Supporting practice-based teacher professional learning and assessment at scale in the Global South

Conference or Workshop Item

SUPPORTING PRACTICE-BASED TEACHER PROFESSIONAL LEARNING AND ASSESSMENT AT SCALE IN THE GLOBAL SOUTH

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Abstract

The successful delivery of teacher professional development (TPD) at scale in the Global South faces significant challenges, yet this is critical to improving the quality of classroom teaching and learning, thereby contributing to SDG4. Challenges include access, rigour, dislocation from teachers' specific sites of practice, the ability to authentically assess such practice, and a stubborn structural incompatibility with digital delivery and support. However, the conditions of the pandemic have accelerated the digitisation of teacher education programmes and highlighted the affordances of teachers' own mobile devices for professional learning at scale.

With a focus on a case study of teachers from over 200 schools in two Eastern states in India we frame digital badges as one example of newly emerging technologies that have affordances compatible with moving TPD into an expanding digital space and supporting the scaling of assessment for, as and of such learning. In India alone it is estimated that over 400 million hours of TPD will be required to meet the aspirations of the 2020 National Education Policy. Such challenges are echoed globally and represent the need for a step-change in thinking and practice around technology-mediated TPD across interconnecting scales and geographies, and in the role of assessment for teacher learning within such provision.

Our study concerned three, short online TPD courses that were delivered during the pandemic, each designed to enhance teachers' competencies and skills in using digital technologies to support their adoption of more constructivist classroom pedagogies. The Teacher participants were awarded a digital badge for each course if they succeeded in achieving a minimum total score across the associated assessment tasks. Unlike many digitally badged courses that only use multiple choice questions to assess learning, we specifically sought to promote change in teachers' practice – whether in real or virtual classrooms - through a variety of assessment tasks, among these, peer review of teaching plans and artefacts, and guided reflection on the application of their learning. Support was provided by volunteer master trainers and the project team. State government stakeholders were fully involved in the programme and publicly endorsed the badges.

Drawing on data from pre-, mid- and post-course surveys and interviews with the teacher participants, this study will examine the relationship between their values, their participation in peer learning before and during the TPD courses, their perceptions of digital badge affordances, and the extent to which they subsequently share their digital badge awards. Few studies have sought to make such connections or capture data about how digital badge earners display and share their achievements, particularly in the Global South. We conclude with a consideration of the significance of our findings in respect of the utilisation of four key affordances of digital badges - scalability, modularity, pedagogic flexibly and shareability - for TPD at scale.

Keywords: Teacher Professional Development, Digital Badges, Teaching Communities, Peer Assessment, India.

1 INTRODUCTION

Delivery of teacher professional development (TPD) at scale in the Global South faces significant challenges, yet it is a critical component to improving the quality of classroom teaching and learning, thereby contributing to SDG4 [1]. The conditions of the pandemic have accelerated the digitisation of teacher education programmes and highlighted the value of teachers' own mobile devices for professional learning at scale. Open digital badges and peer assessment activities are two key tools available to educators to help deliver teacher learning and assessment at scale. However, both represent a potential disruption to existing conceptions about how teacher learning should take

place, how it should be managed, and how it should be recognised. In many countries, such as India where our study is based, digital badges are little used in TPD.

Our study represents a collaboration between researchers at The Open University UK and the Tata Institute of Social Sciences India and concerns three short, modular TPD courses that were delivered online to teachers located in the state of Assam during the Covid pandemic. These digital badge courses are intended to enhance teachers' competencies and skills in the use of digital technologies to support their adoption of more constructivist classroom pedagogies. The teacher participants were awarded a digital badge for each course if they succeeded in achieving a minimum total score across the associated assessed elements. These included authentic tasks such as lesson planning, providing peer review and feedback, classroom teaching activities, and reflective practice.

This paper introduces our study before reporting on a more detailed statistical analysis of survey responses relating to what teachers value as important to their professional practice and how well these valued aspects of practice predict teachers' views about the usefulness of digital badges for a variety of TPD-related roles. This analysis is a component of a wider programme of work seeking to explore routes to the effective use of the digital badge as a scaled, contextually situated, constructively disruptive technology. The research questions addressed in this paper relate to understanding more about how the potential or actual contribution of digital badges are framed, measured and interpreted The two research questions are: RQ1. What aspects of their professional practice do Indian teachers value most? And RQ2. What is the relationship between valued aspects of practice and the perceived usefulness of digital badges?

1.1 Situating digital badges

Digital badges offer educators a unique combination of affordances [2]. When applied to the domain of Teacher Professional Development (TPD), this technology appears to present a compelling proposition, although this is not without challenges. Digital badges appear to offer a pedagogic flexibility because of their focus on smaller, more bounded units of learning, on assessment, on the open and accessible way that they can be created, awarded, managed and shared, and on the way groups or collections of digital badges can be developed [3], [4]. They also have the potential to be used in contextually appropriate ways where the concept, terminology and technical specifications will be viewed through local lenses.

The Mozilla Foundation has outlined an open standard for digital badges in education, defining a badge as a 'digital credential … earned by an individual through specific projects, programmes, courses or other activities'. However, the educational value of using badges extends beyond that of a digital credential, with research indicating value for goal-setting, supporting more personalised learning routes, heightening motivation, promoting deeper learning experiences, building confidence, increasing learner appreciation of their achievements, demonstrating commitment to learning and taking greater control over how learning is curated and represented in public [5], [6].

In some regions such as North America, education has been one of the leading sectors to take up the concept of digital badges for at least five years [7]. Awareness and uptake in the Global South is substantially more mixed and under-researched. In these contexts the concept of a 'badge' as a social and cultural artefact can carry different meanings and the nature of professional practice and development – and consequently what teachers value and hold as important to their practice - has a distinct history.

Globally, interest in open digital badges for primary and secondary school teacher professional development is nevertheless growing. At the local scale, school districts, training providers and universities are developing badge collections and constellations. At the national level, platforms such as Digital Promise in the US offer a portal to find badges from a range of providers. Others are focused on developing the means to check the authenticity of digital credentials. However, the research evidence remains relatively scant [2] [8].

Open digital badges represent a portable 'packaging' of key assessment information associated with their implementation, such as who has earned the badge, the assessment criteria, evidence from the learning activities completed, and who the issuer is. This offers the potential for a more traceable process, a greater variety of assessment and quality assurance processes, open scrutiny, and the ability to use digital badges in combination as micro-credits from which to build more substantial certification. As a consequence, it is vital that policy makers, educators and practitioners make time to consider the benefits, routes to effective use, and the structural and logistical challenges. Our recent

research with teachers in India (n=114) has identified six contextually relevant affordances of digital badges: modularity, flexibility, clarity, scalability, engagement and shareability [9].

As a distinct educational technology, open digital badges could work well in micro-learning contexts (such as short courses or training), in supporting the assessment and demonstration of skills in practice-based and non-conventional situations where other assessment methods are inefficient or unworkable. They also offer scalability if coupled with automated systems of assessment, and are open to local adaptability.

1.2 Digital badges for TPD in Assam

The Open University (UK) and Tata Institute of Social Sciences (India) formed the Digital Badges for TPD in India project team in 2019. Prior to this, the Open University team had led the award-winning mass-scale TESS-India programme and had taken an interest in several constructively disruptive technologies including the use of 360-degree video for teacher learning and the potential affordances of digital badges for TPD [10]. The TISS team had gathered experience and evidence of implementing Integrated Approach to Technology Education (ITE) Programme by working with teachers and students in government-run schools in India since 2016. A certificate course on Constructivist use of Technology in Teaching and Learning was a key component of this activity and it was converted into a fully online course in 2019. The joint project team undertook two exploratory pilots in the summer of 2020 and held a two-day knowledge-sharing event for teachers, teacher educators and policy-makers [9]. The insights gained from this work informed the present study on digital badges.

Our programme of three short (three to four week-long) online digitally badged courses for invited teachers in Assam, India (Table 1) was launched in January 2021. A previously developed TISS certificate course titled 'Constructivist use of technology in teaching and learning' was split to form the first two digital badge courses and the 3rd digital course on Open Education Resources was designed specifically for the project. These each required 5-6 hours of learning and engagement with the course per week and were presented in English and Assamese versions. Over one thousand secondary school head teachers were invited to put forward a teacher to join the programme and, despite the challenging and disruptive impact the pandemic was having on teachers' capacity and workload, this resulted in approximately 500 course registrations. The courses were staggered so as to allow participants to complete one badge before moving on to the next. Content of the three courses was based on prior courses created by the TISS team for Indian teachers. The chunking into three short courses was intended to provide a degree of flexibility for teachers in that they could decide which badges to take and so completing one badge was not a prerequisite for starting the next.

Table 1. Overview of badges used in the programme.

Course start	Title
January 2021	Using Educational Technologies for constructive teaching and learning
February 2021	21st Century Skills and Inquiry-based learning with technology
April 2021	Activity teaching and learning using OER

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.

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 [11]. The master trainers had previously completed a TISS certificate course so had some shared contacts and background. A network of trainers and participants emerged during the course. Most teachers who

achieved a badge shared it with colleagues. 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. The Principal Secretary for Education in Assam demonstrated his support by attending key online events associated with the programme and some teachers who had achieved digital badges were invited to a state-wide Teachers' Day event held in September 2021.

A total of 529 badges were awarded across the programme with around 40% of those who registered completing at least one badge. A separate paper will review measures of impact drawing on evidence from participant engagement (such as lessons plans, peer reviews, and posts in Telegram, WhatsApp and VLE community forums), survey data and teacher interviews.

2 METHODOLOGY

The quantitative components of our methodology centred around three teacher surveys conducted before, during and after the courses. There were English and Assamese versions of all three surveys. Participants completed: Survey 1 (n=101) before engaging in any learning content, Survey 2 (n=78) after they had completed their first badged course, and Survey 3 (n=56) a month after the deadline for the final third badge. 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.

In this paper we report data from two scales used in Survey 2. The first sought to understand how teachers value aspects of their professional practice that are most closely associated with perceived or claimed roles for digital badges in teacher professional development. The question asked respondents to rate the importance of twenty statements about their work as teachers using a six-point scale from 'not at all important' (coded '1') to 'extremely important' (coded '6'). We named this the Valued Practice (VP) scale. The items included in the scale (see Table 4 later) were developed with reference to published research and prior research conducted by the project team with Indian teachers and teacher educators. An initial consultation at a workshop with teacher educators in Delhi in 2019 invited participants to discuss key claims about the role and relevance of digital badges. Analysis of the subsequent discussion identified four key areas considered of particular relevance to Indian teachers: personal recognition; teaching practice; inspiring practice through social learning and community; and adherence to state requirements [10]. Using this insight and framings from the wider literature (e.g. [2], [3], [4]) we developed item statements that were piloted in 2020 during a previous project [9] and subsequently revised further. We found research that argued a role for digital badges in structuring professional development and giving agency in pathway navigation (e.g. [3],[12]) useful in developing our item statements: 'being able to decide what professional development I need', 'taking ownership of professional development,' and 'writing my own professional development plan' whilst the issue of receiving official recognition from school principles and districts informed [3] and feedback from an online event involving teachers and invited government officials held in November 2021 helped frame item statements: 'completing teacher professional development that is supported by the state government' and 'earning the appreciation of my headteacher.' It was not our intention to make direct use of items featuring in Achievement Goal scales, however, a couple of items such as 'Having a better CV than other teachers' could be considered to map to a Performance-Approach, while items related to challenge and performance ('Learning about new ways to teach,' Completing all the activities to the best of my abilities, and 'Challenging myself as a teacher') could be viewed as aligned with Mastery. Project team expertise from working with teachers provided an additional check to ensure the item statements were relevant, accessible and appropriate for primary and secondary school teachers in an Indian context.

The second scale asked participants specifically about the value they saw in using digital badges to support them in their professional work. The scale (see Table 7 later) asked teachers to rate how useful they thought digital badges would be for supporting them in activities associated with their professional practice (see Table 7). A scale of 1 (not useful) to 6 (extremely useful) was used. We called this the Usefulness of Badges (UB) scale. Where practicable, the item wording used was the same or similar to that used in the VP scale that asked about teacher professional values (see above).

It was expected that doing this would help in making comparisons between teachers' professional values and their opinion about the perceived usefulness of digital badges. 14 items were used, each mapping to a potential role that digital badges could take in supporting teacher professional development.

3 RESULTS

3.1 Respondent characteristics

Data reported below is taken from the English version of Survey 2. Translations of the Assamese version have not yet been completed. In the occasional cases where a teacher made multiple submissions of the survey, only the first response submitted has been included. Table 2 reports Survey 2 respondent characteristics and shows there was a satisfactory balance with respect to gender, age and school location.

Table 2. Respondent characteristics.

		N	%
Gender	Female	21	26.9
	Male	57	73.1
Age	26-35 years old	19	24.4
	36-45 years old	39	50.0
	46 years or older	20	25.7
Location	Rural	43	55.1
	Semi-rural	12	15.4

We found no significant difference across the surveys with respect to the gender ($x^2(2)=3.03$, $p=.220$),and age ($x^2(4)=1.66$, $p=.798$) of respondents. The majority of teachers were excited about participating in the course (91.0%) and, although this was the first time they had seen a digital badge offered on a course (89.7%), they were keen to earn the badges (92.3%).

3.2 What teachers rate as most important to their professional practice

Our survey found that a high percentage of teachers rated improving pupil learning in their classroom, learning about new ways to teach, becoming a more confident teacher, and learning skills to make their job easier as important or very important to them (Table 3). All these relate to teaching quality and mastery, and perhaps also to elements of intrinsic motivation associated with job satisfaction, self-improvement and wellbeing. Also rated highly were statements relating to teacher agency in professional practice (such as being able to decide what professional development they need) and undertaking TPD that is endorsed by state educational authorities. Fewer teachers felt that receiving formal recognition, having proof of their ability, or having a better CV than others were important.

An exploratory factor analysis of the 20-item VP scale was conducted using the Principal Component Analysis method of extraction. Some correlation was expected between components, so Promax rotation was employed. Initial inspection of the scree plot indicated that a solution could comprise between three and five factors. Initial tests indicated a five factor solution presented the best fit based on inspection of the pattern matrix and with reference to the study's theoretical framing. There was significant cross-loading on one item ('Improving parents' trust in my teaching abilities') so this item was removed. The resulting five factor solution for the remaining 19 items is shown in Table 3. All coefficients >.40 are shown. Bartlett's test of sphericity, which tests the overall significance of the correlations within the correlation matrix, was significant ($X^2(136) = 1100.68$, $p<.001$), and the Kaiser-Meyer-Olkin measure of sampling adequacy was acceptable (KMO=.873). Table 4 reports the total variance.

Table 3. Teacher ratings of professional practice important to them and factor pattern matrix

	Teacher rating of importance	Factor Pattern Matrix				
	Important and Very Important (%)	1 (TM)	2 (PD)	3 (RS)	4 (PC)	5 (CP)
Completing all the activities to the best of my abilities	89.7	**.876**				
Learning about new ways to teach	92.3	**.846**				
Improving pupil learning in my classroom	96.2	**.745**				
Completing teacher professional development (TPD) that is supported by the state government	84.6	**.678**				
Learning skills that will make it easier to do my job as a teacher	92.3	**.658**				
Becoming a more confident teacher	91.0	*.487*	**.587**			
Writing my own professional development plan	82.1		**.936**			
Being able to decide what professional development I need	85.7		**.888**			
Improving my job prospects	85.6		**.876**			
Receiving formal recognition or awards for my teaching	56.4			***.670***		
Earning the appreciation of my headteacher	61.5			**.949**		
Proving my ability to my friends and colleagues	54.5			**.663**		
Having a better CV than other teachers	53.8			**.620**	*.506*	
Supporting other teachers in their teaching practice	79.5				**.758**	
Meeting teachers from other schools	79.5				**.857**	
Challenging myself as a teacher	84.6				**.721**	
Sharing experiences with other teachers	87.2				**.626**	
Gaining respect and acknowledgment from others	62.8					**.762**
Taking ownership of my professional development	79.5					**.747**

Table 4. Total Variance Explained.

Component	Total	Initial Eigenvalues % of Variance	Total Sums of Squared Loadings
1	9.525	50.129	6.694
2	2.471	13.005	6.822
3	1.600	8.422	4.730
4	.835	4.396	6.518

5	.719	3.786	4.686

Five items load on to the first factor. These appear to relate to an individual's teaching practice, their desire to perform well in their role as a teacher and mastery of practice to improve the quality of their pupils' learning. The items in this factor relate to some goals associated with educational Sustainable Development Goals and it is noteworthy that the value of completing state-approved professional development loads to this factor. We named this factor Teaching Mastery (TM). The item rating scores were added together to create a Teaching Mastery score (Cronbach Alpha=.910).

Four items load on to the second factor. It would appear that items in this latent variable are all associated with professional development activities and so we named this component Professional Development (PD). Item rating scores were added together to create a Professional Development score (Cronbach Alpha=.919).

Four items also load to the third factor. These relate to teacher values associated with how they are seen by others. We name this Recognition and Status (RS) and added the items to together to create a Recognition and Status score (Cronbach Alpha=.887).

Four items relating to interaction with other teachers load on to the fourth factor. Our early consultations indicated that peer relationships were important to teachers and this analysis provides evidence that this may be a discernible aspect to teachers' professional values and motivation. This aligns with a more expansive view of professionalism to include activities associated with meeting, supporting and sharing practice and challenging oneself as a professional. It is interesting to see that the item relating to being challenged loads to this factor in our analysis. We named this factor Professional Community (PC) and adding the item ratings together produced a Professional Community score (Cronbach Alpha=.865).

Only two items load to the final factor. These two items could relate to valuing taking a proactive and strategic approach to career planning, but more investigation would be required. At present, we do not think there is sufficient evidence to have confidence in using a score based on these two items so we excluded them from the subsequent analysis reported below.

Inspection of the data shows that the greatest proportion of teachers rated TM (Factor 1) as very important or important, followed by PD (Factor 2), PC (Factor 4) and RS (Factor 3). Teachers appear to rate RS - the factor most closely associated with extrinsic motivation – lowest of the four.

3.3 Value of digital badges for supporting professional practice

Later in the survey, teachers were asked to rate 14 statements about the use of digital badges for TPD. They were asked to base their answers on what they knew of digital badges so far. Table 5 shows the percentage of teachers who rated each statement as useful or extremely useful.

Table 5. Teacher views about usefulness of digital badges.

	Useful and Extremely Useful (%)	Extremely Useful (%)
Improving pupil learning in my classroom	93.6	52.6
Becoming a more confident teacher	88.5	44.9
Helping me track my own professional development	87.2	39.7
Completing teacher professional development (TPD) that is supported by the state government	87.2	39.7
Helping encourage me to do more professional development	84.6	44.9
Improving parents' trust in my teaching abilities	79.5	38.5
Building a portfolio of professional development	79.5	37.2
Using digital badges in my own teaching	79.5	32.1

Improving my job prospects	74.4	33.3
Receiving formal recognition or awards for my teaching	66.7	25.6
Having a better CV than other teachers	60.3	21.8
Gaining respect and acknowledgment from others	59.0	24.4
Proving my ability to my friends and colleagues	57.7	21.8
Earning the appreciation of my headteacher	55.1	24.4

When asked three additional questions about the overall potential for digital badges overall we found a very positive response. 98.7% of teachers agreed that they thought digital badges could support teachers in their professional development in future, 97.4% agreed that the opportunity to earn a badge helped encourage them to continue and finish the course, and 94.9% would support the idea of widespread use of digital badges for TPD in their state.

3.4 Predicting the perceived usefulness of badges

The pattern of teacher ratings shown in Table 3 and Table 5 appear to be similar for comparable statements. To explore a potentiation relationship further, regression analysis was used to determine if any of the four valued aspects of practice (TP, PD, RS and PC) were predictors of how teachers rated the usefulness for digital badges for particular purposes (Table 6). This analysis found that: (1) teachers' rating of the usefulness of digital badges in improving pupil learning in the classroom was predicted by how much teachers valued Teaching Mastery and Professional Community, (2) rating of the usefulness of badges in helping encourage teachers to do more professional development was predicted by how much they valued Professional Development (this would be expected, but it is useful to see it confirmed) and Professional Community, (3) Usefulness of badges for giving formal recognition and award was predicted only by how much value teachers attached to recognition and status – relative values of Teaching Mastery, Professional Development or Professional Community were not predictors and (4) that a perceived role for digital badges in helping build portfolios of professional development was predicted by all four predictors. A possible interpretation of this latter finding is that the act of building a portfolio is a professional development activity related to improving teaching practice (proficiency) and that may contain achievements that can be shared externally. The adjusted r-squared value shows that around half (between 42.2% and 55.8%) of the variance was predicted by the model (Table 6).

Table 6. Regression analysis

	Usefulness of digital badges in…							
Predictor	Improving pupil learning in my classroom		Helping encourage me to do more professional development		Receiving formal recognition or awards for my teaching		Building a portfolio of professional development	
	Stand. Beta	*p*	Stand. Beta	*p*	Stand. Beta	*p*	Stand. Beta	*p*
Teaching Mastery (TM)	.526	**.000***	.220	.119	.212	.144	.267	**.044***
Professional Development (PD)	-.156	.172	.270	.029*	.059	.636	.215	**.038***
Recognition and Status (RS)	-.148	.150	-.052	.638	.636	.000*	.147	**.022***
Professional Community (PC)	.434	**.001***	.367	**.008***	-.136	.331	.184	**.023***
F	24.669		18.865		16.787		14.700	
Adjusted r^2	.558		.488		.457		.422	

4 DISCUSSION

Our analysis has shown that teachers' views about the potential usefulness of digital badges is predicted by the importance they give to the four aspects of professional practice identified from factor analysis. How much importance teachers place on a particular professional value appears to predict the perceived value of some uses for badges but does not significantly predict others. This could mean that asking about the usefulness, value or 'potential' that teachers see for digital badges may tell us less about any intrinsic value or affordances of digital badges per se and more about what they value more broadly as a teaching practitioner. Finding that individual teachers' conceptions of practice may structure and influence the way they value and perceive uses for digital badges underscores the argument for understanding digital badges as tools that gain meaning and value from the particular instantiation(s) in which they are conceived, implemented, and contextualised. Our data suggests that when planning a digital badge implementation, educators must think beyond the badge as just a pedagogic or motivational device, and instead develop a broader conception of how a badge will operate. This could be termed a Digital Badge Value Realisation Design (DBVRD). It could be through a DBVRD that the multi-dimensional space related to perceptions of digital badge usefulness and the importance to professional identity, practice and development will intersect with the learning and/or assessment design associated with the digital badge.

A second finding is that, at least in the context of teaching in India, a digital badge implementation that focuses on extrinsically oriented aspects of teacher values such as reputation and status will likely appeal to a smaller proportion of teachers - and therefore potentially be less successful - than a digital badge implementation focused also on supporting teaching practice, professional development and engaging professional communities. In the design and delivery of our programme we appear to have appealed well to the four aspects of practice that factor analysis indicates that teachers value. This was achieved by offering: relevant and contextually valuable content, a modular structure, authentic activities, social learning opportunities and networked support structures, encouragement to share the badges and disseminate learning, and visible endorsement from state authorities of the badge, and may explain why 98.7% of teachers responding to the survey were optimistic about the future use of digital badges in TPD

A third important finding is that teachers' social practice and interaction – the society teachers enjoy as practitioners - was identified as a distinct factor. Like professional development or extrinsic recognition, this needs consideration when developing a DBVRD.

The scales used in this study will require further iteration and could benefit from testing with the questions listed in another random order and with teachers in other geographic regions. For this report we were not able to use additional questions from the survey but believe in future this would help extend and improve the regression model. Our analysis has been limited to responses to the English version of the survey and it is possible that the narrative about digital badges that the programme constructed and told may have influenced responses to the question about potential uses for the digital badge. We also acknowledge that most of the teachers who participated in the programme had either volunteered or been nominated by their headteacher and that the study took place during a period of significant disruption due to the Covid pandemic.

5 CONCLUSION

Our study contributes to the wider need for research into digital badges for TPD at scale in the Global South and to understand the connections between how digital badges are earned, assessed, shared and viewed by teachers. We have identified Teaching Mastery, Professional Development, Recognition and Status, and Professional Community as four factors in how Indian teacher value practice and we found evidence for a link between the aspects of practice that teachers value and their perceptions of how useful digital badges might be to them. Learner and issuer motivations are certainly nuanced and complex, meaning care is needed to ensure that badges have a clear and authentic learning rationale and that the digital badge will add value to the learner, their learning experience, and their onward professional practice. Some form of expansive and well-constructed Digital Badge Value Realisation Design (DBVRD) may therefore be helpful in supporting the planned scaling of digital badge achievement and use.

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