

Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Brown, T

Title:

Hāth se sīkhna: geographies of practical learning and India's agricultural skills agenda

Date:

2025-05-16

Citation:

Brown, T. (2025). Hāth se sīkhna: geographies of practical learning and India's agricultural skills agenda

Persistent Link:

<https://hdl.handle.net/11343/315729>

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

Hāth se Sīkhna: Geographies of Practical Learning and India's Agricultural Skills Agenda

Trent Brown

One of the greatest challenges of skill development in the global South is providing meaningful opportunities for practical learning. While previous studies have noted the pedagogical factors associated with this challenge, in this paper, I take a geographical perspective and argue that the barriers to practical provisioning are multi-scalar, extending beyond that of the individual training provider, and highly context specific. I draw on the findings of study of a new agricultural skill development scheme in India to show how while participating trainees often complained that they wanted a greater emphasis on 'learning by hand' (*hāth se sīkhna*) as part of their training, the barriers to doing so were often greater than their individual trainers being unable or unwilling to do so. Often they related to administrative constraints, but also the regional socio-economic environment and the wider political economy. I draw on theories of communities of practice to argue that regionally specific factors, such as the local agrarian structure and regional patriarchies, structure the social relations through which practical learning takes place. This implies regional-level strategies for ensuring practical learning opportunities must be devised for skill development initiatives to achieve their potential.

Keywords: practical learning; vocational pedagogies; work placements; communities of practice; agricultural skills; India.

Introduction

Educationists have long recognised that skill acquisition requires opportunities for practical learning. Depending on the skills in question and the needs of the individual learner, this may entail combinations of 'hands-on' learning, roleplay, repetition of tasks under a mentor's supervision, work placements, and apprenticeships (Lucas et al., 2012). Opportunities for such learning may occur both in sites of formal vocational education and in a variety of informal spaces amongst 'communities of practice' (Lave & Wenger, 1991; Mills & Kraftl, 2014).

Almost as widely recognised is that in formal vocational education settings, practical learning – or, 'vocational pedagogies' – are neglected. Both policymakers and trainers tend to emphasise funding, curricula, qualifications frameworks, and institutional reform before vocational pedagogies are considered (Lucas, 2016). This deficiency is even more apparent in the global South. In India, notwithstanding Gandhi's exhortations on the value of 'learning by doing,' academic education has been overvalued at the expense of modalities of learning and career pathways associated with vocational skills (Singh, 2001). Research on India's vocational education system has found that vocational teachers often lack a clear conception of the value of practical classes, viewing skills as something one is born with, rather than something that can be taught (Pilz, 2018). Work placements, which are regarded as especially important in providing trainees opportunities to gain experience at work sites and develop skills *in situ* are very rarely offered and those that are on offer are often poorly organised and exploitative (Ruthven, 2018).

This paper advances a geographical understanding of practical learning in the global South through reference to a study of a set of new agricultural training programs in India. These trainings form part of the *Skill India* initiative – India's undertaking to upgrade its skill development and vocational education capacity. One of the starkest findings of the study was that many trainees complained that training provided limited opportunities to learn practically.

DRAFT paper presented at the ‘Social Life of Skills Online Workshop’ hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

As reported below, some trainees spoke emphatically of the importance of ‘learning by hand’ (*hāth se sīkhna*) and the limited capacity of theoretical lectures to impart skills. My initial response to these complaints was to conceptualise them as a pedagogical problem – that trainers lacked an awareness of effective methods of practical instruction. Further investigation and analysis revealed, however, that while trainers’ lack of skills in vocational pedagogies may have been an issue in some cases, a more profound reason for the dearth of practical learning opportunities were a series of geographically contingent factors, such as the structure of the agrarian economy, prevailing gender norms, and administrative constraints on trainers. I argue that – at least in the informal sector – formal skill development requires access to spaces of informal learning in what Lave and Wenger (1991) call ‘communities of practice.’ Policy makers must consider the regionally specific nature of these communities of practice and devise regional strategies to overcome barriers of access, to improve systems of social learning, and increase synergies between formal and informal learning spaces.

Understanding Practical Learning: Four Levels of Analysis

At first glance, the challenges of practical learning provision may appear to be primarily pedagogical: problems best resolved by upgrading the pedagogical skills of trainers. Such thinking is evident in the emphasis on ‘training of trainers’ programmes in skill development policy across the global South (see Ajithkumar, 2016). However, recent research from the social sciences on skills suggests this perspective is somewhat simplistic. Meaningful, sustained, and effective opportunities for practical learning hinge on a multi-scalar convergence of actors, interests, incentives, relationships, institutions, and materials, the achievement of which is beyond the capacity of individual trainers or training providers (Streeck, 2011; Patchett, 2017; Gough et al., 2019). Such convergences are contingent and fragile, coming together and falling apart with changes in historical circumstances (Gowlland, 2012). Traditions of informal practical learning may be disrupted by overzealous efforts to regulate and formalize them (Adams, 2018; Aufseeser, 2014). In the global South, there is evidence that macro-economic change – such as increased economic globalization – is eroding longstanding structures of informal apprenticeships (Gough et al., 2019). Recognising its contingency, it becomes imperative to probe the conditions under which effective and empowering forms of practical learning are possible (Avis, 2004). To this end, I suggest a geographical perspective on practical learning, that considers four levels of analysis, each pertaining to different scales.

The first level of analysis is the pedagogical, which can be studied largely at the specific sites of skill acquisition. This concerns the methods of skill development: whether trainers have the knowledge, skill, and willingness to provide effective practical classes and to arrange meaningful work placements. It also concerns the relational and spatial aspects of the training site itself: ideally, training sites should be marked by encouraging social relations of trust and respect, in which learners feel comfortable to experiment with new skills (Mills & Kraftl, 2014; Chea & Huijsmans, 2017; though for a somewhat different view, see Gowlland, 2019). The second level, in many ways tied to the first, is the administrative. This concerns the capacity of training providers to facilitate practical learning, including whether they have the time, resources, and

DRAFT paper presented at the ‘Social Life of Skills Online Workshop’ hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

social networks to do so and whether they are constrained by regulations. This level of analysis may traverse scales: factors that enable or constrain training providers with respect to practical learning may be localised (e.g. their level of connections to local industry) or reflections of the state- or national-level TVET system in which they are embedded. The third level is the socio-economic. These are regionally specific factors operating outside the training site that shape opportunities for *in situ* learning, including prevailing sociocultural attitudes towards vocational learning, dispositions towards sharing knowledge and skills, and whether economic conditions enable or incentivise them. Values associated with the construction of identity that accompany skill transfer become particularly relevant here (Marchand, 2008).

The pedagogical, administrative, and socio-economic factors shaping practical learning are themselves conditioned by the broader economic and political environment, suggesting a final level of analysis, the politico-economic. These are factors operating at a macro level, including dominant state-capital-labour relations and prevailing institutional structures. Such analysis considers whether these conditions provide incentive structures in which businesses see value in providing on-the-job training. There are tremendous variations between national settings in the provision of work-based training. This, in turn, reflects structures on the macropolitical scale that shape incentives for employers to invest in the provision of opportunities for trainees to gain on-the-job experience. Effective on-the-job training and apprenticeship provision can be expensive, and for employers to have an incentive to provide them, there must be mechanisms in place to allay employers’ fears that trainees might be ‘poached’ by competitors (Streeck, 1989, 2011).

In the global South, such mechanisms are rarely in place. Employers may be reluctant to collaborate with trainers to provide practical learning opportunities due to their own resource constraints and governments lacking the mechanisms to allay concerns about poaching (Amegah, 2021). Moreover, economies in the global South are largely marked by informality and small-scale enterprises that lack the means to provide formal apprenticeships. Those training for work in the informal sector may aspire to self-employment and hence a formal work placement in a larger enterprise may have little relevance in preparing them for their own future work conditions. As such, for training in the informal sector, macropolitical factors shaping *formal* apprenticeships may be less relevant than the localised community, family, and cultural settings in which *informal learning* takes place. Thus, in this paper, my concern is for the first three levels of analysis outlined above – though the fourth serves as important context. In India, where the majority of workers find their livelihoods in the informal sector and are either self-employed or employed in very small firms, opportunities for macro-level institutions compelling on-the-job training are curtailed, meaning the geography of opportunities for practical learning tend to be localised and shaped by more regional socio-economic factors.

Communities of Practice and Geographies of Skill Acquisition

Lave and Wenger’s (1991) theory of situated learning provides a cogent framework for analysing the social relations through which practical learning occurs. Its focus on social relations makes it exceptionally useful for understanding the socio-economic enablers of practical learning. Lave

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

and Wenger argue that all learning takes place in the context of 'legitimate peripheral participation' within 'communities of practice.' Indeed, learning, from this perspective is seen as part of a process of becoming a legitimate participant within the diverse communities of practitioners that make up society – which may consist of schools, workplaces, neighbourhood associations, friendship groups, or any of a host of other formal or informal social formations within which organized activity takes place. They posit that learners begin by observing and participating in relatively low-skilled and less important tasks within their communities of practice and gradually shift towards fuller forms of participation and more advanced tasks. Through this process, learners not only acquire knowledge and skills, but also begin to identify as skilled practitioners within the community and develop a sense of belonging. In recognizing that mastery of skills is part of this process of gaining acceptance, recognition, and belonging within communities of practice, legitimate peripheral participation may also be a source of motivation to persist in skill acquisition. Anthropological studies of artisanal apprenticeships have reinforced this, showing how the acquisition of skills occurs in-tandem with the assumption and performance of gendered, ethnic, and religious identities that are sources of personal meaning (Marchand, 2008; Simpson, 2006).

Yet, not all communities of practice are the same: their structure and properties determine whether they provide meaningful opportunities for participation, learning, identity formation, motivation, and belonging. Lave and Wenger (1991) note that overly hierarchical communities of practice often lead to distorted learning outcomes, as newcomers often learn more about resisting authority than about targeted skills. Likewise, when new entrants to a community of practice are instructed in overly didactic, non-participatory ways, this does not lead to an active feeling of involvement and undermines learning. Moreover, a community of practice should be *transparent*: newcomers should be able to ascertain, from their peripheral position, how the community of practice is organised, who the skilled seniors are, and how they can participate in more complex activities to become full, esteemed members of the community.

Subsequent research has further explored how the structure of communities of practice shapes skill acquisition and identity formation. One line of inquiry has been to explore how macro-level changes and state interventions stimulate new forms of communities of practice that structure opportunities for meaningful participation and learning. Gowlland (2012) explores how the Chinese government's collectivization of craft industries in the 1950s led to a decisive shift from traditional master-apprentice relations to a model of participatory learning in larger groups of apprentices in classroom settings. This mode of organizing the community of practice had advantages not only of efficiency, but also in facilitating the wide dissemination of knowledge and skills previously held as trade secrets by individual master craftspeople. The value of this innovation was so widely appreciated by craftspeople themselves, that similar forms of social organization persisted even after China privatized its collectivized craft industries and government-run training centres were closed: denser social relations were recognised as fostering more expansive practical learning and a greater sense of belonging to a shared identity as craftspeople.

DRAFT paper presented at the ‘Social Life of Skills Online Workshop’ hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

Studies of rural development similarly suggest that where there are existing networks of dense social relations amongst farmers, this fosters collective learning, innovation, and more rapid dispersal of new skills (Tran, et al., 2018). Where these networks are based on trust and friendship, farmers may help each other build confidence to develop skills and innovate (Dolinska & d’Aquino, 2016). Yet, the basis for cooperation between farmers within such collectives is a set of common interests and shared purpose: and the extent to which farmers share these can vary across time and according to context (Morgan, 2011).

Similar conclusions could be drawn for much of the informal sector: meaningful cooperation between the largely self-employed actors that make up the informal sector hinges on relations of trust, solidarity, and contingent convergences of interests. Therefore, if policymakers promoting skill development for the informal sector wish to tap existing communities of practice as a basis for advancing practical learning, this would require a regionally specific understanding of how those communities of practice are organised. In what follows, I explore how the structures of communities of practice differ according to the contingencies of local context. These differences lead to specific regional geographies of practical learning which shape the ways in which skills are acquired.

Context and Research Methods

The research that informs this paper was conducted between October 2018 and May 2020 and explored themes of practical learning in relation to set of agricultural training programs that were introduced as part of the Government of India’s skills reform agenda (see King, 2012). The rollout of these agricultural trainings has been overseen by the Agriculture Skill Council of India (ASCI), which was formed in 2013. At the time of research, ASCI had developed 176 ‘qualifications packs,’ each covering material related to one specific agricultural job role (such as ‘wheat cultivator’, ‘dairy entrepreneur’, or ‘tractor operator’). Qualifications packs outline national occupational standards and skills to be imparted through modular trainings of between 150 and 300 hours in duration. They have also developed model curricula for trainings, most of which recommend at least half of course time be spent on practical classes.

To implement training, ASCI partnered with a host of public and private providers with experience in agricultural education. Though these providers are diverse, at the time of research, most trainings were being imparted by publicly-funded extension service providers – specifically agricultural universities and district-based agricultural extension agencies known as Krishi Vigyan Kendras (KVKs). This is noteworthy, as agricultural extension does not necessarily carry the same assumptions about how practical learning takes place as does mainstream discourse on skill development – in fact, extension has long been criticised for its lack of attention to practical pedagogical strategies (Farrington, 1995).

Research took place at seven training centres in the North Indian states of Punjab and Himachal, including Krishi Vigyan Kendras, agricultural universities, and one undergraduate college. The ASCI training programmes observed were for job roles in crop production, animal husbandry, and ‘allied activities’ (for example, mushroom cultivation and beekeeping). The two states

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

chosen, though geographically adjacent, are very different in agrarian structure. Punjab has a long history of commercial, capital-intensive agriculture, while Himachal Pradesh is a mountainous state, where farming is more subsistence-oriented, and often practised alongside other forms of wage labour and non-farm entrepreneurial activities. Moreover, the two states differ substantially in the gendered relations of agricultural production: in Punjab, women are removed from agricultural activities as a marker of status, whereas in Himachal women perform the majority of day-to-day agricultural tasks.

Data consisted primarily of interviews and direct observation of training programmes. 20 interviews were with the trainers and administrators enlisted to implement ASCI trainings. These interviews focused on their evaluation of the ASCI scheme, their approach to implementation – including approach to practical classes – and the challenges they had faced in relation to the scheme. 82 interviews were conducted with trainees, which focused on their reasons for enrolling, their experience and evaluation of the ASCI training programme, and their plans after completing training. Direct observations were made of how ASCI training programmes were conducted, including both theoretical lectures and practical lessons.

These initial interviews and observations took place in late 2018 and early 2019. In late 2019 and early 2020, follow-up interviews were conducted with 51 of the initial 82 trainees, exploring the impacts training had on their lives and livelihoods. While the first round of interviews were mostly conducted at training sites, the second round were mostly conducted with trainees at their farms and villages, which created opportunities for more ethnographic modes of engagement, in which I was able to appreciate the social contexts of skill acquisition in greater depth. Follow-up interviews with some of the initial trainers were also undertaken. Amongst other things, these interviews explored their thoughts on alternative approaches to administering practical classes, whether work placement models might be workable, and some of the barriers to the effective provision of practical classes.

Practical Learning in Agricultural Training and its Limitations

While there was disagreement between trainers on the value of the new ASCI trainings, most agreed that their emphasis on practical approaches to imparting agricultural skills was a good thing. One trainer noted the lack of practical teaching as the main deficiency of extension in India and hence welcomed ASCI's provocation to deliver at least 50 per cent of training via practical modalities. Most trainers saw practical classes as being essential to consolidating skills, noting 'farmers learn practically' and 'they are not interested in theoretical or classroom training programs.'

Despite what trainers said, however, the 'practicals' offered during ASCI trainings were limited and only made up a very small proportion of training hours. On this, there was variation between training providers: in one, trainees claimed to have not undertaken a single practical class, in others, trainers appeared to be trying to maximise the number of practical classes to the best of their ability. Yet, even where there were 'practical classes' they offered little in the way of 'hands-on' learning. Work placements were not observed at any point in the research.

DRAFT paper presented at the ‘Social Life of Skills Online Workshop’ hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

What were termed ‘practicals’ took one of two forms. The first were field visits. For most training programs observed, 2 to 3 days were dedicated to off-site learning, typically at large commercial ventures. Trainees did not have the opportunity to participate in work at these sites and the commercial ventures were often on a scale that was beyond what trainees were capable of doing themselves – a complaint that several trainees made. The second kind of ‘practical’ were class-based demonstrations – for example, of the preparation of organic inputs and composting as part of organic farming training. The demonstrations observed were not participatory. Typically, only a small number, if any, of the trainees took part. More commonly, trainers or other staff performed the demonstration while trainees observed. Moreover, occurring at the training site, these demonstrations were not *in situ*: the environment in which they took place was artificial and hence may have differed to that encountered on trainees’ farms.

Although not designated as ‘practicals,’ many lectures observed were closely organised around practical themes. Some lectures would begin with a brief explanation of scientific principles of practice but would then move on to explore the practical challenges trainees would face in a more interactive manner. For example, during one mushroom cultivation lecture observed, the lecturer devoted considerable time asking trainees about the materials they had in their village that could be used for composting and the kind of space they had available for cultivation, advising how they could make best use of what they had. She facilitated a collective discussion in which trainees would talk through their plans and engaged them in a dialogue anticipating the kinds of problems they might encounter and how they might solve them – including makeshift solutions using locally available materials. The trainer also encouraged trainees who had already made a start in mushroom cultivation to share their experience, which other trainees found motivating. Although these classes were not ‘practical’ in the sense of being ‘hands on’ or even demonstrative, they nonetheless worked on trainees’ imaginations regarding their own concrete situations, their material constraints, and engaged in problem solving. Such approaches to delivering lectures were not uncommon.

Despite these efforts, there was a view amongst many trainees that the approach to ‘practicals’ in the ASCI program was inadequate. When asked if they felt there was anything about the training program that could be improved, the most common response was some variation on ‘practical *kam tha*’ (there weren’t enough practicals). There were different ways in which the need for practical classes was experienced and expressed. For a small number of young people a complete lack of experience in agriculture made lectures difficult to follow. This was true for 25-year-old Harshit,¹ who had enrolled in a dairy entrepreneurship training after having become tired of exploitative urban employment and was desiring a new livelihood. Harshit attended the training daily and his overall impression was positive. Yet, he did note that the course seemed overly theoretical. Trainees would spend much of their time being taken from one department of the university to another, where they would receive lectures from experts on different aspects of work in the dairy sector. Harshit struggled to pay attention in these lectures. He tried to take notes, but could not picture in his mind exactly what they were talking about, since he had limited prior experience working with cattle. He worried that after completing the course he

¹ This name is a pseudonym, as are all others used for research participants in this paper.

DRAFT paper presented at the ‘Social Life of Skills Online Workshop’ hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

would still not know how to respond in the event of an unexpected development, such as an outbreak of disease.

Like Harshit, 35 of the 82 trainees interviewed had limited prior experience in agriculture at the time of enrolling. Several others were either coming back to agriculture after time spent working in other sectors, or were entering a new agricultural venture in a field in which they had limited prior experience. These participants also tended to stress the importance of practical classes. Moreover, several trainees who had not been in school for several years said they mentally retained more of what they learnt in practical classes than they did in theoretical lectures (during which, in my observations, very few trainees took notes). For example, one woman in her late 20s who had completed class 10 explained her preference for practical classes as follows:

This is my first time coming for training. So I’m not in the habit of writing – and I’ve almost forgotten everything [taught in lectures]... It’s been 8-9 years since I left school.

Other trainees who *did* have prior agricultural experience also expressed disappointment over a lack of adequate practicals in the training. For example, a group of experienced dairy entrepreneurs enrolled in the same course as Harshit clearly stated they wanted to learn more by hand (*‘hāth se sikhna’*). They said that what trainers called ‘practicals’ were mostly field visits, which one of them described as visual demonstrations of theory. They never had an opportunity to learn by doing – and this they wanted, particularly in areas where they hoped to develop new technical skills, such as administering vaccines to animals. One trainee suggested it would have been beneficial if they had the opportunity to administer vaccines under the supervision of the trainer, and receive feedback on their technique. At best, they were given a demonstration of how to administer a vaccine followed by an opportunity to ask questions.

Trainees’ demand was not for work placements – that was rarely considered as a possibility – but rather for more regular and more hands-on field-visits and on-site demonstrations. They noted that in the few instances where they had done practicals, these kinds of hands-on activities were what consolidated their knowledge (*‘dimāg me lagāna’*, lit. ‘stuck in the brain’).

Administrative Challenges of Practical Training

The analysis above would suggest a pedagogical problem within these agricultural trainings – that trainers did not know how to administer training in a manner that met trainees’ needs and expectations or were unwilling to do so. This may have been true to a certain extent: trainers’ education and professional experience were in extension education, where the focus is more on vertical knowledge transfer than practical training. Had ASCI provided professional development opportunities for trainers in vocational pedagogy prior to the rollout of the scheme, this may have been beneficial. Yet, further discussions with both trainers and trainees revealed the barriers to effective practical training were more complex, and often related to administrative constraints and the broader socio-economic environment.

In the second round of interviews with trainers, I discussed their needs in terms of administering effective practical classes. In most cases, trainers were interested in administering better practical

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

classes – and some were actively seeking opportunities to do so – but they faced several barriers. In KVKs, these related to poor quality or small-scale facilities. This was particularly a problem, since all KVKs had been tasked with administering a diverse range of training programs. One senior trainer noted that there might be better prospects for practicals if individual KVKs were able to develop as more specialised 'centres of excellence' on particular topics of relevance to their district. Facilities needed to administer excellent practical classes could be developed specifically in relation to the KVK's specialised topic.

In agricultural universities, where facilities were typically more developed, there were nonetheless administrative hurdles and resource constraints with which to contend. In animal husbandry trainings, for example, health regulations and the risks associated with compromising the health of animals meant that trainees often couldn't be allowed to physically handle animals. In poultry training, where the cost of replacing an animal was less, training providers faced fewer barriers to providing trainees opportunities to work with animals directly – and trainees who studied poultry had fewer complaints about the dearth of practicals. Staff at agricultural universities also faced time constraints, which prevented them from putting in the extensive work involved with coordinating practical classes. In addition to their work conducting agricultural training, faculty also had the mandate of undertaking research and academic teaching. In the absence of staff exclusively dedicated to training, exceptional practical classes may have been an unrealistic expectation.

I also discussed with trainers whether they might consider a focus on job placements as part of training. This was acknowledged as a good idea, but extremely difficult to implement. The difficulty related to the challenges of finding appropriate local enterprises which could host a sufficient number of trainees to be a viable arrangement. Some trainers also noted that trainees would be reluctant to work on someone else's farm – particularly if unpaid. One trainer claimed he had tried to arrange work placements as part of a training program for rural youth and that trainees would depart after just a few hours of work.

Practical Learning within Communities of Practice

Although they saw some potential in reforming systems to allow for better on-site practical classes and work placements, several trainers also had different view of how practical learning takes place. Practical skills, these trainers argued, would not be consolidated in a classroom setting over the course of a one-month training. Skills were acquired when farmers attempted to apply what they had learnt in the field, made mistakes or encountered challenges, and then came back to their trainers with follow-up questions. They imagined a loosely structured community of practice, consisting of farmers and extensionists, within which skills are developed with a more extended and open temporal horizon. What mattered for trainees' success was less that they had experienced excellent practical classes during training, and more that they had fostered a relationship with their trainer and could reach out to them to receive feedback when things went awry.

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

Interviews with trainees suggested that in some ways, this accorded with vernacular understandings of what practical learning entails. Several trainees saw the pain experienced as a result of mistakes as the most powerful prompts for adjustments in techniques and upgrading of skills. Take for example Malini, a female trainee, who prior to her marriage had no involvement in agriculture. When we asked her how she acquired her skills at that time, she told us of how she badly cut her hand when she first attempted to use a sickle. Gesturing to a large scar on her hand she laughed and exclaimed: 'This is practical!' Such views were not uncommon – several trainees, particularly those with years of experience, related how prior mistakes ultimately became their greatest teachers.

Moreover, although trainees did wish for more practical classes as an integrated component of their training, trainers' view of a more temporally extended process of acquiring 'hands-on' experience while maintaining contact with mentors did accord with many trainees' experience a year after training was complete. What differed from the trainers' views, however, was that their mentors were not only their former trainers (though they could be exceptionally helpful), but also fellow trainees and other experienced practitioners with whom they had made contact. In other words, they had acquired and refined their skills 'practically' within communities of practice. Importantly, however, they engaged with different communities of practice in different ways. The structure of the community of practice with which they were engaged and their place within it in many ways determined how effective it was in facilitating skill consolidation.

Perhaps the most commonly mentioned community of practice for acquiring agricultural skills was the family. Since much of the agricultural sector in India is overwhelmingly comprised of family-based enterprise, it is perhaps unsurprising that most trainees described having acquired their agricultural skills from parents and other family members since childhood. Most found it difficult to describe how this learning took place – perhaps because it was such a taken-for-granted aspect of their lives or perhaps because it happened so long ago. Those who were able to articulate how they had learnt explained a process very similar to that described by Lave and Wenger (1991) as legitimate peripheral participation. As children, they helped out on simple tasks whenever asked and tasks became gradually more complex with age. When they became more actively involved in work on the farm, they would ask their elders for advice. There were important gendered differences in these processes. Men described a more-or-less continuous process since childhood (perhaps with breaks, due to periods of undertaking wage labour and education), while many women described a more intense learning period after marriage, when they were asked to take on a range of agricultural tasks for their marital family.

Yet, there are three key reasons why families are not entirely positive examples of communities of practice. First, families in India are often hierarchically organized. Elders within family tend to delegate unskilled tasks to younger family members, without providing opportunities to participate in more advanced tasks (see also Pilz & Wilmschöfer, 2015). Progression to 'full participation' is thus limited. Second, families are fragmented and do not have access to the

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

broader body of knowledge that is present within a networked community.² As one young trainee complained 'in the village in Punjab, they only know how to farm like their elders did' – he wanted the benefits of scientific knowledge and more open dialogue on different approaches. Third, the family is a patriarchal and gerontocratic institution, within which women and younger men are denied opportunities to make use of skills in empowering ways: their skills are subordinated to the needs of the family unit, rather than being resources for personal development and flourishing (Ghosh, 2019). Female trainees described learning new methods in training programs that they wished to adopt, but were unable to experiment with them at home because their parents-in-law considered them to have limited value for advancing family livelihoods. Families could restrict learning opportunities for young men as well. One male trainee from Himachal in his forties, for example, noted a shift in family tendencies to encourage participatory agricultural learning during his lifetime. When he was a child, families still saw farming as the principle source of livelihood and hence encouraged children to work in the fields and become good farmers – even at the expense of their education, which was seen to be a more risky endeavour with fewer chances of returns. For the younger generation, he said, the situation has reversed, and families now tend to discourage young men from spending too much time in the fields at the expense of their studies – which are now seen as the pathway to upward mobility. Indeed, several young men indicated a lack of family support in acquiring and utilizing new skills, including Harmeet, a young male trainee from Punjab who was highly enthusiastic about starting a career in dairy. Yet, a year after completing training, he had left dairy completely, after his father – himself an established dairy entrepreneur – encouraged him to return to university for further studies:

my father... after doing [my] undergraduate, he told me that, 'you can... [work] in some other field, this work is not good for you.'

The reason for his father's discouragement was the low economic returns that accrue to dairy: he wanted his son to strive for salaried employment. Family thus did not always provide the kind of supportive milieu characteristic of a thriving community of practice.

Given these limitations of the family setting, the community of practice that was constituted when trainees networked amongst themselves became extremely important. Several trainees – including those critical of the lack of practical provision in training – noted that the primary benefit they took from training was meeting other trainees. They derived from the networks they established a motivation to develop skills further and a milieu in which practical learning and problem solving could take place. Becoming linked to a community of aspiring innovative farmers bolstered trainees' sense of identity in relation to their livelihoods. This was especially important for young men, whose families and communities had discouraged involvement in agriculture, given its associations with low status and poverty – and for Scheduled Caste men, for whom agriculture had historical associations with caste oppression (see also Carswell & De Neve, 2018). Meeting with others allowed them to invest greater esteem in farming, become

² This is also true of traditional craft apprenticeships, where small, bounded communities of practice hold knowledge as tightly guarded trade secrets – curtailing opportunities for knowledge sharing and innovation that a more open community of practice affords (Gowlland, 2012).

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

proud of their identity as farmers, and become motivated to learn more and develop skills further. Discussions with other farmers prompted interest in alternative approaches to forging livelihoods and addressing key challenges. In a few cases, trainees would visit each others' farms after training was over, providing informal opportunities for practical learning. A more common outcome, however, was for trainees to form WhatsApp groups, which served as loosely organised online platforms for practical learning and problem solving. When trainees encountered problems, they would post queries to the group and solve them together or with the help of trainers (who were typically also members of the WhatsApp group – and some had facilitated them). When they had success, they posted pictures to the group, serving both as a model to follow and a source of further motivation.

Training also served as a prompt for trainees to connect to external communities of practice in which practical learning could take place. Connecting with self-help groups (SHGs) or non-government organisations (NGOs), for example, was an important way for women and members of marginalised communities to connect with other practitioners and safely experiment with new technologies and practices. Connecting to such groups not only helped in providing avenues for sharing experience and collective problem solving, but also in gaining access to subsidised inputs – which allowed one to experiment and become familiar with working with new materials without needing to make a personal investment to do so. Some trainees also consolidated skills after training by reaching out to experienced practitioners, who could serve informal mentors. Connecting to these practitioners, however, required networks, meaning that trainees with greater stocks of social capital tended to find more opportunities for these forms of social learning.

In addition to unequal social capital, there were also barriers to social learning as a consequence of patriarchy and casteism. Several women did not feel comfortable working with others outside their family farm, while others expressed strong interest but did not think it workable given prevailing values. Caste could also be a barrier – upper caste men, for example, could not even be seen doing certain kinds of work like poultry, let alone try working with lower caste people who are more experienced. Whatever organic, community-based communities of practice exist tend to be fragmented along gender and caste lines, limiting potential for meaningful situated learning.

Regional Variations in Orientations to Practical Learning

There were very substantial regional differences in the extent to which the socio-economic environment facilitated practical learning in the context of communities of practice. The social relations between villagers in Himachal were more conducive to participatory learning than in Punjab. Some Himachali trainees expressed the view that since livelihoods in the state are precarious, it is necessary for farmers to share amongst themselves whatever knowledge or skills might bolster livelihood security. Fischer (2017) notes long histories of collective labour amongst Himachali farmers – practices which persist to this day – which may provide both a platform for working alongside others, but also a set of social norms around sharing capabilities. The relatively small landholdings in Himachal and the absence of the high fences around animal

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

enclosures that are typical in Punjab mean that when one farms or tends to their animals they often do so in the copresence of others in the village. Other farmers might comment on one's work, giving feedback – useful or otherwise. When one observes someone doing something innovative, they might say '*yah kya kartoot?*' ['what is this you're doing?' or, literally, 'what handicraft is this?'] and there is a strong social expectation that one should share their knowledge and skills with anyone who asks. Many noted that they had shared whatever they learnt in their training program with neighbours who were unable to attend. Not all trainees in Himachal thought this to be a positive feature of local culture – some resented the expectation that they give their knowledge away, while others spoke of bandwagon effects, where misguided practices spread as quickly as well-informed practices. Nonetheless, this expectation that new knowledge and skills should be shared did provide a platform for *in situ* learning from and with fellow practitioners.

In Punjab, by contrast, most trainees were reluctant to share skills and knowledge with other farmers in their community. It was far more common for farmers in Punjab to say that they would not share what they had learnt with others (without payment) and most did not believe that other experienced practitioners in their village (outside of their family and kin networks) could be consulted for advice: one could only get a general idea from conversations with such practitioners, but they would not teach others about their practice. Some also expressed a reluctance to approach others for assistance, which seemed to be a matter of pride. There are two aspects of social structure in rural Punjab that may explain this. The first is agrarian structure: Punjab has a long history of commercial agriculture, which was intensified by the Green Revolution of the 1960s and 1970s. As scholars have long noted, this commercialisation of agriculture has led to a breakdown of social solidarity within Punjabi villages, as farmers came to regard each other as competitors (Shiva, 1991). Further, the development of capitalist agriculture in Punjab means there is clearer class segmentation in Punjab than in Himachal (Byres, 1981). To work on the farm of another – even simply to gain practical knowledge and experience – would be associated with the agricultural labourer community (mostly Scheduled Caste) and a marker of low social status. Second, rural Punjab is highly patriarchal, exhibiting a kind of masculinist 'virtue ethics,' in which independence is valorised. For this reason, some trainees, particularly young men, seemed shamed by the prospect of approaching experienced practitioners for practical advice: the whole point of undertaking training was to gain the skills necessary that one could make it on their own. Those with large commercial ventures found the suggestion that they should ask anyone for help ridiculous – believing that no one else in their vicinity knew how to farm better than them.

These regional differences were reflected in attitudes towards the idea of work placements as a model for practical learning. In Himachal, trainees were largely (though not universally) enthusiastic about the idea. In Punjab, by contrast, numerous reservations were expressed. Some simply stated that because trainees 'had their own land' they would be uninterested in working on the farm of someone else – even a very large commercial venture. Others were perplexed about how such an arrangement would work, saying they would only consider it if they were paid to do it, that they did not believe that any agricultural venture would pay them an adequate wage. They also noted frequent mistreatment of farm workers. Reluctance was also expressed by

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

more established commercial farmers to the idea of hosting trainees for work placements, saying that it would be inconvenient to have people coming and going and they doubted that trainees would work hard.

A Promising Exception: Beekeepers' Community of Practice

Even in the highly competitive environment of Punjab, there were examples of more cooperative communities of practice that actively enhanced skills. This was most evident amongst those who undertook beekeeping training. Research conducted elsewhere in the world has documented the highly social character of learning amongst beekeepers (Adams, 2018). Punjab beekeepers, too, formed cooperative relations between themselves, which provided opportunities for participatory learning. There were numerous reasons for this, including the need for supervision in order to gain mastery of the technical and potentially dangerous tasks involved in handling bees and the benefits of pooling labour when undertaking tasks such as transporting hives and harvesting honey. Beekeepers also exhibited enthusiasm for beekeeping and the social aspect of the work – the bonds of friendship with fellow beekeepers was part of what made it enjoyable. A vignette is useful to illustrate the ways in which beekeepers learnt practically through participation in communities of practice.

Gurpreet, a farmer in his 40s with substantial landholdings, had taken an interest in beekeeping as early as 2014. He had heard that a distant kin member in a neighbouring village, Karanpal, had been doing commercial beekeeping for many years and approached him for advice. He purchased five beehives and kept them together with Karanpal's hives. The two men would work together when moving hives, caring for bees, and harvesting honey, and Karanpal took every opportunity to teach Gurpreet the basics of beekeeping. Unlike in other activities I observed, such as dairy, Karanpal had no hesitation in sharing his knowledge and taking out the time to instruct Gurpreet, as the work was mutually beneficial. Karanpal explained:

Why would I hesitate? I get the benefit; I make money from it. If there are more people [like Gurpreet], then I have to hire less labour. And for my labourers, I also have to give them food!

The two regarded the arrangement as mutually beneficial, with Karanpal gaining free labour from Gurpreet in managing his hives, while Gurpreet gained the benefit of working with and receiving instruction from an experienced practitioner. Although Gurpreet was undertaking formal training at the KVK at the same time as working with Karanpal, he said in beekeeping it is absolutely necessary to work alongside an experienced practitioner to consolidate skills:

If you get the hives without knowledge, that will not work. And training is [only] for one week, which is not adequate.³ You have to work with someone.

It was apparent that for Gurpreet the largely theoretical knowledge imparted through training was necessary, but not sufficient. The observational learning, joint problem solving, and direct

³ The ASCI training is for one month – Gurpreet is here referring to an early training he had undertaken. ASCI's trainings were of unusually long duration; most trainings offered by agricultural extension agencies are for one week or less.

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

feedback he received by working under Karanpal's supervision was how he gained confidence as a beekeeper. In time, the two started to collaborate more. They would take it in turns moving hives from one location to another, allowing them to increase the geographical spread of their operations and increase their surveillance to guard against theft or to negotiate disputes with farmers or authorities. Gurpreet was graduating to fuller participation in the community of practice and acquiring the skills necessary to manage all aspects of a beekeeping business.

Gurpreet was aware that these forms of cooperation and shared learning were unique to beekeeping. In other 'side businesses', such as dairy, cooperative relations form primarily within families. Yet, amongst beekeepers, there are advantages to working with others at all stages of the production cycle: from maintaining the health of hives, to transporting them, to harvesting honey. Cooperation necessarily extended beyond the immediate family partly because of the need for cooperation between working age men. In the Punjab setting, women often face restricted mobility, and Gurpreet and others noted their wives could only be peripherally involved in beekeeping as they had domestic tasks to attend.

In time, Gurpreet had established more than 100 hives and began taking on informal apprentices of his own. He encouraged his childhood friend Sukhdeep, who had been struggling to make ends meet with his marginal landholdings, to try beekeeping as a side-business. Sukhdeep acquired a small number of hives, enrolled in training, and started working alongside Gurpreet. While Gurpreet still cooperated with Karanpal on activities such as migrating hives and marketing, more of his everyday work was now occurring with the newcomer, Sukhdeep. Although Sukhdeep had gained theoretical knowledge from attending training, he says that all of his practical knowledge of how to handle bees, manage his hives, and harvest his honey came from working alongside his more experienced friend. His participation was still peripheral – and he remained very dependent on Gurpreet for advice and decision-making – yet was graduating to more complete participation with time. At the time of our followup interview, he was only keeping some five hives, and was gradually purchasing more as his bee populations naturally increased. This small number of hives was not providing a huge source of income – barely enough to assist in covering the costs of inputs for his wheat and cotton crops – but he persisted because he found it an enjoyable hobby to pursue with his friend. He was also able to observe how his friend's endeavour had become more profitable with time, which motivated him to persist.

There was also a sense in which the social bonds of friendship that were both strengthened by and served as the basis for this community of practice were intrinsically motivating. Previous research has documented how friendship in rural settings in the global South is often a productive social relation, often inseparable from daily farm work (Dyson, 2010). Gurpreet insisted that choosing to work with Sukhdeep was based not on his relative skill or resources, but exclusively on the strong personal bond between them which came 'from the heart [*dil se*].' Moreover, his choice of Karanpal as mentor, he insisted, was based less on his material capabilities and more on his moral character: that he was a 'good person' and 'honest.' His community of practice was thus not only forged on the basis of mutual benefit, but also on trust and personal connection – through kin networks (Karanpal) and friendship circles (Sukhdeep).

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

These bonds helped make their collective labour enjoyable – and it was often accompanied by much socialising, drinking, and laughter. This gave newcomers the motivation to persist in starting their beekeeping businesses despite only marginal returns – part of why they did it was the enjoyment of being part of a community.

The bonds of friendship and solidarity that brought these learners together was also valuable in overcoming social barriers to success. Beekeeping was a somewhat transgressive venture within Sukhdeep and Gurpreet's village. They, like many others whom we interviewed in Punjab, noted that anyone within a village society who starts a new venture tends to be the victim of gossip and ridicule, particularly by village elders, who spend much of the day sitting around in public areas discussing other people's business. In the case of beekeeping, this was compounded by a (somewhat misguided) perception that beekeeping was an irresponsible venture, putting others in the village at risk of bee stings. In this slightly hostile social milieu, having a community of friends committed to doing things differently was paramount to retaining resolve. Sukhdeep, Gurpreet, and others who were attempting new ventures found ways to separate their group spatially to distance themselves from the prying eyes of village elders. They built a small shed with a kitchen in Gurpreet's fields, discretely sheltered with a hedgerow, where they would sit in the afternoons drinking homemade liquor and discussing – amongst other things – different agricultural projects they were working on. This 'safe space' and the community of practice it ensconced made it possible to strengthen their resolve to persist with their ventures despite community opposition. Here, village gossip could be laughed away. As Dyson (2010) observed elsewhere, friendship groups can provide a basis for both learning and motivation: one is motivated to emulate more skilled peers (who become role models), while affective bonds between friends motivate those with experience to share their knowledge. Members of Sukhdeep and Gurpreet's friendship group were made aware of profitable avenues for side businesses and motivated to take up promising leads. They also forged identities through this informal but somewhat exclusive club, not just as beekeepers, but as rural innovators.

The existence of meaningful communities of practice meant that Sukhdeep, Gurpreet, and other beekeepers I interviewed had a different relationship to training and the KVK than those enrolled in other kinds of training programs. Although they valued the scientific knowledge which the experts at the KVK were able to provide, participation in didactic learning was not their only – or even primary – motivation for attending. Tellingly, several highly experienced beekeepers continued to attend training programs – including the long-duration ASCI program – whenever they had time, despite already having advanced knowledge. Gurpreet estimated he had attended some 6-7 beekeeping trainings, which might seem redundant in terms of attaining technical knowledge. What they valued in training was meeting other beekeepers, discussing opportunities to work (and thereby learn) together, sharing advice on good locations to keep their hives, and planning how to address structural issues, such as the dominance of honey traders. The fact that beekeepers were capable of functioning as a community of practice transformed training to a more dynamic and productive site, where informal networking structured opportunities for practical learning and economic cooperation.

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

There were, however, limits to the way this community of practice functioned as a basis for situated learning. The implicit trade involved when beekeepers take on newcomers as informal apprentices – i.e., pooling labour in exchange for learning – began to make less sense when either the novice or experienced beekeeper exceeded a certain scale. Gurpreet indicated that he would only take on newcomers who had less than ten beehives as an informal apprentice. Beyond that, the benefits of pooling labour would begin to tip in the newcomer's favour. He also indicated that he might see someone with a large number of hives as a potential competitor and not someone he should assist with learning. Moreover, Gurpreet and Sukhdeep indicated that more commercially successful beekeepers were unwilling to share knowledge or pool labour. This may be because they have become too busy, or they have their own experienced labourers working under them and enlisting aspiring beekeepers as informal apprentices creates inefficiencies not offset by the benefits of pooling labour. The beekeeping community of practice thus tended to function in the manner described by Lave and Wenger (1991) mostly in relations between medium-sized producers and newcomers, with large commercial beekeepers being relatively inaccessible.

There was also evidence that the beekeeping community of practice could be socially exclusionary. As this community of practice formed along lines of community and friendship, it also, almost by default, occurred along lines of caste. Members of castes with no prior involvement in beekeeping found it more challenging to find an entry point into such communities. One beekeeping trainee from a Scheduled Caste background, Manjit, did not have the positive, socially validating experience with his foray into beekeeping as any of the others we interviewed. He had enrolled to learn beekeeping as an out from his current lowly paid job as a petrol pump operator. Despite attending training diligently for a month, he did not gain access to a community of more advanced practitioners: no one had offered him opportunities to work together. He thus started a small beekeeping venture with an even less experienced friend – and their lack of prior experience led their bee colonies to collapse within a few months. He felt the lack of support from an experienced beekeeper had undermined his venture and he ultimately gave up on it, despite desperately wishing for an alternative source of livelihood.

Conclusion

For any training system to offer meaningful opportunities for practical learning, a host of factors must converge that operate on at least four scales: the pedagogical, the administrative, the socio-economic, and the politico-economic. For many of those enrolled in the agricultural training programs studied here, it was evident that aspects of all four of these scales conspired to undermine their opportunities for practical training. Pedagogical constraints were evident in some trainers' devaluation of practical classes and lack of knowledge on effective vocational pedagogies. Administrative constraints applied, as training institutions lacked the time, resources, and facilities to provide work-based training and were in some cases bound by regulations. Politico-economic constraints could be discerned in the sense that the Indian agricultural sector lacks large firms that might be able to spare the expense and shoulder the risk involved in taking on trainees. Precisely because these constraints were in effect at other levels,

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

for the Indian agricultural sector, the most meaningful scale of analysis for understanding who could and could not gain meaningful practical learning opportunities was the socio-economic: regional social and economic conditions that structured communities of agricultural practice within villages.

Local agrarian structure profoundly shaped the nature of communities of practice. This was reflected in strong regional variations in dispositions towards social learning, sharing knowledge and skills, and working together. In the more competitive, commercial agrarian economy of Punjab, there was less village-level cooperation than in Himachal, where there are longer histories of cooperative communal labour. This meant that in Himachal, people were more likely to share experiences and form collectives in which new agricultural skills could be consolidated than was the case in Punjab. Such barriers to informal practical learning have flow-on effects for the formal training system. They make it more challenging to create opportunities for apprenticeships and job placements, or to facilitate the formation of 'skill ecosystems' that encourage ongoing skill development. Given the regional variations in informal practical learning identified here, this suggests that developing pedagogical strategies to enhance practical learning in skill development classes will need to be regionally specific. This suggests a strong role for geographers and allied social scientists in informing strategies to take skill development from a rarefied domain of national- and international-level policy-making, into the more tangible local realms where the benefits of training stand to be realised.

References

- Adams, E. C. (2018). How to become a beekeeper: learning and skill in managing honeybees. *Cultural Geographies*, 25(1), 31-47.
- Ajithkumar, M. U. (2016). Training of Teachers: Institutionalising Training and Development of Academic Faculty of TVET Institutions for Realising Excellence. In M. Pilz (Ed.), *India: Preparation for the World of Work*. Wiesbaden: Springer.
- Amegah, A. (2021). 'Business without social responsibility is business without morality': employer engagement in upper secondary technical and vocational education and training schools in Ghana. *Journal of Vocational Education and Training*. doi:10.1080/13636820.2021.1879904
- Aufseeser, D. (2014). Limiting Spaces of Informal Learning among Street Children in Perú. In S. Mills & P. Kraftl (Eds.), *Informal Education, Childhood and Youth* (pp. 112-123). London: Palgrave Macmillan.
- Avis, J. (2004). Work-based learning and social justice: 'learning to labour' and the new vocationalism in England. *Journal of Education and Work*, 17 (2), 197-216.
- Byres, T. J. (1981). The new technology, class formation and class action in the Indian countryside. *Journal of Peasant Studies*, 8(4), 405-454.

- DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.
- Carswell, G., & De Neve, G. (2018). Towards a Political Economy of Skill and Garment Work: The Case of the Tiruppur Industrial Cluster in South India. In C. Hann & J. Parry (Eds.), *Industrial Labor on the Margins of Capitalism: Precarity, Class, and the Neoliberal Subject* (pp. 309-335). Oxford: Berghahn Books.
- Chea, L., & Huijsmans, R. (2018). Rural youth and urban-based vocational training: gender, space and aspiring to 'become someone'. *Children's Geographies*, 16(1), 39-52.
- Dolinska, A., & d'Aquino, P. (2016). Farmers as agents in innovation systems. Empowering farmers for innovation through communities of practice. *Agricultural Systems*, 142, 122-130.
- Dyson, J. (2010). Friendship in practice: girls' work in the Indian Himalayas. *American Ethnologist*, 37(3), 482-498.
- Farrington, J. (1995). The changing public role in agricultural extension. *Food Policy*, 20(6), 537-544.
- Fischer, H. (2017). Harnessing the State: Social Transformation, Infrastructural Development, and the Changing Governance of Water Systems in the Kangra District of the Indian Himalayas. *Annals of the Association of American Geographers*, 107(2), 480-489.
- Ghosh, J. (2019). The Uses and Abuses of Inequality. *Journal of Human Development and Capabilities*, 20(2), 181-196.
- Gough, K. V., Langevang, T., Yankson, P. W. K., & Owusu, G. (2019). Shaping Geographies of Informal Education: A Global South Perspective. *Annals of the American Association of Geographers*, 109(6), 1885-1902.
- Gowlland, G. (2012). Learning Craft Skills in China: Apprenticeship and Social Capital in an Artisan Community of Practice. *Anthropology and Education Quarterly*, 43(4), 358-371.
- Gowlland, G. (2019). The sociality of enskilment. *Ethnos*, 84(3), 508-524.
- King, K. (2012). The geopolitics and meanings of India's massive skills development ambitions. *International Journal of Educational Development*, 32(5), 665-673.
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Lucas, B. (2016). What if the further education and skills sector realised the full potential of vocational pedagogy? In *Possibility Thinking: Re-imagining the Future of Further Education and Skills* (pp. 15-19). London: Royal Society of Arts.
- Lucas, B., Spencer, E., & Claxton, G. (2012). *How to Teach Vocational Education: A Theory of Vocational Pedagogy*. London: City and Guilds Centre for Skill Development.
- Marchand, T. H. J. (2008). Muscles, morals and mind: craft apprenticeship and the formation of person. *British Journal of Educational Studies*, 56(3), 245-271.

DRAFT paper presented at the 'Social Life of Skills Online Workshop' hosted by the University of Melbourne, 5th-7th July 2017. A revised version of this paper was later published with *Third World Quarterly*. Not to be cited without permission of the author.

Mills, S., & Kraftl, P. (2014). Introduction: Geographies, Histories and Practices of Informal Education. In S. Mills & P. Kraftl (Eds.), *Informal Education, Childhood and Youth: Geographies, Histories, Practices* (pp. 1-18). London: Palgrave Macmillan.

Morgan, S. L. (2011). Social Learning among Organic Farmers and the Application of the Communities of Practice Framework. *Journal of Agricultural Education and Extension*, 17(1), 99-112.

Patchett, M. (2017). Historical geographies of apprenticeship: rethinking and retracing craft conveyance over time and place. *Journal of Historical Geography*, 55, 30-43.

Pilz, M. (2018). Opportunities and obstacles: India's school to work transition. *RDWU Journal of Social Sciences and Humanities*, 3, 83-97.

Pilz, M., & Wilmshöfer, S. (2015). Formal, nonformal, and informal training in rural India: the case of fishing families in the Chilika Lagoon. *Prospects*, 45(2), 231-243.

Ruthven, O. (2018). Getting Dividend from Demography: Skills Policy and Labour Management in Contemporary Indian Industry. *Journal of South Asian Development*, 13(3), 315-336.

Shiva, V. (1991). *The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics*. London: Zed Books.

Simpson, E. (2006). Apprenticeship in western India. *Journal of the Royal Anthropological Institute*, 12(1), 151-171.

Singh, M. (2001). Reflections on colonial legacy and dependency in Indian Vocational Education and Training (VET): a societal and cultural perspective. *Journal of Education and Work*, 14(2), 209-225.

Streeck, W. (1989). Skills and the limits of neo-liberalism: the enterprise of the future as a place of learning. *Work, Employment and Society*, 3(1), 89-104.

Streeck, W. (2011). Skills and Politics: General and Specific. In M. R. Bussemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 317-352). Oxford: Oxford University Press.

Tran, T. A., James, H., & Pittock, J. (2018). Social learning through rural communities of practice: Empirical evidence from farming households in the Vietnamese Mekong Delta. *Learning, Culture, and Social Interaction*, 16, 31-44.