The happy families of social learning – mapping the complex domains of learning and social change

Key messages

- Social learning is a complex field of study and practice that has many natural relations with other ‘domains’ related to e.g. complexity and systems thinking, learning and knowledge, online social interactions.
- Not each of these domains is well mapped and understood, and their remit expands, or at least changes over time, making the differences sometimes increasingly thinner.
- Most of these related domains however do not combine the full set of social learning characteristics i.e. its transformative nature, the iterative and looped learning approach, the attention to social differentiation and power play, the importance of facilitating social learning processes and of paying attention to capacity development, the intent of considering the whole picture and of co-creating solutions.
- There is no hierarchy among these domains. This brief only recognizes that there are strong similarities but also some key differences. Each of these domains bears its own limitations and a given domain or approach may be more appropriate for a specific context than social learning. In many ways, social learning and related ‘families’ borrow the same approaches, tools and methods at different times in their very own process, or even use each other.

CCAFS and other programs in research for development have been mandated with tackling wicked problems such as poverty, rural development, climate change and food insecurity. Wicked problems are difficult to solve because their requirements are contradictory, changing, hard to reconcile and often not well understood. Solutions typically require many people to change mind-sets and behaviour (Rittel and Webber, 1973). Wicked problems call for an integrated approach to negotiate common understanding as a problem unfolds so that responses are acceptable to different social groups whose interests might conflict (Carlile et al, 2013). Wicked problems are not amenable to traditional linear approaches where innovations are primarily technical (Water Scarcity Livelihoods and Food Security, 2014).
Given the complexity of this agenda, social learning (SL) – and its focus on getting diverse stakeholders to embark on collective reflection and action – seems a very promising option. The idea behind using SL in this context is to examine and potentially change ideas, discourses, practices that are supposed to help tackle these wicked problems. However, ‘Social Learning’ might seem a muddled-up concept. It is not straightforward. It is not easy to understand because it does not stem from one perspective only. It can be approached from various lenses and as a result lots of people are struggling to understand what it exactly means. As Rodela (2012) puts it “[i]nterdisciplinary engagement, as well as choices in terms of what has been borrowed and how the borrowed concepts have been used, help to explain the heterogeneity of frameworks and definitions in the social learning literature.” This brief aims to clarify SL ‘in relation’ to other approaches and concepts describing the overlaps and existing blurred boundaries.

**Working Definition for the Climate Change and Social Learning (CCSL) Initiative**

Within the Climate Change and Social Learning (CCSL) Initiative developed by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and partners, we have adopted the following working definition of social learning (SL):

*Social learning approaches help facilitate knowledge sharing, joint learning and co-creation experiences between particular stakeholders around a shared purpose taking learning and behaviour change beyond the individual to networks and systems. Through a facilitated iterative process of working together - in interactive dialogue, exchange, learning, action and reflection and on-going partnership - new shared ways of knowing emerge that lead to changes in practice.*

**Characteristics of social learning**

As mentioned above, there are some characteristics of SL that we found instrumental in making SL a useful vehicle to tackle wicked problems and working in complex systems:

- **Goes beyond mere ‘learning’ because of the scale it is concerned with; it goes “beyond the individual to networks and systems”**. It is **transformative**, in the sense that it changes the level-playing field, beyond the sum of changes that affect each actor involved. “SL is thus an emergent property of the process to transform the situation.” (SLIM’);
- **SL is deep, it entails looped learning**: it goes beyond searching for more efficient solutions to a problem (single loop learning), to considering the theory and assumptions guiding those solutions and looking for new types of solutions (double loop learning), and ideally on to considering how we learn to learn and find more effective ways of coming up with dynamic, context-based, ever adaptive and proactive solutions to the endless series of new complex problems that arise (triple loop learning).
- **SL is iterative**: it is not a one-off operation, even if it is applied in modest ways, to small groups of people; it always concerns changes that affect entire groups of people in the medium and longer term, through events and joint activities, with regular feedback loops on those ‘happenings’, which progressively pave the way for transformation;
- **SL is often facilitated**: it is not always about learning that would happen ‘anyway’, in some cases SL happens without facilitation (e.g. in the context of a disaster that strikes a community and brings together new solutions to the fore). However, given the complexity and sensitivity of relations involved in its processes, SL often relies on carefully supported learning processes where issues of power and social differentiation are addressed to ensure proper representation from various groups, and mitigating power play from certain actors. In that context, facilitation often plays a role in creating good conditions to affect the transformative power of SL. That does not mean to say that facilitation is a linear process in itself. On the contrary, it is often as emergent as the SL process is and may take different shapes and levels of intensity at different times.
- **One of the main reasons why facilitation plays a key role in SL is to guarantee that social differentiation is addressed, that various perspectives come into play, that power play is countered. Without diverse perspectives, multiple “knowledges”, there is no SL.**
- **SL processes should try and make the most of everyone’s presence, thus they have to pay attention to the capacities required for SL to unfold in the best possible ways. From interpersonal communication skills (listening, empathy, developing trust, etc.) to documentation, leadership - see the ‘profile of a social learning hero’ for more about this.**
- **SL centrally entails ‘co-creation’ of solutions. “SL seen as a process of co-creation of knowledge, which provides insight into the causes of, and the means required to, transform the situation. SL is thus an integral part of or constitutive of concerted action” (SLIM).**
- **Finally, and perhaps most importantly, SL distinguishes itself from other approaches to enquiry in as far as it is the result of genuine intent to question and challenge the status quo and to consider if change is necessary and, if so, how it may happen. In many cases, that intent is not entirely there from the start or consistently present among all actors involved, but it is essential that it becomes a shared purpose for all actors involved. True SL will not happen if the intent of challenging and changing the present situation in only heralded by one or only a few actors. The intent on possible transformation has to be collective.**

Now that we have laid some foundations for what we believe social learning is, we can examine the difference

---

What broad fields (families) are related to social learning?

Various broad fields are connected with SL, effectively playing as related families, each of which will be further elaborated below:

- The complex systems field – the most prominent field given the emphasis on complexity and wicked problems;
- The research field – since the work in CCSL is very strongly embedded in development research;
- The (online) ‘social’ field, which is fast gaining traction these days;
- The ‘learning’ field and all its applications;
- And finally, there are other approaches that do not belong to specific ‘fields’ or families and could be considered cross-cutting in social learning. Chief among them is gender and equity as explained in figure 1.

a) Social learning and the ‘complexity/wicked problems/systems field’

The first major family that relates to SL is that of complexity and systems thinking. Complexity thinking is hailed, in the development and corporate worlds, as the new paradigm in which we operate. With quite some ground. We do operate in a complex, highly interconnected world, and recent communication channels and social networks have both multiplied the connections between nodes and sharpened our awareness of that connectivity and complexity. As we realise the potential of ‘complex adaptive systems’, which human groupings almost always are, we realise that complexity thinking is an important tool in our attempts at analysing our environment. Against this background, SL is simply a more adapted approach at dealing with that complexity because it relies on more eyeballs, arms, legs, brains and hearts to have any grasp on that big picture. Complexity thinking is not so much a relative of SL as the valley in which SL operates - and it is also the canal through which SL happens - the unpredictable flow that leads to an unknowable destination, despite conscious steps taken, one at a time, in
a given direction). See below for more specific applications of complexity in the development (research) realm.

**Thinking about wicked problems and resilience**

Very much in line with complexity thinking, in the field of development (research) and particularly in natural resource management and climate change, we are focusing on ‘wicked problems’ that are particular instances of the intractable, ultra-integrated, ultra-complex nature of development. Climate change, chronic poverty, food insecurity are not problems that can be dealt with by one-size-fits-all, blueprint or off-the-shelf solutions seen as ‘silver bullets’. They are problems, or more largely issues whose beginnings and root causes are difficult to discern and whose ends are impossible to predict. Arguably even solutions to these wicked problems do not exist. Facing these problems we simply must act and reflect about how we act. The more people are embarked on that process of action learning, the more likely we are to understand the ins and outs of these wicked problems and develop capacities to deal with and proactively anticipate some of their likely consequences.

Resilience thinking relates to wicked problems in the context of fast changing environments, and particularly in the domain of climate change. Resilience “is the capacity of a system to absorb disturbance and still retain its basic function and structure” (Walker et al., p. xii). Resilience as a capacity that is held by individuals and groups relates to the ability to deal with existing problems and upcoming challenges time and time again.

Where does SL fit in all of this? It is perhaps simply the most relevant type of approach to deal with such wicked problems, and perhaps to build resilience/capacity to deal with yet unknown problems. The connection here is not really a family tie, rather a space in which SL seems to thrive or find its most complete application. As for resilience thinking, SL, by its dynamics of capacity development (meaning co-creation) encourages resilience, perhaps even unconsciously. In turn, resilience thinking offers new avenues for SL to be tried out. Resilience thinking is thus not a relative of SL as much as a ‘neighbourhood kid’, and the games between the two benefit each other.

**Structured systems thinking**

While structured systems can be managed, complexity (and complex adaptive systems) can’t. Although many people mistake them for one and the same, systems thinking is different to complexity.

“Systems thinking has been applied to problem solving, by viewing “problems” as parts of an overall system, rather than reacting to specific parts, outcomes or events and potentially contributing to further development of unintended consequences. Systems thinking is not one thing but a set of habits or practices [2] within a framework that is based on the belief that the component parts of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation. Systems thinking focuses on cyclical rather than linear cause and effect.”

Where structured systems thinking does relate to SL is that bringing together diverse actors around an agenda that is not entirely known from the onset progressively reveals that system of which all actors are part. SL certainly tries to know and affect the entire system (i.e. systemic transformation).

In sum, SL borrows very much from complexity and systems thinking arenas, as the playing field in which it happens. It is connected to resilience in the ability to develop capacities to ‘deal with the complexity of the system’ and like systems thinking, SL unravels the system itself by bringing all actors together.

**b) Social learning and the ‘research field’**

SL has very close relatives in the field of research.

**Participatory research**

Perhaps one of the closest relatives, participatory research (and participatory approaches generally) shares the following elements from SL: the importance of social differentiation (involving other groups than e.g. just researchers), the (relative) facilitation involved in training and guiding non-academic researchers in the process of research and thus the consideration for the capacities of the actors involved.

That said, “participatory approaches could actually just involve specific groups for specific activities but not really keep these groups front and centre, involved from the get-go and throughout the initiative”. Indeed, participation can be conjured up for very specific parts of a project, but may not mean that consciously selected diverse actors are taking part in every activity and decision and are co-creating meaning. The main objective of participatory research is not to transform a system but to ensure the uptake of research is more effective, and sometimes that capacities of non-formal researchers are developed in the process.

Equally, there is no objective of ‘transformation at scale’ in participatory research, and there is not always much thought going into the possible power dynamics and participation biases in such activities. Subsequently, participatory research could be considered a cousin of SL, or one of the methods that could be used in a wider SL approach, but no more than that ...

**Action research**

Narrowly linked to participatory research, action research (AR) shares with SL the concern for iteration, for learning - including looped learning - and for the intent of finding solutions. The main distinction with SL lies in the fact that AR could be carried out as an individual initiative, it does not require perseverance or the presence of diverse, complementary and representative actors. Social differentiation and power are therefore largely absent from the discourse around AR - and there is usually very little need for facilitation in AR initiatives. Finally, the scale of AR does not reveal an ambition to achieve transformation at a large scale... For all these reasons, AR and SL are related but not the same, and once

---

3 This blog post is but one of the sources to unravel the differences: http://sonjablignaut.wordpress.com/2013/10/28/5-differences-between-complexity-systems-thinking/


again, we are in presence here of one of the possible approaches used as part of a wider SL initiative, if AR pays attention to all the trademark characteristics of SL. Sometimes, AR is also associated to ‘action learning’.

**Participatory action research**

Participatory research (PAR) and action research overlap in as far as their ‘common aim [...] is to change social reality on the basis of insights into everyday practices that are obtained by means of participatory research—that is, collaborative research on the part of scientists, practitioners, service users, etc.’ (Ber-gold et al., 2012)

PAR combines the two above-mentioned approaches as it “is an approach to research in communities that emphasizes participation and action. It seeks to understand the world by trying to change it, collaboratively and following reflection. PAR emphasizes collective inquiry and experimentation grounded in experience and social history. Within a PAR process, “communities of inquiry and action evolve and address questions and issues that are significant for those who participate as co-researchers” (Reason and Bradbury, 2008, p. 1)6

Participatory rural appraisal (PRA) and participatory learning and action (PLA) are also associated with this strand of research. PAR, PRA, PLA are brothers of SL. They are very similar to it and borrow similar approaches and tools. The main distinction perhaps is the scale of PAR that may not be system-wide. Accordingly, actors involved in PAR may be more limited than in SL. In some cases processes may be one and the same, however.

c) Social learning and the ‘online social learning’ field

In the online social field, at least three different family branches are related to SL:

**Social media networks**

Social media networks (e.g. Facebook, Twitter, Weibo, Instagram etc.) offer historically unparalleled ways to connect and engage with each other simultaneously at scale. They present a revolution in the way people interact and learn together. So much so that the term ‘social learning’ is actually applied a lot to describe the learning that happens in the workplace among individuals connected through social media (see ‘enterprise 2.0 below). However, in social media networks, there is not necessarily intent to adopt a looped learning approach, to understand and/or transform a complex system, and the learning that happens is more often than not un-facilitated. Similarly, the capacities of the different actors involved in social media network interactions are not explicitly considered and worked upon.

However, social change movements that took place in recent times (e.g. the Arab Spring in 2011) combined various features of SL. Social media networks may be mobilized in SL approaches, but usually they do not, in and of themselves, constitute SL approaches. On the other hand, SL approaches may make use of social media networks to further expand and deepen connections between the actors involved – and occasionally to learn together too.

**Enterprise 2.0 (‘E2.0’)**

Related to social media networks, E2.0 looks specifically at how companies are embracing social media to change the way business is done internally (among staff) and with external partners, clients or consumers. E2.0 is “the use of emergent social software platforms within companies, or between companies and their partners or customers”. It aims to help employees, customers and suppliers collaborate, share, and organize information via Web 2.0 technologies. 9

A small group of prolific bloggers and social media engagement thinkers called the Time Alliance (and particularly Jane Hart among them) are regularly referring to ‘SL’ but are mentioning that it relates to “building communities and networks”. Jane Hart elaborates: “though social learning is something that we have always done, it has often been ignored or misunderstood by the training industry. Now, however, the proliferation of social tools makes this a powerful way to improve workplace performance. When we consider what social learning means inside an organization, it’s not just adding social media to instructional programmes or letting people interact with one another. It’s more about helping people learn from one another as they work together – enhanced by collaborative enterprise social tools. Learning in today’s networked workplace is not just being trained to do a task, but about learning with and from one another as we face new challenges. In the connected enterprise there is a new role for HR, OD, and L&D departments.”

In this sense, what we understand by SL here is very different and, although it also relates to the use of social tools online, looks at transformative social change processes beyond the realm of The Organisation.

**Crowdsourcing**

Crowdsourcing refers to “the practice of obtaining needed services, ideas, or content by soliciting contributions from a large group of people, and especially from an online community, rather than from traditional employees or suppliers 10). In this sense, it shares features of SL as it brings together various actors. In fact, crowdsourcing can be a ‘modus operandi’ for certain activities undertaken in a SL approach (e.g. as has been the case several times in the CCSL sandbox), but it is not SL by itself since it does not focus on learning, is not facilitated but usually following the freeform and voluntary approach of the Open Source movement11. The ways crowd sourced efforts deal with power and social differentiation are also not very clear.

In summary, SL borrows some of the techniques, tools and approaches from the online ‘SL’ realm, but they relate mostly on that ‘modus operandi’ level only, not so much on the wider social implications.

d) Social learning and the ‘learning & knowledge field’

In the learning and knowledge field, various families are related to SL. Deeper down, these families also connect with (less famous) theories such as Mezirow’s ‘transformational learning’

---

(“An important part of transformative learning is for individuals to change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans that bring about new ways of defining their worlds. This process is fundamentally rational and analytical (Mezirow, 1997).

**Adult learning**

Adult learning - or andragogy - “is a theory that holds a set of assumptions about how adults learn. Andragogy emphasizes the value of the process of learning. It uses approaches to learning that are problem-based and collaborative rather than didactic, and also emphasizes the process of learning as feedback into the planning and power relations. However, adult learning is usually invoked in SL, since most SL initiatives relate to processes involving adults, particularly around aspects of facilitation, but also - though to a lesser extent – of social differentiation and power relations. However, adult learning is only a part of SL and it is not concerned with transformation, looped learning, the scale of SL etc. However some techniques that are used to stimulate adult learning, such as Open Space Technology and the attention to critical listening, are deeply transformative and may overlap very much with SL, with perhaps less emphasis on social differentiation and the collective scale (i.e. an Open Space could be used to generate individual solutions). At any rate SL and adult learning both put due emphasis on facilitation, if only to ‘hold the space’.

**Communities of practice**

A Community of Practice (CoP) is, according to cognitive anthropologists Jean Lave and Etienne Wenger, a group of people who share a craft and/or a profession. The group can evolve naturally because of the members’ common interest in a particular domain or area, or it can be created specifically with the goal of gaining knowledge related to their field. It is through the process of sharing information and experiences with the group that the members learn from each other, and have an opportunity to develop themselves personally and professionally (Lave & Wenger 1991). There is much learning going on in a CoP and that learning can be purposeful, facilitated and happening at scale. However one key difference with SL is that the social differentiation is somewhat more limited in as far as the profession or practice domain that brings members together is relatively homogeneous in a CoP. Still, the conversation and reflection processes taking place in a CoP may resemble what SL would look like if it focused on a very specific technical issue or problem rather than a complex societal problem.

**Organisational learning/development**

Organizational learning (OL) “is an area of knowledge within organizational theory that studies models and theories about the way an organization learns and adapts (Vasenksa, 2013:615). In organisational development (OD), learning is a characteristic of an adaptive organisation, i.e., an organisation that is able to sense changes in signals from its environment (both internal and external) and adapt accordingly. OD specialists endeavour to assist their clients to learn from experience and incorporate the learning as feedback into the planning process”.

SL may be applied to an organisation and therefore almost equate to organisational learning, but it differs fundamentally in the sense that an organisation has a mandate (thus a clear goal in mind), has a formal structure and hierarchy (thus an established power structure that is enforced) and OL may also not be preoccupied with social differentiation. Looped learning is not always an explicit objective of OL. Not all OL activities are facilitated, although they are usually driven and ‘managed’ (facilitating and managing processes are two very different things). In some cases, OL can result in profoundly transformative processes and results, but the starting premise of OL in formal boundaries makes it a distant cousin of SL.

**Knowledge management**

Knowledge management (KM) is an equally diffuse field as SL, in that most actors involved also do not always agree on the very definition of that field and its terminology. KM is broadly concerned with the use of information (explicit, codified, tangible, structured) and knowledge (tacit, intangible) assets and related processes (needs identification, creation, sharing, application, evaluation). KM usually combines information management, knowledge sharing and increasingly learning to identify ways to use those assets to achieve one’s (whether an individual, team, organisation or even society) goals more effectively and more proactively.

The connection with SL is the fact that KM conjures up knowledge sharing, facilitation, learning and some tools that are typically used in SL initiatives. However, it fails to consistently address social differentiation and power issues, it is not necessarily applied at a large scale, and doesn’t inherently seek change and transformation. In this respect, KM is a close cousin to SL, it is also part of SL, but they are two families that share members only to a certain extent...

Variations of multi-stakeholder platforms and relations to innovation systems

Perhaps the confusion in the relation between SL and innovation comes from the particular ‘innovation platform’ approach, which usually entails SL. Innovation platforms - and ‘learning alliances, research for development (R4D) platforms, etc.’ - are multi-stakeholder platforms (MSPs), usually connected to one another across geographic areas and scales (from grassroots level up to national or even international level) in order to crack complex problems or deal with complex agendas. In this sense, the activities of such platforms, over time, align very closely with SL. In a way, MSPs are perhaps the most complete ‘form’ of a SL approach, in the sense that they bring together diverse participants, are usually facilitated, keep a keen eye on power issues, and pay attention to the capacities of the actors involved. However, one cannot say that MSPs ‘are’ SL, because they may not work iteratively and may not focus explicitly on learning, let alone looped learning. Sometimes MSPs are run simply to bring everyone together to discuss a given issue for a short period of time, or even just to inform various groups of people.

---

MSPs and particularly innovation platforms are thus often part of SL, but they are so only if they work iteratively and with deep learning in mind, and they are the most time-consuming and labour-intensive forms of a SL approach. They might be considered a little brother of SL. They relate to innovation systems very much, but the latter are not directly connected to SL on the other hand.

**Process/product innovation**

While the “national innovation system” was characterised by Lundvall (1985) as “the elements and relationships which interact in the production, diffusion and use of new, and economically useful, knowledge ... and are either located within or rooted inside the borders of a nation state.” There is no consensus on the exact definition of an innovation system. Yet a number of development authors, particularly in the field of agriculture, have been working around this notion as a way to consider how technological and/or social innovation emerges as a result of various actors interacting (Anandajayasekeram, P. (2011, pp.6-7).

The innovation systems field is quite different from SL, even though principles of innovation overlap a bit with SL: iteration is essential (short feedback loops and failing fast to reveal the strongest parts of innovation), diverse perspectives (since innovation is usually found at the edges), looped learning (double and triple loop learning are at the heart of innovation), and the aspiration to change and potential transformation. Particularly the field of ‘open innovation’ that utilises crowd sourcing is much more social by nature and shares many features from SL.

Where innovation differs from SL, nonetheless, is in the fact that the diverse views are used ‘instrumentally only’, not for the benefits of all actors involved but for the benefit of innovation itself. If innovation happens with fewer actors, there is no reason to broaden the scale. Except in some applications of open innovation (e.g. development of the Linux operating system), there is no specific ‘socially inclined’ dimension of innovation. Power is not often addressed in innovation efforts. Facilitation is not always present - which actually requires a lot of freedom and ‘blue sky thinking’, and the scale of innovation is large only if the innovation in mind has wide application, but that is not always the case.

Process/product innovation is thus not a close relative of SL: it shares some common features and aspirations – particularly in its open variation – but does not fulfill the same agenda and has a rather different focus to start with.

In sum: The learning field has some very close relations with SL, but equally also distances itself from it by its lesser focus on ‘social’ issues (differentiation, power) and on societal objectives.

**Conclusions**

This brief tries to look at a wide range of approaches or disciplines from a social learning (SL) lens, to better understand and appreciate their similarities and differences.

Figure 3 below introduces the degree of relatedness to social learning of these different fields, based on a subjective assessment of the features that they share with social learning.
Some general observations from the comparison in this brief are:

- The scale of these dimensions may change a lot and most of the domains related to SL do not have societal aspirations, they are related to a specific group of people (sometimes from a similar profile such as in CoPs) or to a specific time-scale;

- Learning is included in a great many domains, but options of scale, openness to learning and to one’s own shortcomings are not playing in favour of extensive learning initiatives;

- Most of the domains tackled do not put an explicit focus on facilitation, social differentiation and dealing with power issues. If learning is difficult, ensuring an equal opportunity to all perspectives seems the hardest condition to ensure;

- Yet a lot of these domains share similar tools and techniques, which are just applied for different purposes. This is encouraging for building linkages across these domains;

- Similarly, a lot of people involved in SL work are also involved in some or many of the domains considered here;

- Disciplines and schools of thought are dynamic and evolve. It is therefore likely that each of the fields mentioned has the tendency to expand and progressively embrace more of the characteristics of SL.

- Equally, each of these domains has some limitations and these should be recognised. SL may seem powerful but it comes at a very high transaction cost, it remains complex and terribly difficult to assess in a way that clearly demonstrates its benefits, and it bears the risk of never leading to genuine triple-loop learning (pending on proper attention to social differentiation, power issues, facilitation and capacities of the actors involved). This means that there is no hierarchy between the domains compared here. Some are just better indicated for certain junctions.

- In practice, at different times, SL may borrow from either of these domains for its own stake – and the alternative may be true (e.g. a participatory learning initiative may undertake SL approaches at certain moments, or an online learning movement may turn to have societal claims that resemble SL).

As mentioned in the introduction, this exercise is a rather basic and superficial exploration of these domains, to kick-start a conversation and where possible connect these domains. Since the claim of SL is to tackle complex problems, it is only natural it rallies energies and capacities wherever possible. We hope that in practice SL will make better use of all these domains if it helps its own objectives.

**KEY RESOURCES**

- Social Learning for integrated water managing (SLIM): https://sites.google.com/site/slimsociallearningforiwm/social-learning
- Reed et al. (2010) “What is Social Learning” academic paper by Reed et al. (2010) in Ecology and Society
- Wals, A. (2009) “The acoustics of social learning: designing learning processes that contribute to a more sustainable world” paper by Arjen Wals, Noor van der Hoeven and Harm Blanken, see page 11, “Key features of social learning”

**Acknowledgements**

We aim to practice what we preach. This briefing series is the product of an on-going social learning process — the Climate Change and Social Learning initiative (CCSL) — between the CCAFS team and its partners, in which knowledge has been co-constructed through many different channels, including workshops, the CCSL ‘sandbox’, and social media. Many thanks to everyone who has participated in this process so far and to those who continue to do so.