

## Research Article

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# Sigrid Mari Gjotterud\*, Erling Krogh, Cecilie Dyngeland, Nicholas Solomon Mwakasumba

## Orphans as agents for change

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**Abstract:** Transformative experiences can happen at unexpected times, in unexpected ways. This paper tells the story of how a gift of a goat can lead to the transformation of a life. Many organisations globally are engaged in a struggle to overcome poverty and injustice by providing livestock as a means for transformation. The animals in themselves are not enough for the transformed lives; they can be a valuable starting point. In the Uluguru Mountains in Tanzania, a Tanzanian and a Norwegian together took one such initiative in order to support teen-age orphans, one of the most vulnerable groups in the community who were struggling to survive. As practitioners and researchers, the four authors had been taking part in the development of the Mgeta Orphan Education Foundation (MOEF), which had developed through action learning/action research. Selected students received a goat and training, and the opportunity to join and develop a network of orphans throughout the region. In this article, we discuss the benefits and challenges the orphaned youngsters face when joining the foundation. How do they benefit from having the goat and what are the challenges, how do they learn and how do they contribute to fellow farmers in their communities? We claim that many of the students have experienced transformation, and provide examples to give evidence of this claim. However, the students are not the only ones who are transforming; so are we who, as co-researchers, have had the opportunity to play a role in and witness their efforts.

**Keywords:** Action Research, Community Development, transformative research, transformative learning.

\*Corresponding author: **Sigrid Gjotterud**, University of Life Sciences, Norway, Email: sigrid.gjotterud@nmbu.no

**Erling Krogh**, Norwegian University of Life Sciences, Norway.

**Cecilie Dyngeland**, The University of Sheffield, Sheffield Institute for International development, Department of Animal & Plant Sciences, England.

**Nicholas Solomon Mwakasumba**, Mgeta Orphan Education Foundation (MOEF).

## 1 Introduction

We have witnessed orphaned students in Mgeta in Tanzania change from expressing powerlessness to radiating self-confidence, showing knowledge and skills as well as a willingness to engage in their community. Transformation within and amongst the youngsters makes a significant impact on their communities. Despite frequent obstacles and disappointments many of the students experience in their struggle to create a better life for themselves and each other, we have seen that they do not give up. The bonds forming between them, because of the way they are organized, seem to boost their belief that they can manage and overcome hindrances. Together they find their will and develop the skills necessary, in order to analyze challenges as well as possibilities in their local groups. The unity seems to strengthen their hopes and beliefs that even with the smallest resources they will be able to make positive change in their own lives, whilst caring for others. Their transformations, engagement and ability to influence their harsh situations also affects us as researchers. Working with these young people and their wise leader, invigorates our hope that it is possible to contribute to a sustainable future.

A primary aim of this article is to document how orphans can create and develop a dignified life in a very poor community, when they receive a goat, materials for a goat-shed and training for taking care of the goat. Equally important is to explore how Solomon, their mentor and MOEF manager, supports and facilitates individual and group learning, and how the group organization can foster self-esteem and social responsibility. We claim that the learning processes, along with the sense of belonging emergent through the fellowship and collaboration in the organisation and the groups, is transformative. Lastly, we will account for how taking part in these processes affect us as researchers and human beings.

## 2 Background

In this project various threads are woven together and can be said to be rooted in Julius Nyerere's Ujamaa policy

(Ahmad, Krogh, & Gjøtterud, 2014). Nyerere, the father and founder of Tanzania as an independent nation, used the extended family and African traditions for togetherness and cooperation as principles for the organization of Tanzania from 1960s and 1970s. Throughout this period, Tanzanian communities strengthened and elaborated their traditions of problem solving and collaborative learning.

The project is situated in Mgeta, a farming area in Uluguru Mountains in Tanzania. The Mgeta area consists of many small villages bound together with numerous small footpaths and roads barely driveable even in the dry seasons. Nyandira, the central village and market place finally got electricity in 2014. The other villages do not have any electric power. In this area, the farmers have a long history of gathering in democratic, self-driven farmer groups; through Farmer Field Schools (FFS) and the network of farmer groups in Tanzania (MVIWATA) (Lassalle & Mattee, 1996; Lassalle, Mattee, & Noy, 2003). Farmer Field Schools “provide an institutional platform where farmers meet regularly in groups to study a particular topic and engage in an action learning process that includes making regular field observations, relating their observations to the ecosystem, and blending previous experience with new information to make improved crop or livestock management decisions” (Duveskog & Friis-Hansen, 2009 p. 241). The groups address questions of a technical character as well as inquire into group dynamics and processes. Support and guidance is given by a facilitator; often an extension officer. Before the establishment of the orphan goat project, Solomon was an extension officer, and thereafter the leader of the regional extension and research center in Mgeta. Through this position, he coordinated and supervised about 35 farmer groups in UMADEP (Uluguru Mountain Agriculture Development Project), where farmers and researchers from Sokoine University of Agriculture (SUA) co-operated in action research approaches for sustainable rural development (Lassalle, Mattee, & Forster, 1995).

There is also a long history of collaboration between the Norwegian University of Life Sciences (NMBU), Norwegian Agency for Development Cooperation (NORAD) and SUA, introducing Norwegian dairy goats to farmers in Mgeta, starting in 1988 (Krogh, O., & Kifaro, 2007). Successful dairy goat keeping demands fodder production and continual caring for and milking of goats. This intensive animal husbandry is compatible with intensive horticulture, the agricultural tradition in Mgeta. Over the years, dairy goat-farmers have become numerous. In general, dairy goat farming has contributed to improved livelihood in the households, amongst other betterment

of nutritional standards (Eik et al., 2008). Dairy goats are valuable. Many farmers in the area aspire to save up and buy a dairy goat in the future (Tong, 2009).

Learning from the success of dairy goat keeping in Mgeta, Solomon and Erling in 2010 started a project that aimed to empower orphans by strengthening their self-reliance through loaning them a goat kid. Due to AIDS, there are several hundreds of orphans in Uluguru Mountains. The majority of the orphans stay with aunts, uncles or grandparents, but many reside alone. In the middle of their teens, they usually have to make their own living without further support from relatives. Therefore, Solomon and Erling thought that a dairy goat could be a gateway to self-sufficiency. In what follows we narrate, from our experiences, how the goats have become a key to the development of self-sufficiency and cooperation among the orphans. Gradually many of the orphans have improved their coping abilities and become young men and women of resource to their families, circle of friends and local community. In the light of this narrative, we discuss Solomon’s methods to empower the orphans, to a large degree based on his experience from coaching 35 farmer groups in UMADEP. The methods are equivalent to those applied in participatory action research (Fals Borda, 2001). Through the recognition of similarities, the idea arose to connect action research with the orphan goat project. We discuss the transition from social work to action research that Solomon and the action researchers from Norway co-created.

### 3 Solomon and Erling join forces

Solomon and I (Erling) met in 2006, when he became my interpreter during fieldwork among dairy goat farmers in Mgeta. We immediately struck a chord through our common engagement in the life, work and welfare of the dairy goat farmers. Throughout the following 10 years, we cooperated closely in dialogue with the dairy goat farmers; mainly through their organization TWAWOSE (Let us come together). From 2006, I travelled 1-2 times a year from Norway to Mgeta. When I arrived, we met to evaluate measures initiated and carried out since I last left. Then, we discussed and mapped new challenges, suggested new measures and revision of old ones. To promote initiation of smaller investments, for example simple machines or renovation of buildings, I donated money.

Just before my departure back to Norway in June 2010, an impoverished old woman accompanied by two grandparents, one of them mentally disabled, met Solomon.

Facing her miserable poverty, I asked Solomon if I could share my last few Tanzanian shillings with the woman. “Wait. Let’s talk”, Solomon replied, as often before. The result was a dairy goat project for young orphans. We decided to loan a female goat kid to a number of vulnerable orphans. Solomon would teach goat keeping to the orphans. No orphan would receive a kid before building a shed by themselves. We drew up an agreement to reserve goat-farming incomes for the orphan. The village council, the guard of the orphan and the orphan were the signers of the agreement.

A proverb, reputed to be Chinese in origin, inspired our project: “Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime”. Norwegian donors financed goat kids, building materials and Solomon’s salary. To strengthen the project’s sustainability and the social responsibility among the orphans, every orphan had to pay back their goat loan by giving their first newborn female kid to a new coming orphan goat farmer. Solomon instructed the pioneer group of 16 orphans to teach the new novice orphan goat farmers. He also organized self-regulated hamlet groups where the orphans discussed and managed challenges and supported each other. Every month all hamlet groups gathered to learn from each other, mostly through discussions of challenges faced, and presentations of solutions. In the groups and gatherings, they kept minutes to document their discussions and decisions.

Throughout autumn 2010 and winter 2011, I received encouraging feedback from Solomon and the orphan goat project. Coping is a weak description. The orphans rapidly seemed to master both dairy goat keeping and a harsh environment. At the same time, I advised my close colleague Sigrid, who was in the final phase of writing her PhD thesis. She led a co-operative action research process, where we as a group aimed at improving our practice as teacher educators (Gjølterud & Krogh, 2012). The orphans followed equivalent procedures. Throughout Sigrid’s doctoral project, I realized how my relations and emotions towards the colleagues changed and deepened as we gradually opened to each other. Concomitantly, our knowledge and skills in advisory work became more precise, flexible and deliberate. Solomon reported on similar results on both dairy goat keeping among the orphans, and on social responsibility between orphans, and between orphans and their local communities.

In accordance with Buber (1937) and Walton (2014), Sigrid emphasized how humans come to be and develop through encounters, how emotions and comprehensions change among action research participants, and the

importance of making these changes visible through our texts. The orphan goat project needed Sigrid, and in the summer 2011, she joined me in Mgeta to meet the first orphan group of dairy goat farmers. We visited several of the young farmers. During every visit, I had to fight back the tears. The changes from the year before emotionally affected me. The powerful bodily attitude of the youths, the glow and clearness of their gaze, and their security in choice of words and statements showed both professional pride, self-confidence, determination and consideration. Some of the orphans emphasized that they had experienced acknowledgement in the local community (Interview with Grace, 16.06.2011).

## 4 Sigrid meets the orphan project through Bosco

It is June 2011, my first visit to Tanzania. I am awe-struck by the beauty of the nature and I am equally devastated by the poverty I see everywhere. After a couple of days in the city of Morogoro, we travel into the mountains. On the map, it is a short distance. With a powerful 4WD on the rocky path which had little resemblance to a road, climbing to an altitude of 1600 meters, and leaving electric power behind, it takes nearly three hours to get to the village of Nyandira. Outside the small library, which Solomon established for the orphans with support from Norwegian donors, I meet a young man who greets me from his heart. His name is Bosco. He invites us to come to his house to see his goat. He is such a proud goat owner.

Bosco has been the head of his family since he was a little boy, taking care of his ill mother and his younger brother after his father died. Aged 23 years, he is older than the other orphans in the project. His dream is to become a doctor or veterinarian, but he has not been able to complete secondary school. He shares this fate with most youth in the area. Completing school is almost impossible as the resources are scarce and often hunger prevents learning. Besides, there are too many duties at home, as the family depend on him for farming the little plot they own. The list of hindrances is long. Yet here he is, proudly showing us his healthy goat in a well-built shed. Filled with hope for the future, Bosco accounts for his newly acquired knowledge, his relation to the goat, and how his mother also relates to the goat and helps him. Here is a passage from a letter given to us on my first visit to his home in June 2011 (Figure 1):



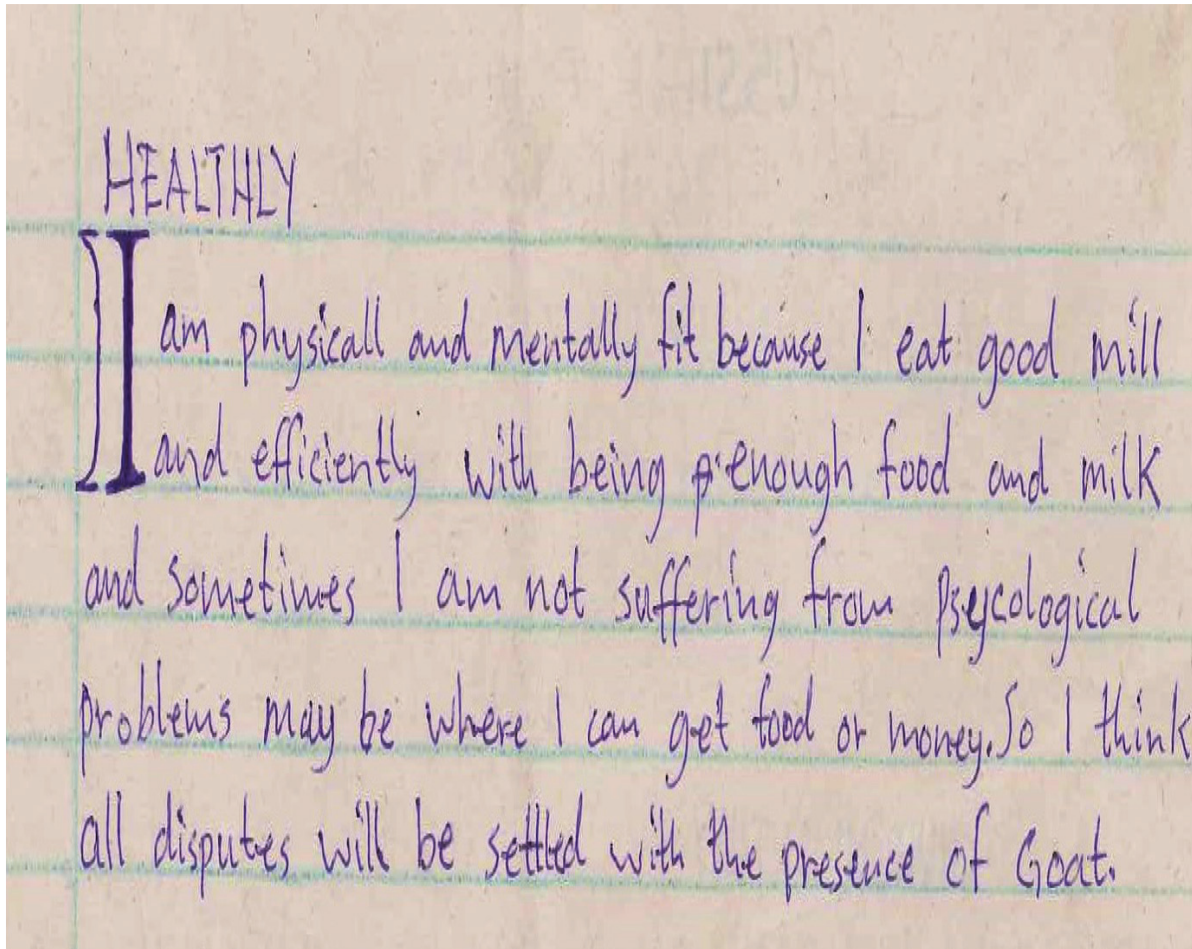


Figure 1: A passage from letter, June 2011.

It made a deep impression on me to meet this enthusiastic young man. Many of the students we talked to told us similarly optimistic tales as the one told by Bosco. As happy as I was to hear their tales, I got an uneasy feeling that we were not catching the whole story. We were representing the donors, and Bosco and his peers wanted to express their gratitude. I felt a need for us to find ways of critically reviewing the real benefit of the goat for these students. Obviously, not all disputes would be settled with the presence of the goat, as Bosco hoped. These feelings prompted the action research project, attempting to sustain and further develop the successes, but also to reveal the challenges faced in the project. Hence, when I received a research grant from NMBU in 2012, we established Community Development – Goats for Orphans and Action Learning (the CD-GOAL research project) in connection with the MOEF, formalized as a collaboration between NMBU and SUA.

## 5 Transformative action research

Although the project did not set out as action research, it had followed the path of action research, starting with the question: “How can we improve our practice?” (Whitehead & McNiff, 2006). Solomon, first in cooperation with Erling, involved the orphans democratically, and conducted continuous cycles of planning, acting, reflecting on effects, and re-planning (Kemmis & McTaggart, 2005). Later, research assistant Cecilie and Sigr d joined in the common effort to enhance the practice of supporting the orphans in their struggle for a better life. Transformative research is not a methodology but rather an orientation towards research, the aim of which is to contribute to a more just and equitable world (Malcolm, Gopalb, Keanec, & Kyle, 2009, referring to Bennet deMarris, 1998, p. 65). The project “aimed at making research an agent of transformation in the rural community”, as Swantz (2008, p. 33) states as characteristic of participatory action research. Thus, we framed our study as participatory and transformative research. The roles of the researchers varied, as

Solomon continued to be the practitioner working directly with the orphans. Cecilie collaborated with Solomon and the orphans for more than one year, as well as with us university researchers. The orphans collaborated within and between their groups. Erling and Sigrid visited the area two times a year. Our role was to discuss with Solomon and Cecilie, talk with the orphans, and sometimes take part in their meetings. Furthermore, we met with village leaders, teachers and guardians. All these activities generated data, as we were keeping field notes from all activities, and the orphans themselves kept records from their meetings. The research grant made it possible to pay for the translation of these records, as well as minutes from other meetings with the orphans (from Swahili to English). Cecilie (who speaks Swahili) interviewed most of the 60 orphans who were members of the foundation in 2012 – 2014, often in collaboration with Solomon.

Besides the role of researchers, the three of us played a role in organizing donor funds for the MOEF (money for goats, sheds, and salary for Solomon etc). Due to our numerous and complex roles, including being discussion partners, facilitators of measures and actions, and organizers of financial support from donors, we wanted the orphans to discuss opportunities and challenges of the project independent of our opinions and suggestions. We regarded such independence both as a key for orphans' project ownership and influence, and for the reliability of our understanding of orphans' perception of the project. Therefore, we initialized preparations for a conference and encouraged the orphans to analyze critically the benefits of being members of the organisation, but also looked closely at the challenges encountered. Data from planning and running the conference have played an important role in informing this article.

In line with Malcolm et al. (2009) we found that anonymity was not an issue. The participants agreed to us using their stories and names.

## 6 Benefits and challenges in the project

In this section, we will present the main findings. First, we discuss apparent benefits in four main categories, followed by challenges summarized in table form. In looking at the benefits, we begin by addressing the quality of the group meetings. Second, we look at how the orphans are researching their practice as dairy goat farmers. Third, we elaborate how the orphans have taken on the

responsibility of teaching in the schools and communities in the area. Fourth, we give an account of the development of social responsibility.

### 6.1 Monthly meetings – problem solving and support

The monthly meetings in the groups “are held for the purpose of evaluating the development of our group as well as the successes of the project” (3 months report from MOEF January to March 2014). The orphans use the meetings to reflect on their development and achievements and for problem solving. On reflecting on their own attendance and the processes in the group, Juliet said, “I like to discuss with people and try to find a solution on how to solve present problems”.

Present problems and goat management are connected. The orphans keep records of the welfare of their goats, feeding, and illness, which are main topics for discussion. One group reports, “We have agreed that those who do not have sheds should construct them, and our agreed deadline is December 27, 2013. We agreed that everyone should grow the fodders like Rosina. We also agreed that every group member should plant at least five trees so as to conserve the environment” (Kilkeo group, December 13th, 2013). Emmanuel pointed to the good cooperation and interaction with the group members. He said, “We encourage each other to reach our individual goals and to improve our goals”. (From interview with Tchenzema group November 10, 2013). Through deciding common deadlines and identifying examples of successful goat management, the orphans encourage each other and share good solutions. In addition, care taking for their environment becomes an important issue, prompted by Solomon.

The systematic sharing of experiences, learning from each other and mutual problem solving, is consistent with action learning as described by Revans (1998), and in line with the structure of Farmer Field Schools. The groups offers a space where both learning farming skills, and social learning such as giving support and advice, take place. The goat is their uniting factor, creating the grounds for belonging.

### 6.2 Orphans as researchers and social entrepreneurs

Bosco discovered that when his goats were eating the root (onion) of a starry grass he had uprooted, because the

grass had no nutritional value, the goats started to yield more milk. His meticulous recording and an inquiring mind brought forth this new knowledge, which might be of significant value to the area.

Bosco was not the only researcher among the orphans. In Tchenzema Emmanuel, Eston, Jessica and Juliet initiated and carried out the meticulous task of making records of all their neighbors' goats; what kind of goats, fodder and amounts of milk. When interviewing the four in May 2013, they had visited 60 farmers in their limited free time. During farm visits, neighbors would usually come and listen. As well as wanting to assist their neighbors, they also emphasized that they hoped to benefit from the more experienced farmers. After their visits, the four students reported to have observed healthier animals and increased milk production.

"The appearance of the goats are improving – before you could see they were not so healthy or productive but now they look good. There is also an attitude change of dairy goats – before people didn't even think of building good sheds or giving concentrates but after talking to us they improve and start doing these things." (Interview with the four students from Tchenzema 10.11.2013).

As a preliminary conclusion to their systematic study, the group identified the main challenges for successful dairy goat keeping in Tchenzema, and suggested actions to manage and overcome the challenges. The Tchenzema group developed skills as reflective practitioners, documenting their own story in accordance with principles for action research. Their efforts and systematic work inspired the other orphans in the foundation, as well as improved the livelihood in their small community.

### 6.3 Orphans as teachers and school developers

Solomon encouraged the orphans to use and develop their knowledge to the benefit of the society. Involvement in the schools was a main contribution. From a three monthly report, January to March 2014, we gained an overview of activities conducted in the groups:

- Trainings at Kikeo secondary school
- Sending goats to Kibuko
- Trainings at Lukunguni primary school
- Sunflower cultivation at Kibuko primary school
- Planting of trees at Kibuko

In this period, the groups were teaching agriculture and dairy goat husbandry in two schools. Furthermore, they

planted trees, necessary for environmental protection against erosion. They bred the goats, which the project provided to schools who wanted to keep goats to help feed the children. Through their efforts, the orphans contribute to realizing school-feeding programs where pupils grow their own vegetables, using manure from their own goats.

In October 2013, we met Bosco at Kibuko primary school. He constructed the common goat shed at the school and even sawed some boards from a tree cut on the school property. The school had not received the promised amount of timber, and Bosco was unhappy with the dishonesty involved. One day he neglected his own field, and walked for three hours from his home to the school, where he worked for several hours in the sizzling heat. Later, he walked the three hours back home. Although not everyone invests this much in the project, many do. When asked why he was donating his time and efforts, he answered: "I am being helped by others so I have also to help others. I really enjoy and feel proud of my work." (Bosco, interview 15.10.2013)

From January 2014, Bosco and three other orphan dairy goat farmers attended a two-year vocational education program in Kibaha outside Dar Es Salaam. In January 2015, 4 other orphan farmers joined, all of them financed by Norwegian donors. The eight orphans have trained and taught goat keeping to almost 2000 pupils in Mgeta primary and secondary schools, focusing on the involvement of pupils and experiential learning with Solomon's practice as an example. When teaching pupils and farmers together in the remote village of Lukunguni, a District Education Officer joined. The orphan students' teaching skills impressed the officer, who burst out: 'Solomon, you know these are really teachers! I will present this during the meeting at the district'. The education officer suggested they teach all the schools in the Mvomero district (more than 100 schools) (from recorded talk with Solomon 20.11.2014). The application of experiential learning is radical in Tanzania educational system, which is normally characterized by one-way communication where the students become passive objects for receiving and containing static and often meaningless knowledge. Emancipation involves believing in the students' ability to solve real life problems, and thus teaching through dialogue and problem solving (Freire, 2000, p. 63). The orphans' teaching is showing how this is possible.

### 6.4 Orphans giving back

Many of the orphans have developed skills as action researchers and teachers. When facilitating teaching and



researching among orphans, Solomon has stressed the significance and the value of reciprocity, and the importance of both receiving and giving. Thus the orphans have shared what they have received, both within the groups of orphans and in the local community. Solomon also has emphasized the necessity of a solid conduct of life to manage a harsh environment, for example through avoiding drugs and alcohol, doing hard work, and being honest and reliable.

A reciprocal principle underlies the orphans' participation through the building of a hostel for vulnerable girls in Luale in the Uluguru Mountains. The pupils from remote villages have long walks to reach Secondary School, often 2-3 hours in each direction. In addition, girls have more duties at home, and they are more exposed to abuse than boys are. When Norwegian donors suggested building a hostel for orphans close to Kikeo Secondary School in order to improve the situation for them, the local communities, included the orphans themselves, decided that only girls should be hostel residents, and not only orphans. Yet, the boys would also benefit from study areas with solar panels. The building process started in November 2014.

When the eight Kibaha students returned to Mgeta from the beginning of December 2014 for the long Christmas holiday, each of them had to commit him/herself to make 1000 building bricks. The prospective dwellers of the hostel each committed themselves to carry 200 buckets of feldspar soil for bricks making, 100 buckets of sand for concrete mix and 1 cubic meter of stones for concrete. In addition, Solomon asked all orphan dairy goat farmers to participate in carrying soil and sand to the construction site. Furthermore, pupils from three remote primary schools with potential future hostel dwellers spent several days carrying soil and sand, up to 160 pupils per day.

Before returning to Kibaha at the end of January, Solomon and the students arranged an end-of-term ceremony on the construction site. All Kibaha students had managed 1000 bricks, working for 2-3 weeks in groups. The students slaughtered and prepared a goat, and many other orphan goat farmers participated during the celebration dinner. During the dinner, Solomon invited each of the orphans to reflect on what they had learnt by participating in the building process. Kibaha student Mary Charles said:

"Making bricks together in groups has been both strenuous and enjoyable. Every day I have become full, not the least today after this abundant celebration dinner (laughter). Through teaching in the dairy goat project and making bricks as the hostel arises, I have realized the importance of beneficial actions for others as a prerequisite for society development and betterment."

Kibaha student Happy added:

"Persons from Europe have travelled to Mgeta to build a hostel for local girls. Their motive is to assist the girls to attend Kikeo Secondary School. I have learnt that helping others can go beyond family, friends, neighbors and hamlet inhabitants, and include people far away whom I do not know at all. Helping others has no limit. For me, this thought is new."

Solomon used the feast as an opening to facilitate the orphans' reflection on social responsibility. For him, the purpose of 'reflection on actions' is not limited to improving a new action. Even more important is the opportunity to develop attitude and character, including the inner drive and values behind a choice of actions. He focuses on empowerment and fostering self-esteem and social responsibility among orphans, and, in addition, how orphans interacting with others can develop and strengthen humanity in everyday local life and work.

## 7 Challenges calling for new actions

To explore the challenges as experienced by the orphans, we held a conference in June 2014. All the orphan dairy goat farmer groups agreed to participate and take part in planning the dialogue conference (Ahmad, Gjøtterud, & Krogh, 2015). During home visits in 2012, Solomon asked the members to record the challenges they faced in their daily lives. The orphans themselves ranked and discussed the challenges in a yearly meeting where all groups were gathered. Almost two years later, we asked them to reflect on these challenges, the solutions they had suggested, and which challenges were still present. Representatives from the local groups discussed these matters in two meetings prior to the conference (09.03.2013 and 03.05.2013). Solomon and Cecilie were guiding both meetings. These discussions laid the grounds for the conference.

The main challenges identified (data from 2012, the two meetings in March and May 2014, and the conference May 2014) can be divided into three categories as shown in the table below (Table 1): problems at home, in school and with the goat. Time constraints, lack of material resources and lack of psychological support are three main hindrances.

**Table 1:** Challenges as experienced by the orphans.

	Time constraint	Material hindrances	Psychological hindrances
SCHOOL	Long distance from home to school Few possibilities for further education and work outside agriculture after Form 4	Inadequate number of teachers, especially science teachers, at school Few text books, often less than 5 per student Shortage of laboratory tools which deprive learning science subjects	Shame and downheartedness due to suspensions of students who do not pay different school contributions Worries due to teachers' neglect or failure to create conducive studying environments
HOME	Multitude of challenges and problems facing the family at home Time-consuming home responsibilities keeping them from home studies	Unavailability of text books Lack of money to buy kerosene oil prevent home studies after sunset at 7 pm	Discouragement through offense from the community and even family members after bad results from national examination Resignation due to lack of encouragement and support from guardians despite hard work
GOAT	Time-consuming care for the goat before and after school	Lack of money for buying supplementary goat fodder Some of the goats do not deliver milk as expected	

Heavy workloads at home, long walking distances and lack of money for kerosene prevent the orphans from studying at night, and so do lack of books. Hence, the situation at home affects the school situation. The schools lack both teachers and study materials. In four secondary schools in Mgeta there are only two science teachers. Both guardians and teachers seem to give less priority to and even discourage orphans, although they try hard to study. When failing to do their homework, the teacher may remove a pupil from the classroom and set him/her to do heavy labor on the school grounds. The strain further prevents the orphans from studying. Interestingly, no one mentioned hunger, even though this is known to be a common issue in school, further hindering learning. Because of the challenges explained, only a small minority of orphans advance beyond Form 4, with many failing to get that far.

Another main challenge discussed, was lack of work opportunities after finishing school. Besides farming, few employment opportunities exist in Mgeta for young adults (without specific skills). Some orphans who have left school explained that they were bored with the "street life", and were discouraged by not being successful at creating a livelihood for themselves. The orphans acknowledged that there are some economic opportunities, and therefore emphasized an urgent need for entrepreneurial training and support.

Even the goat can be a burden. It takes months from receiving the kid until it delivers and can give milk.

Meanwhile the goats need daily care, supplementary fodder and sometimes medicine, which cost money the orphans do not have. Furthermore, the orphans have agreed on giving back the first-born kid to a new orphan goat farmer. Thus, it takes a long time before the goat gives any income to the orphan.

The orphans discussed what matters they could address themselves, and we discussed what we as researchers and donors could do. First, we arranged a meeting with teachers from the secondary school (14.03.2014), to discuss and raise awareness of the orphans' situation. Second, we raised the donors' share for giving one goat, so that money could cover basic medicines etc. Third, the donors provided a Microfinance so that it could be possible to start small enterprises. One suggestion from the orphans was to provide for some chickens as well as a goat, as they are quicker to give food and income. In December 2014, MOEF bought an incubator. For the time being, the orphans are breeding chickens that can provide eggs for the incubator.

The orphans said they would try even harder to support each other, studying together and economizing the goat hold by taking turns caring for each other's animals. They had numerous ideas for small enterprises they could take on in order to get money needed for school supplies and light. Furthermore, they pointed at insufficient reception and treatment of the milk, causing problems not just for them, but also for all dairy farmers in the



area. These are just a few examples of their situational analyses. Almost every orphan in MOEF attended the conference, and they all contributed to the analyses, presentation and discussions.

There has also been an issue of mismanagement of money. One of the orphans was responsible for the micro bank. She was tempted to borrow money for her own project, money that was then lost. Solomon addressed the serious incident, and the group discussed the consequences. The girl had to pay back the money over time, and the orphans decided to change the routines through sharing responsibility for money keeping and transactions. This is another example of participative solution seeking.

## 8 Transformations

In this section, we will first discuss the transformations we have seen in the orphans, and the impact on the communities in light of transformative learning theory. Then,

we will reflect on how the project influenced ourselves in light of some aspects of action research philosophy.

We will not linger on the misery of the orphans' backgrounds. Yet, it seems necessary to inform the reader that only the most vulnerable qualify to receive a goat. A deficient home environment, including abuse of the orphan or a lack of basic resources, which forces the orphan to steal food to survive, is a common situation. The village council has participated in setting criteria for attendance.

### 8.1 Recognition, self-esteem and self-efficacy

In numerous meetings with the orphans, we have seen evidence of raised self-esteem and self-efficacy because they have acquired knowledge and skills that are valuable in their community. The demand for them to serve as teachers in a number of villages obviously is a recognition of their proficiency. Where they were previously a burden, they have become valuable resource persons. Bosco said he was proud of his work when building the goat shed in Kibuko. The four researchers from Tchenzema tell about

Table 2

The self-transformation of the orphans' lives			
	Phase entrance	What happens?	General characteristics
Phase 1	You hope to receive a goat	Observation of other orphans receiving a goat. Expectation of forthcoming allocation of goats.	<i>Awakening of motivation</i> based on expectation
Phase 2	You get confirmation about being chosen in forthcoming goat allocation	Meetings with Solomon, other orphans, dairy goat farmers and goats. Signing of agreement with request of building goat shed	<i>Connecting and relating</i> to significant others and their goats <i>Awakening of will power</i> through execution of a required task
Phase 3	You receive and have to keep the goat kid	Receiving instruction in goat keeping. Learning by trial and error. Problem solving in orphan groups	<i>Goal-conscious and will developing</i> task accomplishment. <i>Empowerment</i> through group work and group support
Phase 4	You manage goat keeping	Skillful dairy goat keeping. Elaboration of problem solving in groups. Significant others recognizes orphans' competence	<i>Mastering</i> , manifested in own experiences and confirmed by social recognition, that fosters self-esteem and self-efficacy
Phase 5	You take mastery into your heart	Intrinsic emotional and mental movement.	<i>Reflecting</i> released by mastering, empowerment and self-efficacy
Phase 6	You want to improve	Increased openness for transitions and change Evaluation of own goat keeping. Adjustments and betterments. Planning of new activities	<i>Realizing</i> «I can and I can change». <i>Improving</i> <i>Projecting</i>
Phase 7	You will change	Initiation of new projects	<i>Creating</i> and re-creating

their pride and happiness when they saw the farmers recognising and accepting their ideas. At first, the villagers met them with scepticism: how could an orphan teach experienced farmers? However, after a while, the farmers waited for them to come, asking, “Why have you not come to visit me yet, but you have been to all these others?” This makes them “feel really good.” (Interview with Tchenzema group 10.11.2013). The four young students express here a transformation from being of less value to becoming resource persons in demand in their village. Their knowledge, their initiative and motivation change their status.

In the same interview, Emmanuel expresses a hope we have heard from many, that the goat will assist him in getting further education, in that it will provide money. However, the goat: “is not only for my further education but for my life. If I cannot continue with any studies, my life will still be better because I have capital with my goats. I should keep them well so that I can get money to build my own house.” (Interview with Tchenzema group 10.11.2013). Hence, management of goat keeping nourishes the orphans’ hope for a decent living. This too, raises their self-esteem built on self-efficacy.

Through our participation in the project, we have observed an amazing empowerment among and within the vulnerable youths. In the table below, we have identified different phases or stepping-stones in the orphans’ self-transformation of their own lives.

The orphans’ self-transformation relies on subsequent phases where actions and the psyche of the orphans mutually reinforce each other. Motivation, connection, wilful actions, and mastering are prerequisites for reflexive transformation and achieving potential. The inner process is dependent both on relations to significant others, and to the goat. Social relations, through action learning in groups, and recognition among hamlet dwellers, are just as necessary for self-transformation as the physical relations to the goat and environment, and the inner motivation and drive of the orphan.

Furthermore, for the orphan dairy goat farmers, self-transformation seems to be dependent on certain *transformative tools*:

- access to resources that makes change and improvement possible
- acquiring of skills to utilize resources for change and improvement of the situation
- sharing of knowledge and skills that are meaningful to yourself and others
- vigour and realization of own and others’ ability to manage situations through action
- contextual and applicable analytic capacity; analyze situation, plan, find measures, carry out actions,

evaluate results and their consequences – both alone and together (Table 2).

Prior to joining MOEF, their poor circumstances defined and limited the orphans’ lives. Their stories tell about low status, abuse, little hope and low self-esteem. The dairy goat project opened up the possibility for development of 1) Self-reliance by acquiring knowledge and skills to utilize a concrete resource, that is the goat, and 2) Social empowerment through group formation of equals with support from mentors and from each other, which is important when things get tough. From a donor perspective, supporting money for a goat is a small investment, but the goat definitely is the key to a changed life, and the social relations and attachments give the power to transform. The orphans get the opportunity to move from helpless victimization to humans with possibilities to create a better life for themselves and for others. Their identity changes. School attendance does not seem to provide the same opportunity to build necessary competencies (Ahmad et al., 2014), and hence does not promote transformative change of identity.

We agree with Illeris (2014) who claims that transformative learning includes “all learning which imply changes in the learner’s identity” (p. 67). Individualism is a core cultural value of the western part of the world. Hence, there is an increasing demand on the young generations to choose and create their own identities (p. 99). In Tanzania, material resources are extremely scarce when compared to the western world. Therefore, the ability to transform your own situation is often dependent on support from others.

In any society, identity necessarily is a relational phenomenon. Humans cannot understand themselves independent of their relations to others and to their environments. Even in western societies, individualization is strongly dependent on social confirmation and recognition and on the material conditions for western life. For powerless groups with scarce resources, common efforts and enterprises often is a gateway for the individual opportunities for empowerment and transformation (Freire, 2000).

What we have witnessed is mirrored in Berger and Luckmann (1984), when they write about the societal influence on the individual identity and vice versa:

Identity is formed by social processes. Once crystallized, it is maintained, modified, or even reshaped by social relations. The social processes involved in both the formation and the maintenance of identity are determined by the social structure. Conversely, the identities produced by the interplay of organism, individual consciousness and social structure react upon

the given social structure, maintaining it, modifying it, or even reshaping it (p. 194).

The orphans have been encouraged to take on responsibilities of contributing their time and knowledge in return for the start capital given to them. They acquire attitudes through the reciprocal receiving from others and giving back to the community. As we have shown, they have grasped the challenges given to them, but they have also created their own initiatives. By these acts, they are modifying, and we see some evidence indicating that they are even reshaping, their communities by bringing in new knowledge and by renewing teaching methods. When meeting these young people, there is nothing to suggest they are victims. For example, they decided to provide a goat for the meal feeding 70 people at the conference in May 2014. Donor-money could have provided the food, but they were happy and proud to provide the food themselves. For the surrounding society, the orphans' transformation from lowest status to become teachers and moral idols foster hope for the future.

## 8.2 We are influenced too

Travelling between Norway and Tanzania for many years, Erling experienced increasingly more difficulty with the material differences between himself and Tanzanians, insisting that every human is equally important, yet earning 200 times more a year than an ordinary Tanzanian agricultural labourer. Similarly, Sigrid experienced the encounters with the orphans and other members of the community as disturbing. On the other hand, coming from the outside, Sigrid observed Erling's and Solomon's enthusiasm and the wish to support fellow human beings. The grounding values of hope and love transpired from their research and development practices. These are values to which Sigrid also holds herself accountable, referring to Whitehead (2006) when he states the importance of making our values conscious so that we are able to live them as fully as possible. When we met Cecilie, we all immediately realized that she shared the same values and the wish to act.

Mutual respect characterizes the collaboration between us. We lift the spirits of each other, we laugh a lot and we always come up with new ideas when we meet. There is usually a short timespan between an idea being born, when considered fruitful, until it is set in action. Together, we become creative and vigorous. Walton (2014) argues that

"there is an urgent need to radically evaluate the research methods we use, and to create new and transformed research methods which will address, at an individual and collective level, the urgent social, ecological and economic crises that threaten our human existence" (p. 41).

Our encounters, based in values of love, respect and a shared hope for a more just and human world, lie at the heart of the method. The shared values and wish to contribute to an improvement in the situation, creates a secure ground for creativity. This was important to Sigrid, who had little experience with the African culture and context, and therefore was cautious and rather anxious. Could our white interference create problems at any levels? Would the orphans feel free to critique or raise challenges? We continually discussed such issues with Solomon.

Walton (2014) points to the lack of research, which reveals how the researchers themselves are being affected and transformed by the research process. Furthermore, the physicist David Bohm (1988) emphasizes that research "should not separate matter and consciousness and should therefore not separate facts, meaning and value" (p. 60). Encouraged by these scholars we highlight how love and joy is at the heart of our research, along with the call for action coming from "the others' face", as expressed by Levinas (1991). This call often brings tears and despair, as we see the orphans hungry, cold and sometimes disheartened by, for example, the demands from school. Usually, though, this has led to an even more urgent probing for actions and solutions. We believe that research has the potential of bettering the world, when we allow ourselves as researchers not to separate facts, meaning and value.

In our encounters with the people in Mgeta, and in particular the orphans, we have all been touched. When visiting the orphans in their homes listening to their tales of raised value and self-esteem, when attending their meetings witnessing their will to learn, when listening to their analyses and reading their accounts, and observing their apt teaching, we have shed tears of happiness, and pride.

The orphans in Mgeta have taught us that humans can empower and transform themselves given key resources. Potentially, orphans can be actors for improvement of their own situation, their local communities and their environment. We have the same opportunities as humans and researchers. By listening to what goes on and what matters together with our action research partners, we can find shared understandings of what is important and how to manage challenges. We have both experienced an ignition within and an empowerment among the orphans in Mgeta. The ignition inspires us to search and realize our

own fire when meeting others in contributing to the creation of a better world.

## 9 Conclusion

One of the biggest surprises when starting to analyse the data, was how little economic benefit the goats were giving most of the orphans. The intention was that the goat should provide for better nutrition in the families, and that the sale of milk would be sufficient to provide education. These expectations proved unrealistic. On the other hand, what we had not anticipated was how valuable the training proved to be. Neither had we foreseen to what extent belonging in the groups could enrich the lives of the orphans and their communities. We have shown how the project enables the orphans to develop transformational tools such as grounding principles of participatory action research that is empowering, because it helps identify areas of problems they can influence and solve themselves, given a small amount of resources to start with. Through the unity of the groups, their strengths and abilities to contribute to the development of their communities have emerged.

According to Heron and Reason (2008) practical knowledge might contribute to “increased well-being – economic, political, psychological, spiritual – of human persons and communities, and to a more equitable and sustainable relationship with the wider ecology of the planet of which we are an intrinsic part” (p. 4). By making our experiences public and open to critique, we hope that this project will contribute such practical knowledge, and that the achievement and transformation we have witnessed in these young people will inspire others. The economic input is minimal, but the outcome in the sense of changed lives is immeasurable. Yet, the money would be of little help, if there had not been the structure of the MOEF, with its learning and support groups, with the training and demand for putting acquired knowledge to use for the community. Furthermore, this would not be possible without Solomon, or someone like him. In addition, we believe that our role as co-creators and action researchers has contributed through providing an encouraging affirmation to Solomon, which has been an important element in sustaining his commitment.

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