

COMMUNITY LEARNING FOR EMPOWERMENT

M. G. Jackson

Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan, Almora

The Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan (USNPSS) has been involved with village communities in the hill region of Uttarakhand in the area of education for about 25 years. If I am asked to characterise this work, I would say that in essence we are attempting to facilitate a process of community learning in these villages, and to consolidate and perpetuate the gains made by this process. By the term 'community learning' I refer to a process of whereby the people of a given community collectively and on their own initiative address a variety of problems that confront them. The class of problems I am referring to in particular are those which are widely recognised, such as the status of women within the community, the increasing scarcity of fuelwood, fodder and water, general economic distress and alcoholism. For all of these problems there are numerous government and aid-agency-sponsored programmes and projects. However, by and large these programmes and projects have failed to solve these problems, and some of them have even made the problems worse. The people of these communities have come to accept this fact, and conclude that they must find their own solutions. Equally important they have come to believe that they can find solutions, even if 'the establishment' cannot. And they have been remarkably successful in formulating solutions and putting them into practice (USNPSS Annual Reports; USNPSS 2005).

Contemplating the achievements of the people of these village communities we find that the solutions arrived embody entirely new ways of thinking about themselves and about their surroundings. As a result of this they define their problems in new ways. With alternative definitions new possibilities for solving them appear. And at the same time the realisation comes to them that they can pursue these possibilities through their own collective effort. Further, they see that not only can they solve their problems themselves, but that they must do so; they realise that they will receive no help. In short, they become empowered

Community learning is a creative activity; new concepts are created and innovative ways of giving them practical shape; and best of all, people recreate themselves as active agents shaping their own futures. Such creative learning is possible only in a community setting. In the process each individual participant learns new ways, and those ways represent a consensus of them all. Only then is effective community action to implement new solutions possible.

Community learning is a definite learning process, in that something new is learned. It differs from ordinary learning in that what is learned was unknown to anyone earlier. Ordinary learning such as is pursued in our formal educational institutions transfers known information to learners. At best it fosters 'problem solving' learning wherein learners use existing concepts and information to arrive at new knowledge. This latter is not really new knowledge since it was potentially knowable given the basic ways of thinking and doing of the society in which the learners live. In the process of community learning, the members of the community reject the existing ways of thinking and doing of their contemporary society and attempt through focused group dialogue to create new ways of learning and doing. This process is also termed 'transformative learning'. A fuller and more detailed account of this will be found in the book *Transformative Learning for a New Worldview: Learning to Think Differently* (Jackson, 2008).

Over the years we have also become aware that the problems faced by the village communities we work with are essentially those faced by numerous other communities throughout the world, and that the new ways of thinking that are emerging are also similar. In fact it is obvious that these new ways of thinking constitute an alternative worldview, radically different from the worldview of contemporary global culture. Such an alternative worldview is essential for the future of human survival and for the survival of the planet because the contemporary global cultural model is dysfunctional. It marginalises and exploits a majority of the world's people, causes the destruction of the environment and the disintegration of society. This alternative worldview may for convenience be termed the ecological worldview. The main features of this view are a localisation of political and economic activity, a focus on systems rather than individual things, community (re)building and gentle modes of human interaction with the environment.

Incidentally, in speaking about communities in other parts of the country/world we should note that communities in an urban setting are necessarily defined differently. Geography ceases to be an important definition here since the people living in proximity to each other in a given area do not derive their support from the land they inhabit. They also come from different cultural backgrounds. Urban communities are groups of individuals who come together for a common purpose, irrespective of the areas in which they reside. These communities exist for the portion of the participants lives which they spend together in pursuit of their common interest. The children and teacher in a school classroom are thus a community, as are the workers on a factory floor, the scientists attending a workshop, the members of a government department, a political party, an NGO, or a satsang group. For the time that they are together they share, more or less, a common interest and ways of thinking and doing in respect of their joint endeavour. In other words, they too, like their village counterparts, operate with a shared set of pre-existing concepts. One and the same person in an urban setting will typically belong to more than one community.

A closer look at the community learning process

We shall now look more closely at the community learning (CL) process as it is occurring in the hill villages of Uttarakhand. The lives of the people of these communities are incredibly complicated. They are buffeted by the mutually contradictory currents of three distinct worldviews. It is my hope that the conceptual framework of community learning can bring some order and clarity to what is happening. In the course of this review the features of the CL process will become clearer, as also the nature of the challenge of facilitating it.

The three worldviews that are interaction in these communities are: 1) the traditional worldview insofar as it legitimises the patriarchal structure of society; 2) the worldview of 'development' and globalisation; and 3) the newly emerging ecological worldview. Of these three, the first is the oldest, representing stability and continuity, emphasising family and community cohesiveness, but at the same time within itself deeply inequitable (patriarchal and caste-bound) and unable to respond adequately to the challenges of population growth, environmental degradation and poverty. The second worldview was that imposed by colonialism, and continues to be imposed by 'development' and globalisation. This view, though offering valuable correctives to the traditional worldview, is nevertheless, in its one-sidedness, causing social disintegration, further environmental destruction and the gross economic marginalisation and exploitation of these communities. Finally, the shortcomings and excesses of the first two worldviews are giving rise to the third worldview through CL exercises.

As I said a moment ago, numerous communities in diverse settings the world over are similarly contributing to the formation of the third worldview. It is crucial to the survival of human society and the earth ecosystem that these presently discontinuous communities increase in number and begin to coalesce. They will coalesce in terms of arriving at a broad consensus among themselves through mutual dialogue, or, in other words, by an extension of the CL process. Indeed, this is already happening in the form of broad-based protest movements of all kinds, the World Social Forum, and, closer to home, in the Uttarakhand Mahila Parishad (Uttarakhand Women's Federation).⁽¹⁾ If history is any guide, this third worldview will eventually become dominant, displacing the others and will bring about the transformation of contemporary global culture.

The worldview toward which the women's groups are moving is at the heart of the entire USNPSS educational programme. Our primary task is to attempt to understand and facilitate the CL process that is occurring in these groups. From our understanding of the alternative worldview and cultural model that is emerging from this process, our secondary task is to articulate these in terms of meaningful educational programmes for children and youth. This is a process of designing and testing formal learning exercises. In other words, our primary task is to facilitate the transformation of these communities and our secondary task is to consolidate, to perpetuate, the new ways of thinking and doing that constitute this transformation.

This simplifying and unifying organisational theme for our work has emerged gradually over the years. We did not have it in mind when we began. We simply attempted to respond to the situation as we perceived it in these villages, doing intuitively what seemed appropriate. We might now say that we chose to participate in the process of CL that was already underway, facilitating it where it seemed that it was needed. Our interventions have been tentative; we have made mistakes, but have tried to learn from them and move on. We have not attempted to impose anything of our own, but only to facilitate community dialogue and to clarify and systematise the alternative ways of thinking and doing that they are evolving. The latter have also been necessary in order to formulate our balwadi (pre-school centre) curriculum, our school course syllabus, and several new programmes that are contemplated.

Before considering the CL process as it is occurring in these villages in more concrete detail, it is necessary to note that at present the CL process is being pursued at present not by the village community as a whole, but largely only by one sub-community within it, the women of the village. It is so far only among them that we find an active CL process in progress. Other segments of the community, men and youth do not, by and large, participate nor do they have any real dialogue among themselves within their subgroups. It is clearly necessary for these other subgroups to initiate CL exercises of their own, and eventually for such separate dialogues to coalesce, or at least network, into a single village exercise. Our efforts are now beginning to turn to facilitating exercises with these subgroups.

Glimpses of the CL process

Our understanding of the CL process has taken shape gradually over the years as we worked with village communities. The first thing we learned was that what is happening in these communities can be seen as a definite process, one that can be described. Such description, of course, awaited the appearance of the entirely new concept of creative learning that was described a moment ago. What, in fact, has happened is that as a result of our participation with these communities we ourselves have undergone personal transformative learning experiences. Without such a transformation, it would have not been possible even to recognise this process. It then became possible to identify definite stages in the process and to study and reflect on them.

The specific communities from which our understanding has emerged are the village women's groups, school teachers participating in our teacher orientation workshops for our school course *Hamari Dhharti, Humara Jeevan (Our Land, Our Life)*, and a community of agricultural scientists in interaction with village communities. Numerous incidental interactions with people in all walks of life added to and extended our understanding of the CL process once the existence of a definite process had been recognised. With school teachers we have experimented with techniques of facilitating the process. Such experimentation needs to be undertaken with village women's groups as well. In the following paragraphs I will briefly describe some of these experiences.

The question of 'development'

Through sustained and reasonably focused dialogue among themselves, women in village communities are, in essence, critiquing the traditional social order in which women are denied active participation in determining and conducting community affairs. At the same time they are critiquing the modern concept of unbridled individualism. The alternative concept they are constructing recognises interconnections among individuals as participants in a larger social organism (community), interconnections which define limits. At the same time participation in such social organisms is conscious and voluntary. Whatever his or her specific role in the community every individual is equally responsible for ensuring the health of that community. This is a unique Indian contribution to the ecological worldview that is emerging worldwide; and it is women in the villages of Uttarakhand and elsewhere in the country that are the pioneers in this development. It would be worthwhile studying this phenomenon in more detail. Among other things a deeper understanding of what is happening here would help us who seek to facilitate this change – help us personally, for we are not separate from what is happening, but an integral part of it, and also help us professionally.

From this point of view, 'development' is social change toward empowering the village community as whole and empowering all members of the community individually. The community as a whole has been systematically subordinated and exploited by the forces of conventional development and globalisation. Individual members of the community, specifically women, have been systematically subordinated and exploited within the community itself. This is a specific instance of human development, the bringing about a situation in which oppressed members of a community empower themselves individually and collectively, and in doing so strengthening the community as a whole.

We must also recognise that aspect of development concerned with improving the material aspects of the lives of the people of the community. In this regard there are two opposing points of view. One is that an increase in money incomes will solve the problem of poverty. This is to be achieved through the application of modern technology in order more fully to exploit natural resources. This is the modernist mentality, and it informs almost all development efforts today everywhere. The other point of view is the ecological. It begins with the perception that 'ecological poverty' and not monetary poverty is the problem (Aggarwal, 1998; Sri Madhava Ashish, 1978,1979). That is to say the problem is one of a shortage of basic, everyday life-supporting materials that, in these communities, are obtained from community land (fuel, water, fodder).⁽²⁾ This point of view derives from the emerging ecological worldview. It leads to efforts to understand the reasons for the degradation of the community's land and the consequent fall in its productivity, and from this to devise ways to halt the degradation, heal the land, and then manage it for sustainable production.

The pioneering efforts of the numerous women's groups in respect of this second aspect of development have awakened the rest of us to the ecological perspective on development. And they are also showing us that this shift in conceptual focus in

resources management can occur only when the human dimension of development, that is, the empowerment of the community as a whole and of all its members individually, occurs simultaneously. This new perspective is of the entire community working to heal the land and then managing it sustainably through a shared vision and community effort.

'No' to modern agricultural technology

The efforts over the past several decades by universities and research institutes to transfer 'improved' agricultural technologies (mainly new crop varieties, chemical fertilisers and pesticides) to rural communities in the hill region of Uttarakhand has largely failed. Such transfer has sought to be done by conducting 'on-farm' demonstrations. Several hundred such demonstrations are conducted every year, and the new technologies are shown to be markedly better than the villagers' existing, traditional technologies. At least the scientists who conduct them are satisfied that the new technologies are better, and come away with the impression that the villagers on whose fields the demonstrations are conducted are also convinced. They therefore assume that the farmers will adopt the new technologies. But, with a few exceptions, they do not (VIHA, 2002). Or, in other words, the village people after observing the performance of the new technologies draw their own conclusions, which are just the opposite of the scientists' conclusions. As a result they do not continue on their own with the new technologies the next year. The almost zero rate of acceptance of their new technologies should have made the scientists stop and think. But no. They continue year after year with this meaningless (and expensive) activity. And village people acquiesce in it – because they very occasionally do find something of value and adopt it. I have described all this more fully elsewhere (Jackson, 2006).

In respect of our subject of community learning, I would like focus on two aspects of this story. The first is that the scientists, both individually and collectively, are unwilling to accept the possibility that their new technologies are irrelevant because of defects in their own ways of thinking and working. Indeed, they appear unable even to contemplate such a possibility. They do not pause to consider the possibility that village people are as rational and capable of looking after their own self interest as the scientists themselves, but that they have a completely different way of looking at things. The community of scientists does not try to understand the farmers' viewpoint, and does not even see any need to. These scientists operate fully and unambiguously in the modernist worldview.

Continuing with our focus on the community of agricultural scientists, this story illustrates the phenomenon of 'cognitive dissonance'. This occurs when the results of our efforts/activities are contrary to our expectations based upon our worldview, and after all our efforts to explain the negative feedback, or fine tune our approach, have failed. There are two reactions to cognitive dissonance by the people who experience it. One is to ignore the negative feedback, and the other is to acknowledge that we are confused and have no answers. Having done the latter there is an opportunity to back up and examine our underlying assumptions. Only when the individuals of the group, and the group as a whole, decide in favour of the second is the stage set for an exercise in CL.

The second lesson from this story is that the villagers involved apparently do not have the self-confidence to engage with scientists as equals. They are unable to say straight out that the new technologies, in their view, are useless, and sometimes even harmful. Instead they leave the scientist who conducts the trial with the impression that they have accepted the new technology. Perhaps they are they unable to explain why they reject his or her new technology. In other words they have not recognised or examined their own assumptions, the traditional cultural assumptions that determine their reactions to the new technologies.

Their lack of forthrightness can perhaps also be explained by an acute awareness of their inferior social status in relation to the scientists in present-day Indian society. They are unable to participate equally with scientists in the task of responding creatively to the grave problems that confront them and all of us today. They are, in short, disempowered. And their disempowerment makes it all the more likely that, collectively, we will fail to solve these problems.

It would be worthwhile, I suggest, studying this continuing, sterile interaction between farmers and scientist in depth. One aspect of this interaction that might reward everyone with new insights is the roles of rural men and women in the rejection of new, 'improved' agricultural technologies. It is noteworthy that the scientists initiating these demonstrations deal almost entirely with men. Are men more ambivalent about the new technologies – standing with one foot in the traditional worldview and the other in the worldview of modernism – than women? Maybe in the end, after all is said and done, it is the women's view that prevails. Would they be more forthright with the scientists than the men if the opportunity presented itself? We do know that women's logic in such matters is informed more by the emerging ecological worldview – to the formulation of which they themselves are pioneers – than is the logic of men.

If village men do in fact feel more disempowered than village women, then we must ask why this is so. Is it because they generally have more formal education than women, and are taught that present-day school education is the only route to a viable livelihood when they grow up? Have they internalised more completely than women the modernist worldview into which they are inducted by the school curriculum? Are they disempowered as a result of being introduced into a culture in which they realise they can never participate on an equal footing with others? Finally, would it be fair to say that modern education, instead of empowering rural people, actually disempowers them?

That the foregoing line of questioning is leading us in the right direction is supported by the work of Paulo Freire. He worked with exploited share-croppers in Brazil more than 30 years ago and demonstrated that they felt helpless because they saw themselves in terms of the worldview of the landlords; their condition was inevitable given this view.⁽³⁾ Recognising this freed them from the automatic interpretation of their every-day experience in terms of the context provided by that view, and this freed them to construct alternative contexts, or at least actively to contemplate contexts constructed by others in the same situation. In doing this, and following it up by putting alternatives to the test of practice, they empowered themselves.⁽⁴⁾ I think that this explanation may be taken as valid in all situations of disempowerment.

CL with communities of school teachers

The school course entitled *Our Land, Our Life*, now a part of the junior high school curriculum in all government schools in Uttarakhand,⁽⁵⁾ has been designed from the point of view of a radically different worldview than that of modernism and development which informs the rest of the curriculum, what is being termed an ecological worldview. Our inspiration for this, as I said earlier, has been the pioneering efforts of village women's groups. In doing this we have attempted to draw out the precise meanings of their words and actions in terms suitable for use in formal learning exercises. Of course, we have also taken into account the formulations of this general worldview of other groups around the world. The course differs radically from all existing school courses in terms of content and pedagogy. And it requires more initiative and hard work by the teacher. The course has been described in detail in a number of publications Pande (2001), Jackson (2003) and Pande (2004), and copies of the course workbooks are available from the USNPSS (USNPSS, 2009).

In order to prepare teachers to conduct the course effectively we organised teacher orientation workshops right from the beginning. The objectives of the workshops were: 1) help the teachers to gain an understanding of the rationale of the course, or, in other words, to participate, if possible, in the ecological worldview which informs it; and 2) impart the knowledge and skills needed to conduct the course effectively. By observing the teachers during the workshops and evaluating their performance in conducting the course afterwards, we discovered that we were not being very successful in achieving the first of our objectives. Pondering this experience several features of the CL process came into view.

The first is that a CL exercise, which is what, in essence, we initially hoped our workshops would be, cannot succeed if all the participants have not experienced and acknowledged cognitive dissonance. Most of the teachers were assigned to teach the course by their principals and hence to attend the orientation workshops. Only a very few volunteered. Some of these latter may have experienced cognitive dissonance in the personal and professional lives, and were actively searching for alternatives, or at least open to an alternative. Subsequently these teachers conducted the course with energy and imagination; they inspire children and demonstrate that the course can achieve all we had hoped for it. A majority of teachers, however, took away from the workshops only the information and skills we offered and developed no real understanding of the course or commitment to the alternative worldview informing it. They taught it mechanically and largely failed to inspire children.

We then experimented with techniques designed to create cognitive dissonance as preliminary activities in the workshops (see USNPSS, 2002). These largely failed. Either the techniques were poorly designed or the task is impossible. I am inclined now to the latter conclusion.

Often at the end of the workshop participants, even the most enthusiastic, will comment: 'all this is fine, but I still have to conform to the requirements of the curriculum, do what the Principal says, educate my own children so that they have a chance to succeed in life, and generally get ahead in my career.' This reaction used to come as a surprise, but hearing it repeatedly and reflecting on it has suggested that the participants did not really go along with the exercise from the beginning, or that they are overwhelmed by the disjunction between his/her experience of participating in contemporary society and the ways of thinking newly acquired in the workshop. This latter highlights the dilemma of transformation that occurs in the setting of only one of the communities in which a person participates.

Now for the second lesson learnt from these workshops. As a part of the effort to create cognitive dissonance and to challenge participants to 'think differently', they are requested to solve seemingly insoluble problems in contemporary global culture, and particularly problems from their own locality. The participants are divided into small groups and asked to read the stories in the course workbooks and find solutions to the complex problems they pose. Typically the groups get bogged down. They are unable to come up with any solutions. The organiser of similar exercises with school teachers in South Africa has found the same thing (Lotz-Sisitka, 2003). She pointedly remarks that instead of empowering these teachers to think differently, the workshop actually disempowers them. A community worker in Uganda working with rural communities has found the same thing (Babikwa, 2004). Both of them have come to the same conclusion as we have: unless the facilitator suggests a new concept to the participants at this point, the exercise will fail completely. In our case we suggest the concept of the village as an ecosystem. This suggestion is given tentatively, even off hand, as something they might consider. Often the groups then perk up and go on to formulating comprehensive solutions.

The conclusion is that though ideally participants in a CL exercise should find the answers to perplexing contemporary problems themselves and not be 'taught', in practice they often cannot. The facilitator of the exercise must then inject into the dialogue a suggested alternative concept – that is, not as a teacher, but as a participant. It is also often necessary to provide information and skill training if the participants are to test the tentative new solutions that emerge. With women's groups, for example, they very often decide that they must plant trees in their village common land. But, never having been faced with the problem of shortage of fuelwood and fodder in the past, they have never had to even contemplate planting and tending trees. And so they have no knowledge of how to do it, and must be trained.

The facilitator

It cannot be too strongly emphasised that community learning toward a new worldview is a process that occurs naturally and spontaneously in response to changes in world conditions that stress the community. The community, seen as a social organism, tries to respond creatively to such stress, or, in other words, to regain lost balance and harmony both within itself and with other communities and the natural world. It is always accompanied by confusion, uncertainty and strife, but if it is undertaken self-consciously with an understanding of the process involved, the levels of these can be reduced. At least there is some evidence that this is so. The purpose of this paper has been to suggest a way of understanding the process. We are also hopeful that, as outsiders participating in the process in the communities in which we work, we can facilitate the process.

In attempting to do this it cannot be too strongly emphasised that we must avoid the notion that we can bring about change in any definite pre-conceived direction. Our attention must be focused on the process, and not on the outcome. If it is not, our efforts may well be counter-productive.

In this final, concluding section I would like to offer a few general guidelines to those who would facilitate this process. These have been distilled from actual involvement in the various communities mentioned earlier in the paper.

The first of these guidelines is that we must approach the task with an understanding of the process of CL, at least in broad outline. That understanding will almost certainly be incomplete and faulty in some ways, but even an incomplete and faulty understanding is better than no understanding at all. In my experience spontaneous community dialogue often loses momentum and bogs down. Discussion goes round and round and does not move toward any conclusion because participants are unable to break free from existing assumptions – because they are unaware of them. The facilitator must be able to recognise such situations and intervene in ways that will lead participants to identify and critique those assumptions. If this is done effectively the dialogue will begin to move on again. The facilitator must keep in view at all times the direction in which the discussion must go in order to complete the process, for if one loses sight of that the exercise is unlikely to be successful.

A second requirement for a facilitator is that he/she must have experienced cognitive dissonance personally and have removed it in some measure by transformative learning pursued individually or as a part of a CL exercise in which he/she was a participant. In other words, a person is unlikely to be an effective facilitator if he/she has not identified and critiqued all his/her own assumptions. If he/she has not, there will be a danger that he/she will unconsciously attempt to impose a pre-determined outcome, thus derailing the exercise.

The would-be facilitator must also have shown a willingness to pass on to the hard work of critiquing his/her present worldview and of speculating boldly and systematically

in respect to possible alternatives. And, needless to say, the hard, slow work of helping others to do this as well.

It perhaps goes without saying that a would-be facilitator in a particular CL exercise must have a deep understanding of the life of the community. He/she must understand the constraints, the present collective mindset, the nature of the crises facing the community, and be trained and experienced in the technical aspects of that community's activities.

Fourth is the matter of if, when, how much and in what manner the facilitator should intervene with alternative ideas, information and techniques. Ideally, a community engaged in a CL exercise should overcome the crises facing it entirely with its own resources, otherwise the community will not fully own the new ways of thinking and acting that result. In practice, this is probably never possible. No community has the resources within itself to carry a CL exercise to completion, at least within any reasonable time frame. Put another way, no community can succeed in isolation from the knowledge, experience and travails of other communities; the solutions found by one may be helpful, at least in principle, to others. In the case of USNPSS teacher orientation workshops the injection of new concepts has already been mentioned. In addition, specific facts about climate, vegetation and so on usually have to be supplied and new skills such as measuring water flows, raising tree seedlings and calculating field areas have to be taught.

Finally, it is, I suggest, vitally important for the facilitator to record and reflect on his/her experience in conducting CL exercises. And then he/she must share his/her experience and conclusions with others. We all have to learn as we go along.

Notes

1. The Uttarakhand Mahila Parishad (Uttarakhand Women' Federation) is a network of whole-village women's groups which are actively involved with the issues of education, health, water, sanitation, livelihoods, alcoholism, and gender and caste disparities in the hill villages of Uttarakhand. About 450 of these groups participate in the Federation, which operates as a non-government organisation and with no affiliation with any political party. The Federation recognises the centrality of women's empowerment in improving the social, ecological and economic status of communities and facilitates collective social action for women's development. The practical needs of women and girls and gender relations within and between communities are addressed through a process-oriented, women-led participatory approach that systematically builds on local wisdom and practices.
2. These materials are not available in the market place.
3. Feire's book, *Pedagogy of the Oppressed*, came to my attention in 2002, at which time I read it. It is not now to hand and consequently I am writing from memory.
4. In this case, and in most other cases, including that of the women we are considering, the practical programmes of groups thus seeking to empower themselves will at times be agitational in addition to constructive.
5. The course deals with land (including village forest) rehabilitation and sustainable land management in the future, and with the importance of the community to achieve these. Students systematically study their local village ecosystem, learn traditional land, water and animal management practices from the village residents (that is, their parents and neighbours – who are thus given legitimacy as teachers), and learn to interpret all this information within a framework of current ecological concepts (that is, ecosystem, species diversity and adaptation, ecosystem health, ecosystem constraints and carrying capacity; and also the idea that the community is an integral part of the village ecosystem). They also learn village land and water use planning through participatory community effort. Overall, an attempt is being made to foster the alternative view of a future of the village in which dignity, environmental security,

increased livelihood security and improved levels of well-being can be achieved through local self-help efforts.

References

- Aggarwal, A. (1998). 'The poverty of Amartya Sen'. *Down to Earth* 7 (14), 56-7.
- Babikwa, D. J. (2004). 'Tensions, contradictions and inconsistencies in community-based environmental education programmes: the role of defective educational theories'. *Southern African Journal of Environmental Education* 21, 61-80.
- Jackson, M. G. (2003). 'From practice to policy in environmental education'. *Southern African Journal of Environmental Education* 20, 97-110.
- Jackson, M. G. (2006). 'Agricultural development in the hill; an alternative pathway'. In: Gupta, H. S., Srivastva, A. K. and Bhatt, J. C. (eds.) *Sustainable Production from Agricultural Watersheds in North West Himalaya*, Almora: VIHA.
- Jackson, M. G. (2008). *Transformative learning for a New Worldview: Learning to Think Differently*, Houndmills, Basingstoke, Hampshire, U.K.: Palgrave Macmillan.
- Lotz-Sisitka, H. (2003). 'Sustainability: an ambiguous steering idea influencing environmental education processes in South Africa'. Paper presented at the Seminar Environmental Education and Sustainable Development (the Sixth UNESCO/Japan Seminar on Environmental Education in the Asian-Pacific Region), Tokyo, 18-20 March 2003.
- Pande, A. (2001). 'An environmental education course in rural Himalayan schools'. *Journal of Environmental Education* 32 (3), 47-53.
- Pande, S. (2004). *A Village Ecosystem Model as a Tool for Sustainable Development*. M.Sc. thesis submitted to the Sikkim Manipal University of Health, Medicine and Technological Sciences, Gangtok.
- Sri Madhava Ashish (1978). 'The Kumaon: collapse of an economy'. *Imprint*, September 1978, 37-44.
- Sri Madhava Ashish (1979). 'Agricultural economy of the Kumaon hills: threat of ecological disaster'. *Economic and Political Weekly*. June 23, 1979, 1058-1064.
- USNPSS (2002). *Hamari Dharti, Humara Jivan: Adhyapaka Abhimukhikarana Karyakrama Nideshika (Our Land, ours life: Teachers Orientation Programme Manual)*. Almora: Uttarakhand Seva Nidhi Paryavaran Siksha Sansthan.
- USNPSS (2005). *Beyond Practical Gender Needs*. Almora: Uttarakhand Seva Nidhi Paryavaran Siksha Sansthan.
- USNPSS (2009). *Our Land, Our Life: A Practical Course of Agriculture and Environment Education*. Almora: Uttarakhand Seva Nidhi Paryavaran Siksha Sansthan.
- VIHA (2002). *Annual Report (2001-2002)*. Almora: Vivekananda Institute of Hill Agriculture.