

Education as a way to strengthen the capacity of rural people to improve food security; Towards a tool for analysis.

by

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Acronyms

DAC	Development Assistance Committee of the Organisation for Economic Cooperation and Development
ERP	Education for Rural People Initiative
EFA	Education for All
ESD	Education for Sustainable Development
FAO	Food and Agriculture Organization of the United Nations
IFAD	International Fund for Agricultural Development
IIEP	International Institute for Educational Planning
MDER	Minimum Dietary Energy Requirement
OECD	Organisation for Economic Cooperation and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCEFA	World Conference on Education for All
WSSD	World Summit on Sustainable Development

Foreword.

This paper was commissioned by the Task Group on Training for Technicians for Capacity Development(OEKD/FAO) and the Education for Rural People Flagship Partnership. The Education for Rural People Initiative, ERP is a collaborative effort between the FAO, UNESCO and the 363 partners who are members of the ERP network. The FAO led Education for Rural People Partnership was officially launched during the World Summit on Sustainable Development, WSSD, in Johannesburg, South Africa in 2002. etc etc.

Table of contents	page(s)
0. Summary	5-6
1. Purpose of the paper	6
2. Capacity, capabilities and capacity development	6-9
3. Learning and education as capacity development	10-15
4. Food security, learning and education	15-18
5. Traditions of educational responses	18-20
6. Learning, education and action	20-23
7. Towards a tool for analysis	23-25
8. The Education for Rural People Initiative as a bridge	25-26
9. Concluding comments	26-28
List of references and other sources consulted.	29-33

0. Summary

This paper has been written against a background of the fact that there are over 1000 million people in the world today who do not have access to adequate food on a sustained basis. They are food insecure. Or expressed in a more direct way: There is one billion hungry people in the world today, despite all international targets and action plans aimed at reducing poverty. In terms of income poverty, there are 1, 4 billion people who survive on less than 1,25 dollars a day. Seventy per cent of the world's poor are rural poor. (IFAD, 2011, p. 16). The percentage is highest in Africa.

There is a close correlation between poverty and lack of education, including adult literacy in both rural and urban areas. The correlation is stronger in rural areas. At the same time, it is generally recognized that education is critical to the reduction of food insecurity of rural people.

Although there are big variations, another feature of education and training has remained over the years. It is that neither the formal system of education nor non-formal and targeted programmes have managed to bridge the gap between urban and rural areas. The rural areas are disadvantaged when it comes to access to information, knowledge and opportunities for education, be it formal or non-formal. This gap comes out on indicators for school attendance, completion rates and access to literacy and other adult education programmes. It can also be illustrated with reference to the quality of teachers, books and school buildings. There are many reasons for this and they vary with the context. (Atchoarena & Gasperini, 2003, FAO/IIEP, 2006).

This paper identifies links that exist, conceptually and empirically between individual learning, education and wider objectives related to food security. It uses the concept of **capacity** as a lens for the analysis. It notes that the understanding of the concept of capacity and what it takes to develop it, has been widened in recent years. It has gone from a focus on training as the main vehicle of capacity development towards the development of individual and organisational capacities as more complex processes in which individual learning of knowledge and skills is only one part, albeit an important part. Capacity in the sense of the ability that individuals and organisations have to do things in practice also hinges on issues related to management, incentives and surrounding policy and other normative and regulatory frameworks.

The first part of the paper illustrates how the concepts of learning, education and capacity can be understood and linked.

The second part identifies links between education and objectives related to different dimensions of the concept of food security. This part also identifies some current analytical traditions that seek to answer how food security for rural people can be improved. In this context the paper starts from the assumption that access, use and management of resources are critical for the improvement of food security of the rural people. Access to knowledge, information and networks are important parts of this equation.

On this point, the paper discusses how education, both formal and non-formal has responded to different strategies of change, historically and what is known about the effects of investments in education. It is argued that what rural people actually do as a result of education can be taken as a strong indicator of the fact that their capacity has improved.

The paper also discusses some underlying and worldwide trends, notably the emerging global networking society that may change the conditions for what rural people want to learn and where this learning will take place.

The third part of the paper offers some concluding comments based on the analysis. In this context, it discusses the role of the Education for Rural People Initiative, ERP as a bridge between policy frameworks and organisations related to education on the one hand and objectives related to food security on the other. It is also concluded that the ERP as a network of mutual learning, is typical of global networking societies.

1. Purpose of the paper.

This paper is intended as a tool for all those who are seeking ways to strengthen the links between education, training and wider individual and societal objectives related to food security, agriculture and rural development.

The purpose is twofold. The first is to identify links that exist, conceptually and empirically between individual learning, education and broader strategies of change that aim to enhance food security of rural people. The second is to present the concepts in such a way that they can be used for contextual analyses and action.

It uses the FAO policy and concepts of capacity and capacity development as a lens and as a bridge between the general discourses on learning, education and training on the one hand and on different dimensions of food security on the other. Also, it discusses the relationships between learning, education and capacity.

The paper draws heavily, but not exclusively on material generated by the Education for Rural People Initiative, ERP since its inception in 2002.

2. Capacity, Capabilities and Capacity Development

This section will review and comment upon the concepts of capacity and capacity development as they are understood in the current policy/ corporate strategy of the FAO for capacity development and in the DAC Good Practice Paper on Capacity. (DAC, 2006, FAO, 2009 c).

The origins of the concept of Capacity

The etymology of the concept of **capacity** stems from French **capacite'** (latin *capacitas*) and it has two meanings. The first has to do with space i.e. what can be contained in a room, a ship or a container. It is also used in relation to the human body i.a. the capacity of the heart or the capacity of the lungs of a person.

The other meaning has to do with action. Capacity is what individuals, organisations or countries are able to do. In the words of a recent definition by the DAC, capacity is "the ability of people, organisations and society to manage their affairs successfully." (DAC, 2006, p. 12). According to the FAO Corporate Strategy "capacity development ideally unfolds across three dimensions; an enabling policy environment, the institutional dimension and the individual dimension." (FAO, 2009 c, p.1). This definition relates to capacity development as a way to get to what the DAC has defined as capacity above. It signals that it is important to look at the ability of individuals and of organisations/institutions. It is equally important to

identity the policy environment. It is understood in this definition that an enabling policy environment will open up possibilities for action by individuals and organisations/institutions. Needless to say, there may also be other policy environments that prevent individuals and organisations from using their capacity. Also, the FAO definition, unlike the DAC definition above, does not include general socio-economic conditions that may facilitate or prevent people, organisations and countries to act. This is an advantage when the concept is used for analytical purposes. The DAC definition is so wide that it may include almost everything when it comes to questions of capacity and capacity development at societal level. In the case of the FAO, the different capacities relate to individuals and organisations that act to improve food security, mainly in agriculture and rural development.

Capacity for what?

It should be noted that in the real world there is hardly any capacity that is developed without a purpose. Capacity is always related to normative issues, or expressed in another way: What is defined as capacity can hardly be separated from another question, namely: Capacity for what? And yet, it is useful for analytical purposes to think about capacity and capacity development in generic terms.

When this has been said, the question arises how it is possible to know that capacity has been developed and exists in real life?

There is an unfinished discussion about criteria for the evaluation of capacity. There are basically two answers to the question, which stem from the distinction between capacity as a set of individual, organisational and normative conditions on the one hand and development as a process of change at the individual, organisational and societal levels. These changes should be manifested in concrete actions.

The first approach implies that capacity exists when there are capable people, efficient organisations and a normative and policy environment that is conducive to change. There should also be reasonable correspondence between the three levels in relation to the capacity that is required, say to increase agricultural production. Capacity is measured according to its component parts.

The second answer is that capacity can only be measured in a meaningful way when it has been translated into action. It is only when agricultural production has increased that it is meaningful to conclude that the capacity for agricultural production has been increased. For the most part, it is easier to measure what has been done to create capacity i.e. through education, organisational and policy changes than to establish that this capacity has led to the achievement of higher order objectives such as increased agricultural production or rural development.

This paper will address both questions in relation to learning, education and the capacity of rural people.

For a discussion about methodological issues related to the evaluation of capacity development see for example: (Boesen & Therkildsen, 2003, Zinke, 2006).

It was noted above that capacity development, according to the FAO “unfolds across three dimensions; an enabling policy environment, the institutional (read organisational) and the individual.”(FAO, 2009 c, p. 1) For example, there is a policy environment at the international level which includes human rights frameworks and internationally agreed policies and action plans. This is the formal side. It is important to point out that normative and regulatory frameworks exist at a multitude of levels. They can also be informal and consist of shared norms and values within a society or an organisation.

One of the merits of the above mentioned understanding of the concept of capacity is that it makes a clear distinction between normative and regulatory frameworks such as policies on the one hand and the organisations set up to implement them on the other. It is a distinction between normative frameworks as “the rules of the game” and organisations as the way resources are combined to “play the game.” For example, the rules of the game of football are the same for all and they will only change slowly over time. The way a coach decides to organise the football team will vary and may even change during the match. The way resources are combined is not one and the same for all teams even if the purpose is the same. (to win the match). (North, 1990).

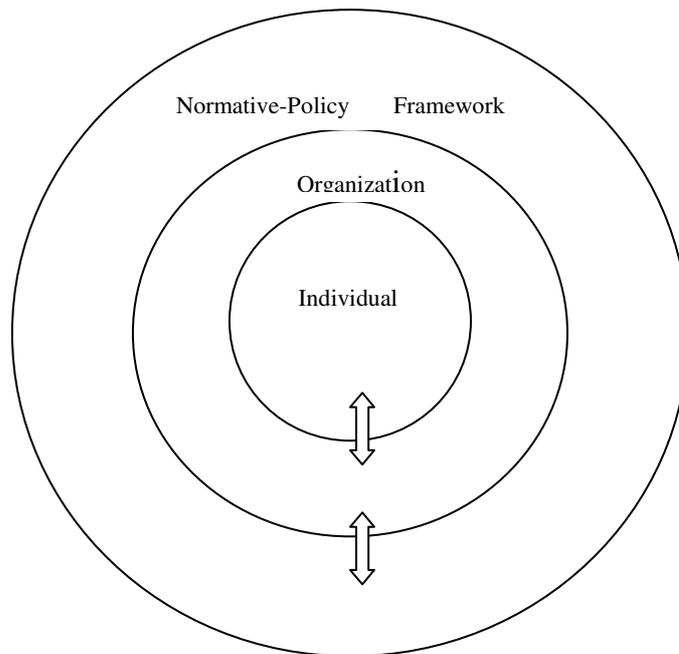
Another distinction is common in the literature. It is between different kinds of capacity or different capabilities of individuals or organisations. For example, the FAO policy makes a distinction between technical and functional capabilities. (FAO, 2009c, p 2). The former are oriented towards specific tasks that an organisation has to perform. The latter are closer to the ability to manage any process of change. Another distinction that can be found in the literature is that between individual capabilities (i.e. doing for one self) and collective capabilities (i.e. forming an organisation and working together within it). (IFAD, 2011, p. 17). It is also common to look at capacity as consisting of different kinds of capabilities, particularly when the focus shifts from individual to organisational capacity. For example, a recent international study on capacity makes a distinction between five different capabilities which are typical of all organisations. They are: (1) The capability to self-organise and act, (2) the capability to relate and to uphold space, (3) the capability to generate development results, (4) the capability to adapt and self-renew and (5) the capability to achieve and maintain coherence. (Morgan, 2006, p. 8 ff.). These different capabilities taken together represent the capacity of the organisation.

Capacity development as links between policies, organisations and individuals.

The linkages between the three dimensions of the concept of capacity have been illustrated in figure 1 below. It is generally assumed then that favourable conditions for capacity development exist when there is reasonable correspondence between the three levels of analysis i.e. the individual and the organisational dimensions on the one hand and the corresponding policy frameworks on the other. It is easy to think of situations when this correspondence does not exist.

For example, individuals learn, they gain knowledge and new insights. They are motivated to do things in a new and better way. They work in an organisation that would not encourage them to use what they have learnt. The management of the organisation would not allow them to use their new insights and skills. Or, alternatively, the organisation wants to change, but the policy environment does not open up possibilities for change. And so, in a dynamic perspective, it will be necessary to look at the conditions for and drivers of change in each context and at each level.

Figure 1. Capacity development as the interplay between individuals, organisations and policy frameworks.



Comments

There are linkages and interdependence between the different levels of analysis. Individual capacities that are enhanced through learning will be carried out within a formal or informal organisation. The capacity of the organisation is not only contingent on the capacities of the individuals but on the way these resources are combined and used. Results may also depend on the “culture of the organisation” or the informal normative frameworks that exist within any organisation. Action undertaken by the organisation will also be the result of incentives, information flows, management styles and an enabling policy environment. These policies may facilitate or restrict the organisation from doing what it is set out to do. Individuals within the organisation may act as a result of education and training but they may also refrain from doing so for a number of other reasons related to the policy environment. What you actually do as a result of learning, education and training may also be a result of what you think you **can** do and what you are **allowed** to do.

These few examples are mentioned in order to point out that this framework is only the beginning of an analysis. It has to be contextualised in each situation. The next section is a step in this direction. It links the concepts of learning and education to the understanding above of the different dimensions and components of the concept of capacity.

3. Learning and education as capacity development.

It is concluded in the FAO strategy that education and training are important pillars of the strategy. They are interlinked with the process of capacity development.

In the DAC Good Practice Paper, it is concluded that learning is central to the process of capacity development but learning new skills is not enough. (DAC, 2006). If and when individuals act as a result of their learning, this can be taken as an indication that they are using the capacity that they have acquired through learning, education and training. Likewise, it is generally assumed that well functioning education and education systems are preconditions for capacity development both for individuals and for countries.

Conceptually, there are two issues involved. The first is that the aims of any education system are usually wider than to be able to act in relation to a specific task or objective. Targeted skills training may be expected to lead to direct action, but the objectives at the level of an education system are always wider. The other issue is that the capacity of individuals, organisations and countries to act depend on a host of other factors but individual learning or the improvement of education and training. This is the whole gist of the analysis in the DAC paper (ibid.)

Therefore, the links between individual learning, education and capacity are strong but the relationship is not one and clear-cut. The links will vary with the context. In order to be able to take this part of the analysis a step further, it has been found important to discuss learning and education as capacity development.

Three questions arise. They are the following:

- What is learning?
- How is learning organised?
- Which are the specific international normative and policy frameworks that pertain to learning and education?

Learning

There are many definitions of learning. This paper is based on an understanding of learning as the interplay between inner mental processes and contacts with the environment. (Jarvis, 2007). According to Jarvis, there is often a disjuncture between what the individual carries with him or her and what he or she experiences in the environment. The more rapid the changes are, the more likely it is that a disjuncture arises. It is precisely at this disjuncture that learning takes place. The individual takes in this “new sensation”, gives meaning to it and decides to comply with the environment or to change it. But this can only happen as individuals gain a sense of self and self-identity and can become “actors in the situation as well as recipients.”(ibid. p.6).

Understood in this way, it is almost a given that learning takes place throughout the life span of an individual.

Hence, and in the words of Jarvis: “Learning is always personal but some of the opportunities to learn are provided by social institutions, such as State and employers.”(Jarvis, 2007, p.99).

The individual will learn throughout life. This will be referred in this paper as **life long learning**.

Learning and education.

Individuals learn. When this learning takes place in an organized way, within organisations that have been set up for this purpose it will be referred to here as education. It is a system of organisations, the main purpose of which is to promote individual learning.

In all countries today education consists of complex national systems with professional teachers, instructors, planners and managers. These organisations work in an equally complex policy environment which may or may not be conducive to individual learning and the way it should be organised.

Not long ago, in the history of modern development, the bulk of all learning took place in the family and on the workplace. It was not organised to the same extent as modern systems of education are. Also today, a lot of learning takes place outside the organisation of a school or a university, perhaps increasingly so. This learning is usually less structured and well organised.

Learning and structured forms of training also take place in the myriad of other organisations that are modern society. Learning is not their main mission but developing their capacity is unthinkable without deliberate education and training efforts aimed at learning within and outside the organisation. When such systems or organisations are brought into a coherent whole with clear entry and exit points, this will be referred to here as **life-long education**.

It has been argued by some observers that the definition of learning should be extended to organisations. In this understanding it is not only individuals within organisations who learn. The whole organisation should be the unit of analysis and be seen as a learning organisation. There is a whole body of literature with roots in organisational theory, which argues that the analysis of learning should be extended beyond individual learning within an organisation. It should also be possible to identify the characteristics of a **learning organisation**. (King, & McGrath, 2004, Ohlson & Granberg, 2009). The discussion about organisations as learning organisations will be left aside here. It is sufficient for the purpose of this paper to note that people working within organisations learn as a way for the organisation to develop its capacity. For example, in-service training of teachers is very important in any education system.

When organisations for learning are brought together into a coherent system, this will be called a system of **life-long education**.

Comment

It follows from the above that learning is very important for capacity development at the individual level. Capacity grows from within the individual and it is only when learning takes place in a way that has been defined above, that individuals get the potential to act. Education as organised learning, belongs to the organisational dimension of capacity. Also, national systems of education are crucial to national capacity. However, capacity in the sense of the effects of the actions of national systems on wider national objectives, are not one and clear cut. This relationship varies with the context and a host of economic, social and other factors.

The reality for rural people is far from the vision of life-long education. The more typical picture is that rural people learn within many different structures within and outside the State. Also, rural people learn outside these organised structures set up for the purpose of learning. It is important to recall what was observed by Coombs and Ahmed already in 1974: “Non-formal education, contrary to impressions withstanding, does not constitute a distinct and

separate education system, parallel to the formal education system. It is any organized, systematic educational activity, carried out outside the framework of the formal system, to provide selected types of learning to particular subgroups in the population, adults as well as children. Thus defined, non-formal education includes, for example, agricultural extension and farmer training programmes, adult literacy programmes, occupational skill training given outside the formal system, youth clubs with substantial educational purposes, and various community programs of instruction in health, nutrition, family planning, cooperatives, and the like.”(Coombs and Ahmed, 1974, p.8).

It follows from the above that these organisations of formal and non-formal education can be more or less structured, more or less hierarchical. Educators have found a way to express these differences by referring to education as formal, non-formal and informal. There are many other ways to describe education in terms of organisation. These will be left out in this paper.

International policy frameworks pertaining to learning and education.

Learning is an individual activity and education is an organisation or set of organisation set up for the purpose of learning. These organisations are always contingent upon policy and other normative and regulatory frameworks. This is the policy dimension of the concept of capacity. Normative frameworks exist at many levels and they can be codified or more informal. One such framework is what is defined as relevant knowledge within a subject or a curriculum. This paper will refer to a few of the international frameworks that pertain to learning and education.

The most important of these are the international rights frameworks pertaining to education. The international rights frameworks pertaining to education are more far reaching than is commonly assumed. “Everybody has the right to education” is a frequently quoted sentence in Universal Declaration of Human Rights of 1948. Less well known, perhaps is that this paragraph continues by stating that: “Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. Education shall be directed to the full development of the personality.”(As quoted in Tomasevski, 2003, p.41).

The most elaborate statements are to be found in the Declaration of the Rights of the Child. They include:

The right of disabled children to education and special care. It should be provided free of charge when possible.

The right of children to education, regardless of their sex, where they live or what language they speak.

The right to education of refugees and populations affected by war, displacement and calamities.

The rights of working children to education.

The right of disabled children to education and special care. It should be provided free of charge when possible.

The right of children to education, regardless of their sex, where they live or what language they speak.

The right to education of refugees and populations affected by war, displacement and calamities.

The rights of working children to education.

In this convention, the right to education is linked to the principle of non-discrimination. (Sida, 2000).

There is also an international agenda of action aimed at basic education for all. It has been expressed i.a. in the Jomtien Declaration on Education for All and in the Dakar Framework of Action. The Jomtien Declaration of 1990 would set the stage for an international initiative that was followed by six concrete goals and a framework for action ten years later at Dakar.(World Conference on Education for All, 1990 & World Education Forum, 2000).

The Jomtien Declaration concluded already in 1990 that “what is needed is an “expanded vision” that surpasses present resource levels, institutional structures, curricula and conventional delivery systems.” (World Conference on Education for All, 1990 p.4). Both are an attempt at crossing normative and organisational borders, between formal and non-formal education, between levels of education and between knowledge areas.

What should be the purpose of learning? Individuals have a variety of reasons to learn. Two important international UNESCO reports have synthesised a very broad discussion of what should be the different purposes of learning when translated into organised forms of learning i.e. to education. One is the Report of the Faure Commission in 1972, which was followed by the Delor Commission Report in 1996. (Faure, 1972 & Delor, 1996). According to the Delor Report, there ought to be four objectives of learning. They are: (1) Learning to know, (2) Learning to do and (3) Learning to live together. The ultimate purpose should be mature human beings. Following the tradition of the Faure Commission, the fourth and overriding objective was formulated as (4) **Learning to be**.

Where do rural people learn?

This question arises from the distinction that was made above between learning as an individual process and education as a way to organise learning in a systematic way. It was noted that rural people learn throughout life, but they may have limited access to education. So, the question arises: Where do rural people learn?

It was noted in the introduction that the relationships between learning and education have changed over time. Today, all countries seek to develop the formal system of education as a way to organise learning. It is also a fact that most organised learning takes place in hierarchical organisations, be they schools, universities or extension services.. In these types of hierarchical organisations, the “new sensations” that Jarvis talks about, are expected to be generated by a teacher or an instructor.

These “new sensations” are expected to lead to new insights, knowledge, change of attitudes and ultimately, to changed behaviour. If and when they do, this can be taken as an indication of a strengthening of individual capacity.

It was noted above, that rural people walk in and out of organisations of education and training during their life-span. Many may never get in contact with a primary school, let alone a secondary school, a university or an extension service. On the other hand, experience has shown that sending children to school is a very important part of the survival strategy of rural families. If these possibilities are not open and rural people want to improve their capacity through learning, they may do it in other settings. Where is their learning taking place?

One answer could be that farmers have always had their networks and they have learnt from each other. Or, as observed in a study by the International Fund for Agricultural Development: “Most farmers learned more by looking over the fence and copying techniques from other farmers” (than through extension services or other organised forms of learning, my comment). (IFAD, 2005, p.4).

Indeed, it has been argued by some observers that the whole tradition of extension service as organised learning, is undergoing change. For example, a recent literature review of experiences of agricultural extension in Africa observes that “the building of farmers management and problem solving capacity requires joint learning through practical field work.” (Duveskog, 2007, p. 6). This observation reflects past experiences of rural extension but it also reflects a changing reality for the farmers. The trend is towards diversification of activities and sources of income. In this new reality, farmers need to get together and organise themselves. It is not possible a priori to define what constitutes relevant technology. Management and problem solving capacities related to agricultural production will be more important than before. (ibid). In the words of the FAO strategy for Capacity Development, farmers will need both functional and technical capacities. (FAO, 2009 c). The above mentioned example is but one of many that have changed the context of learning for poor people and which may have consequences for organisations and frameworks within which rural people learn. What can be described as typical of education in a national and international perspective may not be typical at all for how rural people learn. Formal education may not be accessible, due to long distances to schools or high user fees. Rather, rural people continue to learn what they need to learn in other settings. One implication of the above might be that whole balance between formal and non-formal education may shift for rural people with the emergence of an international networking society. Few if any studies have been found that could throw light on this question in an international and comparative perspective. The purpose of the next section is to point to the fact that an emerging international networking society is likely to change the organisational context within which rural people learn. Exactly how this is happening is outside the scope of this paper.

An emerging networking society?

It is often said that modern societies are information and knowledge societies. In this analysis, information and knowledge are treated as assets which are more important for productivity increases than labour and capital.

Manuel Castells is one of the most well known analysts referred to in this discussion. He has placed questions on knowledge and development in a broad perspective of world wide trends in which information and modern information technologies play a crucial role not only for the economy but for social and political changes at large. Information and communication are not only to be looked at as new tools that have facilitated information sharing and learning that is relevant to the production of goods and services.

According to Castells, the implications are much wider. The main reason is that the new information technologies, ICTs have made it possible to organise the production process in a less hierarchical way than has traditionally been the case. This process started with the production of the new technology itself. This model of organisation which was less hierarchical than most other industrial production. It has spread to other areas and become an integral part of globalisation. Castells has argued that the new informational economy and the successful enterprises within it are marked by a networking organisation. This means that vertical and hierarchical structures are replaced or supplemented by more decentralised and horizontal networks. (Castells, 1996, 1998.).

Therefore, the globalised world of today can best be characterised as an emerging networking society.

From the point of view of learning and education, the implication of the above could be that more and more learning is taking place within horizontal networks. The use of information

and communication technologies, ICTs, including mobile phones is an integral part of these networks. The networks are sometimes at odds with more established and vertical structures for education and training. They can also be seen to complement these.

There is an obvious risk that an emerging networking society will create new inequalities between rich and poor, between urban and rural people. People in urban areas may benefit more than people living in rural areas. The implications of these developments for the capacity and learning of rural people would need to be analysed in a systematic way.

4. Food Security, learning and education.

This section will paint a broad picture of different dimensions of the concept of food security and the different approaches to learning and education that have been associated with those. Based on this analysis, the paper will discuss some new trends that may change the current “map.” Again, the focus is on trends worldwide. A contextual analysis will be required in each concrete situation. A discussion about learning and education in relation to food security will have to go beyond rural people and where they learn. It ought to start with the normative and policy frameworks as well as with strategies of change pertaining to food security. It will be shown that there are three broad traditions of education and training that are seen to respond to those strategies of change. Ideally this analysis should be extended to include the learning among staff that is taking place within organisations that work to improve food security of rural people. Such an analysis may include learning within ministries of agriculture, organisations for extension work, non-governmental organisations and farmers organisations, just to mention some.

Food Security

Access to adequate food for all was formulated in the International Convention of Economic, Social and Cultural Rights of 1976. It reads as follows: “the right to adequate food is realized when every man, woman and child, alone or community with others, has the physical and economic access at all times to adequate food or means for its procurement.” The UN Special Rapporteur on the right to food, defined the right to adequate food as follows: “Right to adequate food is a human right, inherent in all people, to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively adequate and sufficient food corresponding the cultural traditions of people to which the consumer belongs, and which ensures a physical, mental individual and collective fulfilling and dignified life without fear.” (FAO, 2010, p. 1). There are voluntary guidelines for its implementation which stem from 2005 (ibid).

The current FAO definition of Food Security reads as follows: “Food Security exists when all people, at all times, have physical social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within the household as the focus of concern.” (FAO, 2009, p. 8). “Food insecurity exists when people do not have adequate physical, social or economic access to food as defined above. (ibid, p. 9). The definition above also includes undernourishment as an important concept. The concept of food security is built on three pillars. They are food availability, food access and food use. This definition can also be seen as a normative statement or a goal.

The concept of food security is closely linked to strategies for increased production of food. A whole set of issues revolve around the conditions under which production will take place and who the producers are and will be. Therefore, the concept is also associated with issues related to sustainability, protection of the environment and climate change.

As mentioned in the introduction to this paper, there are approximately 1000 million people in the world today for whom this objective is not a reality. The majority, or 70 per cent are living in rural areas. According to the 2010 Rural Poverty Report “the rural poor account for a high proportion of hungry and malnourished people, partly as a result of poverty itself, and partly due to other factors, notably gender inequalities and exposure of poor households to a variety of risks and shocks. Children also constitute a large percentage of the hungry.” (IFAD, p. 3). The FAO has and continues to put special emphasis on the capacity or capabilities of small farmers to produce food. On this point, the Director-General of FAO noted in his foreword to the Medium Term Plan of the FAO of 2009 that: “The recent L Águila Joint Statement on Global Food Security signals a welcome and encouraging shift of policy in favour of helping the poor and hungry to produce their own food.” (FAO, 2009 b, p. 1). It also notes that there is a “new momentum-after decades of neglect-to-re-invest in agriculture.”(ibid, p. 10). One of the conclusions is that “FAO shall build capacity, particularly for rural institutions.”(ibid, p.15).

This part of the discussion is about what it takes **to increase the productivity** of rural people. An analysis of the importance of learning and education for the improvement of food security of rural people has to start with some strategic issues related to the achievement of food security at individual, family and national level. The international discourse on strategies directed at this overall objective is very wide. This discussion falls outside the scope of this paper. Interested readers are referred to other sources. (IFAD, 2011).

Finally and since the World Summit on Sustainable Development in 2002, there has been an emphasis on issues of sustainability and protection of the environment. Production of food should be organised with respect for the environment and in a sustainable way. In later years, issues of climate change have also come into the picture.

Approaches to change.

Any analysis that seeks to link education to broader strategies of change related to food security for rural people, have to be based on some general notions of how such changes can be analysed and understood. In one way or another, this discussion can also be described in terms of capacity and capacity development along the three dimensions mentioned above. (cf . section 2).

Many of these analyses carry with them that change is contingent on the capabilities that rural people have to act and to use the resources that are at their disposal. Equally important is that there is an enabling policy environment i.e. that there are policy and other normative frameworks that support what individuals and organisations want to do. The purpose here is not to even seek to capture a very broad discussion about poverty reduction, food security and development that has been going on for ages. It has been found important however, to highlight some dimensions of it that are relevant to education and how education has responded to these approaches to change. Three perspectives will be identified here.

One tradition can be found in the background material of the 2011 Rural Poverty Report. The analysis starts with to resources, notably natural resources as the key to sustainable rural

livelihoods. (Lee & Neves, 2010.). One important point is that “it is access to resources, not the supply of resources or their overall availability, that determines whether poor men and women will be able to make the most of the opportunities they have to enhance their livelihoods.”(ibid, p. 5).

It follows from the emphasis on access rather than on availability of resources, that access is strongly associated with rights. It is only when people have the right to resources that they have a potential to use them. Therefore “access to any particular resource at any time, can be described in terms of the bundle of rights that are ascribable to a given resource, even if held by different agents.”(ibid, p.5). In terms of capacity, the concept of access is closely related to the rights to these same resources. It focuses the attention on “rights to assure access.”(Lee & Neves, 2010).

Also, this analysis brings in dimensions of capacity such as management and it puts emphasis on collective capabilities i.e. how rural people interact, form organisations and learn from each other.

It should be obvious from the above that there is a direct relationship between the capacity of poor people and the normative frameworks(read rights) that are associated with access to these natural resources.

The concept of **access** is used in a wider sense than “the right to enter the property.”(ibid, p.24). It is also about the ability that poor people have to “use and manage resources in order to improve food security, enhance nutrition and reduce household vulnerability.”(ibid, p. 24).

It follows from the above that management is another key term in this context. Poor people are living in a world of risk. How they manage risk is key to securing livelihoods.(IFAD, 2011).

Expanding access to natural resources and increasing security of access to natural resources become part of the “key challenges” ahead.(Lee & Neves, p. 28).

Two other observations are important. They run through the material referred to above. One is that rural people seek to meet risk by **diversifying** their sources of livelihood. Although it is true that 90 per cent of African agricultural production is estimated to come from small scale producers, it is also true that these same producers increasingly also seek sources of livelihoods outside the agricultural sector.(ibid. p.7, IFAD, 2011, 184 ff.).

The other is that management is strongly related to individual and collective capabilities. More concretely this means that management of resources and of risk depends of individual capabilities but also on the way rural people are able to organise themselves, to share information and to learn from each other. In terms of the five capabilities identified on section 2 above, it may be said that there is an emphasis on the capability to self-organise and act. This is the discussion about capacity from an individual and from an organisational perspective. Equally important in this analysis is that the State provides an enabling policy environment.

A second tradition related to production of food puts research, technology and innovations at the centre of approaches to change. This strategy could be summarised in an equation as follows:

Research + technology + innovations = increased productivity.(Gustafsson, 2010).

It has been argued that this approach is more relevant in “favoured environments” of production. Less favoured areas would typically use “indigenous knowledge, learning from neighbours and social networks” (Lee & Neves, p. 25).

It was also argued above that a new paradigm is emerging in the new knowledge and networking society in which the emphasis also will be on issues such as communication and the use of ICT and emerging networks for information sharing and learning. (Gustafsson, 2010).

A third tradition focuses on the relationship between food security and nutritional security. Again, this is a very broad international discussion. The point to make here is that this discussion is closely linked to learning and to education, mainly in that part which has its focus on the malnutrition of children, the linkage between food security and nutritional security at the family level and the crucial role of women. (FAO, 2010).

Capacity for change.

In the analysis above rural people are both consumers and producers of food. It is in their role as producers that it is relevant to go back to the concept of capacity in relation to the change strategies above.

Some of the background analysis in the 2011 Rural Poverty Report discusses i.a. issues of access, use and management of natural resources and the capacity to manage risk. From the perspective of the rural poor and their capacity to access, use and manage natural resources there is mentioning of virtually all of the dimensions of capacity and capacity development that were listed in section 2 above. The important observation to make here is that this analysis is not primarily a discussion about the need for the technical skills that rural people need. It is an analysis in terms of individual and collective capabilities to access, use and manage natural resources. It is what rural people need to know, how they learn and the importance of collective capabilities i.e. to form organisations, networks and to work together that matters.

It is illustrated how a change strategy based on intensive use of scientific knowledge is more relevant in “favoured environments” and how important “indigenous knowledge, learning from neighbours and social networks are in “less favoured environments.”(Lee and Neves, p.25).

It is pointed out that education, or sending children to school, is an important pillar of a strategy based on diversification of the means of livelihoods and of the management of risk. The analysis also brings the need for national policies and other normative frameworks that make it possible for rural people to get access to resources. It is even argued that access to natural resources in reality, can best be described as a bundle of rights. Hence, and the analysis referred to here, the concept of access to natural and other resources comes close to the normative dimension of the concept of capacity. A distinction is made between environments in which research results and scientific knowledge are vital and environments within which indigenous knowledge and learning from your neighbours are critical for increased production.(ibid, p.25).

5. Traditions of educational responses.

There are normative responses related to the content of education (what should be taught and why) and there are different traditions of how education and training should be organised to respond to the broader strategies of change indicated above. (formal, non-formal education).

One tradition is linked to agricultural production as mainly resulting from research, technology and innovations. This tradition has been reflected in the content and organisation of agricultural education in primary and secondary schools, universities and in extension work. The FAO has a long tradition of working in this area. Use of new technologies has also been the purpose of a long tradition of functional literacy.

There are other forms, including some traditions of literacy work which has put emphasis on the capabilities to “self-organise and act.” The ultimate purpose has been seen to be to improve the self-confidence of the learner and to strengthen the ability to work with others.

The most well known representative of this tradition is Paulo Freire who saw literacy as a way to liberate the mind of oppressed farmers. It was only when farmers had formed words and a language that reflected their lived reality that they could get out of their mental and “institutional” oppression. Without this liberation, no agricultural development would take place. (Freire, 1972).

Another tradition is linked to the intake of food of good quality or to food use. This is the whole tradition of nutrition and health education.

A fourth and emerging area has grown out of the concept of sustainability and protection of the environment. This area is usually referred to as **education for sustainable development**, ESD. It is a newcomer if compared with the other traditions mentioned above. (UNESCO, 2009).

It is against this background that the shifts that have taken place within the area of extension services can be understood. The 2011 Rural Poverty Report observes on this point that “The standard public sector model of agricultural extension based on technology transfer and delivery has all but disappeared in many countries...Extension has been decentralised, and a variety of advisory services have emerged, including private extension efforts run by agri-input and agroprocessing companies, a vast assortment of NGO-supported efforts, services run by producer organisations, farmer to farmer exchanges and mobile phone and Internet based services.” (IFAD, 2011, p. 175). A recent review of extension work in Africa concludes that “the building of farmers management and problem solving capacity requires joint learning through practical field work.” (Duveskog, 2007, p. 7).

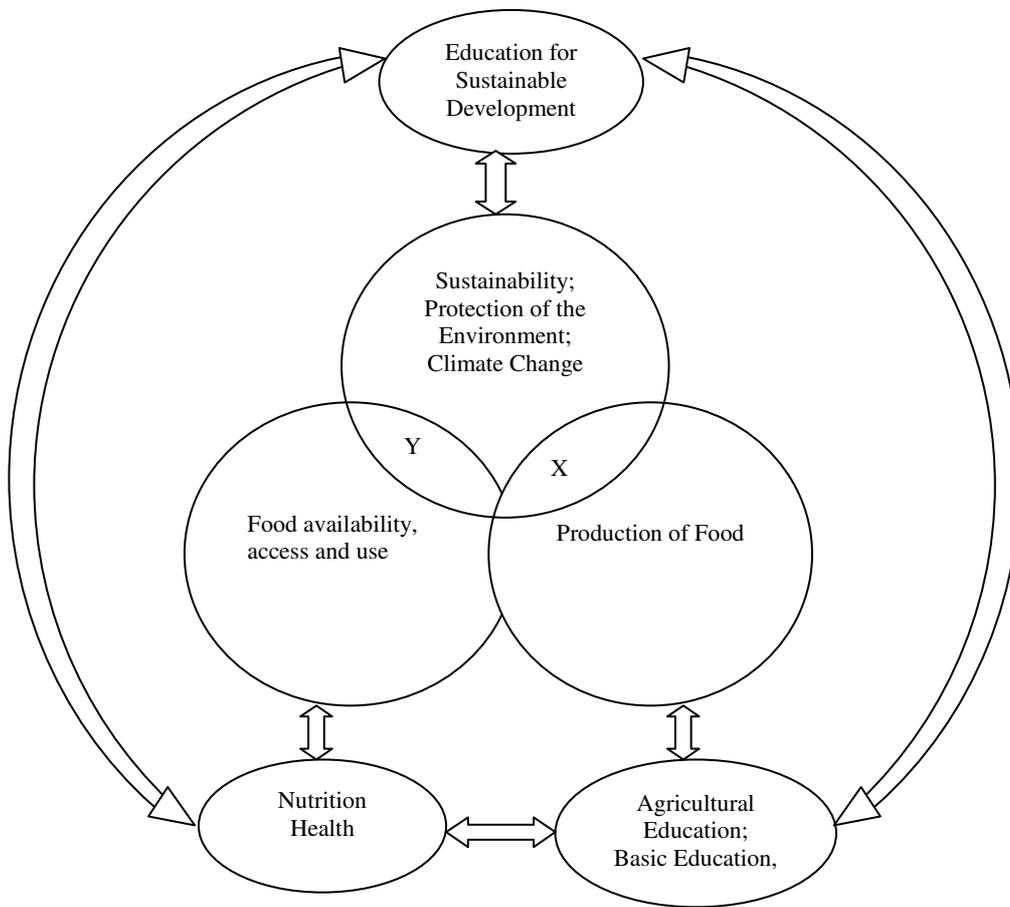
It can be seen that these changes refer both to the normative aspect (what should be taught) and the organisational dimension of capacity as it relates to how learning should be organised within the context of extension services.

This being said, it is also concluded that “In practice, however, the range of service and information choices for poor farmers often remains very limited. Women farmers and marginal livestock producers are often excluded.” (IFAD, 2011, p. 175).

This last observation underlines a point made earlier in this paper. The analysis of capacity can not stop at the normative and organisational levels i.e. what should be learnt and how learning should be organised. It has to start with individual capacity as a process of learning. The question that should be asked is: **what, where and how do rural people learn?**

Against this background, it is possible to illustrate the links between food security and traditional education responses. This has been done in figure 3 below.

Figure 2
Educational responses to different dimensions of Food Security



X: Sustainable production

Y: Food security

Adapted after Swedish Government, 2002, P.16

6. Learning, education and action.

It was mentioned in section 2 above that there are essentially two ways to assess if capacity has improved. One is to assess if favourable policies and other normative frameworks are in place and if there are organisations, ready to work towards the realization of these policies and normative frameworks (the right to and education, education for all etc). So far, this paper has followed this tradition. It has looked at the education and food security through the capacity development lens understood in this way.

The other tradition is to seek to measure the relationship between policy, organisational and individual changes and action. Policies and organisations have changed and something has happened as a result. Individuals have learnt, they have got education and they have acted in a different way as a result of what they learnt or the education that they have been through.

This section will look at relationships between education as organised learning and individual action. Rural people learn, through education and they act. What is known about these relationships?

A vast body of literature exists which has addressed this question. The basic question underlying all of these analyses has been: Rural people learn, but what do they do differently as a result? The studies all seek to establish a relationship between learning and action. If and when individuals act differently, it can be concluded that their capacity has been enhanced as a result of their learning.

This section will summarize what is known about these linkages in an international perspective.

Learning and capacity for food security.

When this has been said, it should be noted that there is a vast body of research and other studies that illustrate a general connection between learning, education and actions related to the different dimensions of food security as referred to above. The findings usually start with the individual learner. The effects are often assessed both from the individual and/or family perspective and in some cases as cumulative effects at the societal level.

For example, an often cited literature review has studied the relationship between basic education and agricultural productivity in 13 developing countries. The 37 studies confirm this positive relationship and conclude that agricultural productivity is over 7 per cent higher for farmers with four years of elementary education than for farmers without such education. (Lookheed, Jamison & Lau, 1980 as quoted in Atchoarena & Gasperini, 2003). A study from Latin America in 1994 has reached the same conclusion. (ibid, p. 56).

A more recent cross country study commissioned by the ERP concludes that “Education for rural people, the main group directly involved in food production, processing and commercialization, is a key factor in fighting food insecurity in low-income countries...Indeed, of the factors we examined, our measure of rural primary education was by far the best predictor of rural food security.” (de Muro & Burchi, 2007, p. 37). It should be noted that this latter study takes a broader approach to food security than the increase of agricultural production. It also includes issues such as “processing and commercialisation.”

Studies that have looked at knowledge and skills that are related to family life have generally found a strong relationship between learning, education on the one hand and improved nutrition, hygiene and health status of families on the other. The nutrition and health status of the learner is also strongly related to learning outcomes. The main actors in such programmes have been the women. (Atchoarena & Gasperini, 2003, p. 67). The report on the State of Food Insecurity in the World has the following to say about the relationship between nutrition (access to adequate food) and the ability to learn. “ These effects (of malnutrition, my comment), are particularly worrisome because there exists a large body of literature that suggests that stunting is associated with cognitive skill and slower progress in school as child, as well as reduced earnings as adult.”(FAO, 2009 a, p.26).

The Global Monitoring Report on Education for All of 2010 has this to say on this point: “Hunger undermines cognitive development, causing irreversible losses in opportunities for learning. There are often long time lags between the advent of malnutrition and data on stunting.” (UNESCO, 2010, p. 24). This has i.a. led to the introduction of school feeding programmes in many countries. Education improves the nutritional status of families at the same as children and adults who have access to food of good quality learn better.

Many of the studies can be found in the area of adult literacy. They often include aspects that are related to individual identity and self-esteem and ability to make your voice heard. The same can be said about programmes that aim to give poor people voice and improve their capacity to work together and to organize themselves. There is a strong relationship between literacy and issues that have to do with pride, self-esteem and possibilities to make your voice heard. The 2006 Global Monitoring Report on Education for All was devoted to literacy, as a human right and for its role in development. One of the important conclusions is: "While the benefits accruing from women's formal education is well understood, less well known are those accruing from women's non-formal education; education contributes positively to women's empowerment, in terms of self-esteem, economic independence and social emancipation. Many women who have benefited from adult basic and literacy education have spoken of feeling a sense of personal empowerment as a result." (UNESCO, 2006, p. 31). Another interesting summary of findings will be quoted here. It seeks to relate the outcome of adult literacy programme to some of the Millennium Development Goals. They are: (1) Eradication of Extreme Poverty and Hunger, (2) Reduced Child Mortality, Improved Maternal Health and Combat of Aids, Malaria and other Diseases and (3) Social and Political Participation. (Oxenham, 2009).

These are not the only goals are covered in the studies referred to by Oxenham. They are highlighted here because of their connection to food security. With some reservations, the overall conclusion with regard to the first goal is that : "literacy education does contribute to reducing both poverty and hunger. (ibid, p. 92).

The main message with regard to health indicators is: "The message from the available studies is that knowledge conveyed through literacy education programmes does tend to contribute towards the achievement of the Millennium Development Goals for health.(ibid, p. 96). On the third goal, the message is that "suitably organised and implemented literacy programmes do tend to promote stronger and more confident social and political participation by poor unschooled people, particularly poor women."(ibid, p. 97).

Comments

From the individual point of view, there are compelling arguments for the assumption in the beginning of this paper that learning is at the heart of capacity development at the individual level. If and when this learning is the result of national programmes of basic education, for children and adults, it can be argued that there is a strong relationship between learning, education and action.

However, the extent to which this relationship can be established depends on the context. The UNESCO report quoted above has this to say on this point: "It is important to note, however, that these effects (of adult education and literacy, my comment) are not automatic, but result only when literate individuals are able to exercise their literacy, which requires that broader development and rights policies are in effect and implemented. Indeed, literacy per se is not the sole solution to social ills such as poverty, malnutrition, and unemployment, though it is one factor in helping to overcome them."(UNESCO, 2006, p 31).

Oxenham's reflections are worth quoting in full:

"The evidence set out above confirms the importance of including literacy and numeracy in adult education and training; without them progress towards the MDGs will be slower.

However, it is equally important not to regard such inclusion as miracle-working ingredient.

The evidence also underlines three cautions:

First is the well known pattern of behavioural change that Everett Rogers observed among farmers nearly 50 years age; new information does not automatically of immediately change

attitudes; and attitudes do not automatically or immediately change behaviours. People take time to absorb the implications into action. The process of personal change can be slow and unpredictable.

The second caution reflects the fact that people differ. Change begins with minorities of people, perhaps only 20 per cent to begin with, then gradually affects others and spreads to minorities. Literacy and numeracy only help to make the process quicker.

The third caution is that education, training, literacy and numeracy depend for their full effects on supportive environments-social, political, institutional, infrastructural. They need to be part of a total development effort.” (Oxenham, 2009, p. 98).

It could be added, that there is a need to place these findings and conclusions in a wider strategy for capacity development which is aimed at the capacity of rural people to improve their livelihoods.

7. Towards a tool for analysis.

This paper has used the concept of capacity as a lens for the analysis of linkages between learning, education and wider objectives related to food security. The paper has also discussed some of the international trends that may change the conditions under which these links can be strengthened.

If these aspects are brought together in a simple matrix, the following picture emerges.

Figure 2. Tool for identification of linkages between education and capacity of rural people to improve food security.

Dimensions of Capacity Development	Education	Food Security	Emerging Trends
Individual learning	Learning what, where and how?	Food availability, access and use. Access, use and management of natural resources	Diversification of sources of livelihoods
Organisational change	Formal, non-formal, informal i.e. schools, universities, extension services, literacy programmes, networks	Ministries, non-governmental organisations, farmers associations etc. etc.	An emerging and global networking society fragmentation need for a system of life-long education, shift of balance between formal, non-

			formal and informal education
Policy/Normative	Right to Education, International Action Plans related to Education for All etc.	Right to Food, Access of natural resources as a “bundle of rights”	??

Comments.

There are links between the different dimensions of education and food security, as they are defined and discussed in this paper. These links will vary with the context. This paper has stopped at identifying some general trends. The intention has been to provide a tool for context specific analyses.

It has been noted above that there are important international rights frameworks pertaining to the right to education and the right to food. They are mutually reinforcing. There are also a number of international objectives, strategies and action plans that are relevant in this context. Some that pertain to food security have been mentioned above. The Education for Rural People Initiative, ERP also operates within the framework of the Jomtien Declaration on Education for All and the Dakar Framework for Action. (World Conference on Education for All, 1990 & World Education Forum, 2000). This is not the place to go into details. It should be noted that the Education for All Initiative that resulted in the Jomtien Declaration in 1990 and the Dakar Plan of Action in 2000, also were serious attempts to widen the traditional discourse on education and to place it in a context of life long learning and life long education. These action plans are framed within a broad context of development which includes the different dimensions of food security outlined above. They do not specifically use the concept of food security.

There are many links between these different normative documents. This paper has identified some of these.

There are also tensions between the normative dimensions and the contribution of education and training to wider objectives related to food security. Learning has other objectives but the capacity to act. The relationship between education and food security at the national level is not one and clear cut. A strong belief in the right to education does not necessarily mean that learning will have these effects or that all education programmes will have an immediate impact on higher order objectives at the societal level. However, there are compelling arguments in the existing body of research to suggest a strong link between learning, education and the capacity that rural people have to improve their livelihoods. However, one step towards capacity development for food security at the level of international normative and policy frameworks would be to identify links and try to build bridges between them.

On this point, the late UN Rapporteur for the Right to Education, Katarina Tomasevski had this to say: “The building of bridges across disciplinary boundaries is therefore necessary, to transcend boundaries amongst sectors.”(Tomasevski, 2003, p. 1).

If interpreted in terms used for this paper, it is to say that the building of bridges at the normative level is a precondition for a closer connection between all those organisations that seek to link education and training to higher order objectives related to food security.

Learning relevant to improvement of food security takes place in many different settings, too many to be covered here. This section will only make some distinctions that are useful for the analysis.

The formal organisations include schools and universities. There are organisations for extension services, there are literacy programmes and networks of different kinds. From the point of education as organised learning, these organisations are two kinds. There are those whose main purpose is organised learning and there are those which have other mandates but put organised learning high on their agenda. This latter aspect is usually referred to learning within organisations. It applies to schools and universities, to Ministries of Agriculture and to Non-Governmental Organisations.

p.2).

FAO and UNESCO are the main organisations that have sought to establish and maintain linkages at the international level. There is fragmentation as well as alliances and networks, in a complex web, typical of the international community of today.

Improvements of the capacity of organisations related to education and food Security is a question of identifying and strengthening linkages both within and between organisations. How this can be done can only be answered in a contextual analysis.

8. The Education for Rural People Initiative as a bridge.

This section will comment upon the role of the Education for Rural People Initiative, ERP as a bridge between normative frameworks and organisations pertaining to education and food security. It is also a network for learning in its own right.

The background to the Education for Rural People Initiative.

It is against the broad context of this paper that the Education for Rural People, ERP should be seen. The ERP is a collaborative effort between FAO, UNESCO and the 363 partners who were members of the network by the beginning of 2010. It was officially launched during the World Summit on Sustainable Development, WSSD, in Johannesburg, South Africa in 2002. The ERP and WSSD partnership was launched at the request of and in collaboration with UNESCO through an intersectoral and interdisciplinary approach, issues which needed a combination of the comparative advantage of the two organisations. These areas included agriculture, biodiversity and education. The ERP is also one of the UNESCO flagships that were agreed as follow up of the Dakar Framework of Action relation to Education for All. (World Education Forum, 2000). Some of the recommendations of the World Conference on Education for All, WCEFA, the need to ensure basic education for rural people, were retained in the Plan of Action of the World Food Summit that took place in Rome in 2004. (FAO, 2004).

The ERP network with over 360 members is also an arena of research, policy dialogue and mutual learning. It has generated a lot of material, some of which has been used for this paper. It is also an important “modern” network of mutual learning across disciplines.

Comment

The ERP can be seen as one of many international networks, typical of the modern knowledge society. It has generated a lot of knowledge and it has served as a network for learning.

In a perspective of capacity development, it has been a way to develop the capacity of the individuals who have participated in the network through mutual learning. In some cases it has also done so through different forms of organised learning.

However, its mandate and ambition have been wider. It was set up to serve as a bridge between international normative and policy frameworks pertaining to food security and to education.

This paper is a contribution to this effort and the many seminars and other activities have also served the same purpose. It has been illustrated in this paper that there are many links that could be strengthened in various ways.

The ERP has also been expected to bring FAO and UNESCO closer to each other, and it has been expected to stimulate contacts across borders within the FAO. It is at this organisational level that the problems of capacity development have arisen. As was described in general terms in section 3 above, the emerging networking society is very often at odds with traditional hierarchical organisations. This is true for schools and for other organisations. Manuell Castells has shown, how the computer industry, through its emphasis on horizontal networks came to challenge organisations in other areas of production.

It is when the ERP is placed in this broad context that it is possible to see which its future challenges are. This is outside the scope of this paper.

9. Concluding comments.

This paper has identified linkages between learning, education and different dimensions of the concept of food security. It has used the concepts of capacity and capacity development as a lens. This means that the analysis has covered the issues dealt with in the paper from an individual, organisational and normative/policy perspective. Also, it has identified links that have existed for a long time between the different dimensions of food security and related knowledge areas and traditions of education and training.

It can be concluded that there are compelling arguments for the assumption in the FAO Policy on capacity development of a strong link between learning, education and the capacity of rural people at the individual and societal levels.

It has also been noted that there are strong links between international normative and policy frameworks. Human rights frameworks reinforce each other and so do international action plans in the fields of food security and education.

Rural people are far away from this international context but do come into contact with different settings in which organised learning takes place during their life-span. Adult literacy programmes and/or extension work may be their main contact with organised learning. Sending children to school is part of the survival strategy of many rural households. Farmers also learn from each other “over the fence.”

In this perspective, there is every reason to think in terms of life-long learning and education when it comes to organised forms of learning in support of broader strategies aimed at improvement of food security of rural people. Such a system would include both formal and non-formal education and it would transcend organisational borders.

The problems are mainly at the organisational level. All the different forms of organised learning that are relevant and important for the improvement of food security will partly be found at primary and secondary schools. They can also be found in literacy programmes, at universities and in extension work. There are non-governmental organisations working in the knowledge areas associated with food security. Some come under Ministries of Education, others are found in Ministries of Agriculture, in Ministries of Community Development, Ministries of Local Government and so on. At the international level there is a division of responsibility between FAO and UNESCO, just to mention one example. There are many others at the international level. A lot of relevant and organised learning is supported by these organisations. There is also an emerging networking society which offers new technologies and important opportunities for learning.

The organisational problems are eternal and endemic. There is no easy answer. This paper will not pretend to provide an answer. However, by using the capacity lens, it becomes even clearer that the improvements of the capacity of rural people for food security through education and training are strongly related to changes at the organisational level. This is where the main problem lies. The problems are not primarily at the normative/policy level. Nor do they have to do with rural people. They improve their capacity through learning whenever they can. Some of their learning will take place “over the fence.” Sending children to school is an investment and a way to mitigate risk. Adult education may offer some opportunities of learning.

This paper has also identified some world wide trends that way change the way that the linkages between education and food security are understood.

Starting with the perspective of rural people, their coping strategies are marked by diversification of their sources of income and the means by which this income is generated. One reason is that diversification is a way to mitigate risk but also to seize the opportunities that may arise. Diversification is also driven by increasing contacts and exchanges between rural and urban areas.

It has been argued in some of the material referred to above that this will enforce a more flexible and open ended perspective on learning. The same can be said about education and training as organised learning. There will be a need to identify and strengthen linkages between formal and non-formal education. Some important shifts have taken place in extension work which reflect experiences of how rural people learn and wider national and international strategies of change. For example, there will an increasing need for both functional capacities related to the management of natural resources.

It can be concluded that rural people see investments in education as part of a diversified strategy if they can afford it. A related question has to do with globalisation as an emerging and global knowledge society and how rural people will benefit from it.

The emergence of a global knowledge and networking society based on ICTs may change the context of information sharing and mutual learning among rural people in a dramatic way.

The results can be seen in their use of mobile phones but the implications for the understanding of these new trends are much wider. One question is how the emerging networking society will enhance the possibilities for rural people to access information and to learn? Will there be a shift of emphasis between formal, non-formal and informal education? Will more learning take place in non-formal and informal settings than before? If this is the case, then governments will have to review how education and training should be organised. At the normative level there is a strong connection between the ideas of emerging knowledge societies and the need for flexible and yet integrated systems of life-long education. The knowledge society will need individuals who are creative and ready to learn and to adjust to changing conditions and opportunities that arise.

At the same time there is a risk that new inequalities are created as a result of this process. It seems obvious from the above that a strengthening of the links between education, training and broader objectives and strategies related to food security of rural people should be part of an integrated analysis that seeks to identify the links between these areas of work. The section above has given some examples by way of illustration. A contextual analysis is required in each situation.

There are linkages at the normative level (the enabling policy framework) and there are serious questions about learning within all the organisations that exist. Many may not have learning as their main objective as have schools and universities. The real challenge, is not only to work across organisational borders but to identify the emergence of new settings in which relevant learning is taking place. By way of conclusion, it should be important to repeat what the late Rapporteur for the right to education, Katarina Tomasevski had concluded on the need for an integrated analysis.

She said: “The building of bridges across disciplinary boundaries is therefore necessary, to transcend boundaries amongst sectors.”(Tomasevski, 2003, p. 1). It is hoped that this paper will be a contribution towards such an integrated analysis.

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