate the course design and consider the learning, assessment and social interaction options open to them. This may even disrupt the way the course is written and delivered and therefore lead to improvements in critical elements such as the clarity of learning outcomes, the authenticity of learning and assessment tasks, and way in which learners should use and celebrate the learning they achieve. The local context (locale) becomes a visible and important influence on the setting of the badge. It represents the fact that learning and teaching learning considerations are grounded. In this model, the badge serves a function for both the learner and for the designer/teacher.

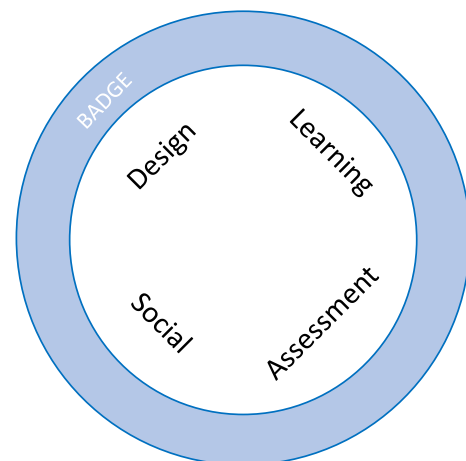


Figure 8. The Digital Badges as an Innovative Wrapper

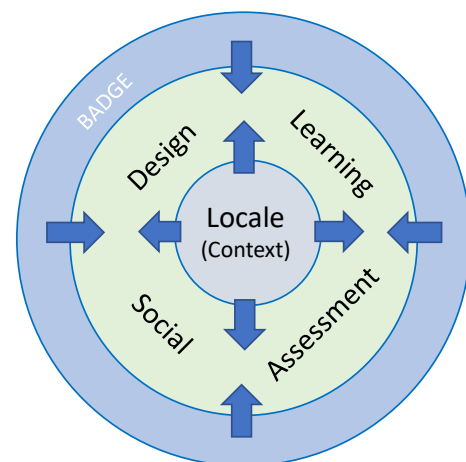


Figure 9. The Digital Badge as an Innovation Enabler

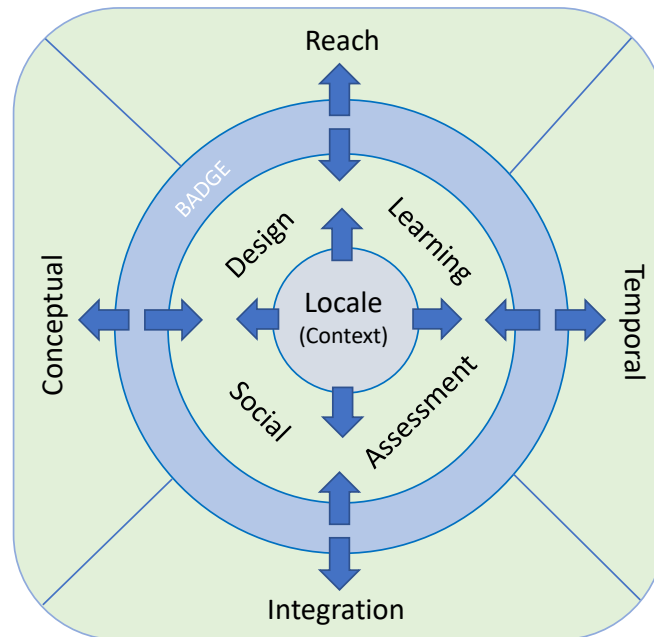


Figure 10. The Digital Badge as an Enabler of Scale

Stage 3: A Framework for Digital Badges as an ‘Enabler of Scale’

We consider this diagram a contribution to conceptualising the implementation and evaluation of digital badges at scale. It incorporates the interconnections described in Stage 1 and 2 (previous page) but introduces four dimensions of scale. Through the use of the digital badge, these interact with key components of learning design and the context (the Locale) in which badge is being implemented.

In this report, we have drawn on a range of perspectives about scale and the process of scaling associated with affordances of digital badges. Badges help move TPD into the digital online realm; a critical repositioning for scaling to be achieved. The diagram above shows four aspects of scale that are both supported by and required for the scaling of digital badges in TPD. In combination these harness the affordances of digital badge.

The first of the four ‘outer’ segments of the framework refers to the scaling of ‘reach’ - the number of learners or the geographic coverage of learners. This will be easier to achieve by using digital badges as a driver to develop effective online support, assessment at scale, digital awarding (the issuing digital badges), and greater communal sharing and valuing of professional practices.

‘Temporal’ scaling refers to the modularity and portability of digital badges. Rather than representing one-off

training, badges can be collected over time. This act of collecting or portfolio building represents a scaling-forward over a sustained period of time.

The third dimension we propose is ‘conceptual’ scaling. By this we mean that digital badges bring a pedagogic flexibility that can help increase, extend, transform, and stretch (scale out) teachers’ conceptions and understanding of teaching theory and practice.

Finally, a scaling in to existing systems is required. Such ‘integration’ scaling involves the ever tighter and complete embedding of practice (and associated evaluation and development cycles) into existing formal, operational, cultural and social processes and systems. This includes endorsement from respective stakeholders.

When the digital badge is properly linked both outwards to these key elements of scale and inwards to the course design and grounding locale, then it will function to influence the learner, the course designer and the educational administrators and strategists charged with implementing TPD. It means the scalability of the badge is inter-woven and ‘designed in’ yet there may also be tensions between scaling and the local context in which the badge was developed.

7. Conclusion

Practical and academic understanding about how digital badges could support TPD at scale in India remains limited. Our work seeks to make a significant contribution and has relevance to teachers, managers, policy-makers and researchers. Across the two phases of the project, our innovation, knowledge mobilisation and capacity-building has had significant impact at practice, academic and policy levels.

A strength of our approach has been in the strong partnership forged between teams based in the UK (the OU) and India (TISS) and our shared goal of achieving real change in classroom teaching practice by combining quality learning design, innovative technologies and authentic, context-appropriate assessment.

Teachers in over 220 schools in Assam successfully earned digital badges. 96% felt that participating in the course would improve pupil learning in their classroom. Feedback from their experience was very positive. Teachers valued how our approach integrated authentic assessment methodologies and the professional value to building a digital record of achievement:

Key success factors have included:

- A novel integration of authentic assessment methodologies such as peer assessment and lesson plans with more common approach into the digital badge design at outset.
- A clear focus on classroom practice and scalability;
- Attention to understanding and planning for the multi-faceted and inter-connected affordances offered by digital badges
- Sensitivity to the professional and cultural context including offering all materials and surveys in Assamese in addition to English despite the extra costs involved
- Building strong relationship with state government
- Our team of volunteer Master Trainers
- Technical development of digital technologies to monitor VLE activity and issue badges, and
- An inter-disciplinary team with international expertise and existing quality materials to draw upon.

Our evidence-based framework and the supporting advice offered in our project reports, is intended to guide the success of others. The issue of how 'context' informs implementation and an acknowledgment of the importance of scalability, support and authenticity in assessment of classroom practice sits at the heart of our conception.

Our Assam trial offers a practical implementation case-study to compliment the framework. Already there has been a further pilot in West Bengal and our approach is informing a new project based in Assam and West Bengal. Research from the project has featured in many events and reports including an EdTech panel at CIES, a GPE KIX project workshop, and Teachers Day celebrations. The project has been short listed for the 2022 OU Research Awards Best Collaborative Project award.

We look forward to a continuing role in supporting practitioners, managers and policy-makers in developing evidence-based and pedagogically-informed practical approaches to using digital badges for TPD at scale in India.



Figure 11. Teachers from Kamrup rural & metro districts receive recognition of achievement by the Hon'ble Education Minister, Assam Dr. Ranoj Pegu on 5th September, 2021 at a celebration for Teachers' Day.

Selected team publications

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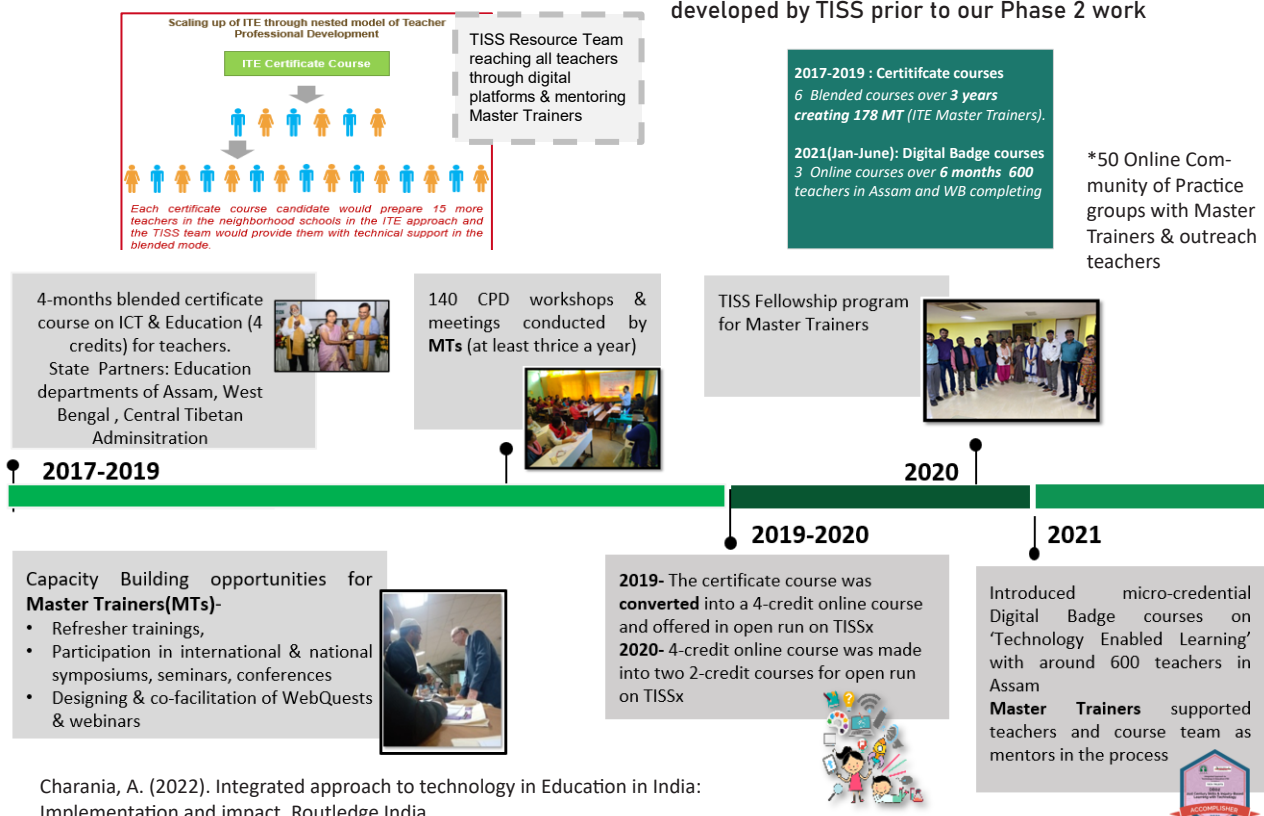
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Appendix 1

The infrastructure, courses and networks developed by TISS prior to our Phase 2 work



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