Structure, Function and Impact of Lifelong Learning Using ICT and ODL

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Based on a study conducted by
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Introduction

The Commonwealth of Learning (COL) is an intergovernmental organisation helping governments, civil society and the private sector to harness Information and Communication Technology (ICT) and distance learning to improve access to education. COL believes that learning is the key to sustainable development and it can play a key role in economic growth, social inclusion and environmental conservation. It develops models which can then be replicated and scaled up by various stakeholders.

Education and Lifelong Learning

Sustainable Development Goal 4 (SDG4) envisages ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. However, both in terms of target and indicators, the emphasis seems to be more on formal education. The reference to lifelong learning has been minimal when one perceives it as a concept of "from cradle to grave" blending formal, non-formal, and informal learning. OECD argues that "the recognition of non-formal and informal learning is an important means for making the 'lifelong learning for all' agenda a reality for all and, subsequently, for reshaping learning to better match the needs of the 21st century knowledge economies and open societies " (OECD, 2010a). It further points out that "Non-formal and informal learning – learning that takes place outside formal education institutions – can be a rich source of human capital. Recognition of non-formal and informal learning makes this human capital more visible and more valuable to society at large" (OECD, 2010b).

SDG4 rightly talks about literacy and numeracy since worldwide 780 million adults and 103 million young people (ages 15–24) are illiterate (UNDP 2015). While literacy is a very important area to address, equating adult literacy to adult learning or lifelong learning may not be the right approach. Preliterate societies, in spite of the lack of written forms of communication, were learning societies as pointed out by anthropologists and sociologists. Bond (1986) in his study of a preliterate society in Northern Zambia points out that learning was taking place without a formal education system, since "education was embedded in the very fabric of social relationships" (p. 251).

One of the themes of this presentation is that the lifelong learning approach need not be a linear process of literacy-formal education-non-formal learning-informal learning. The presentation argues that formal and non-formal should be treated as a continuum and not to be seen as a dichotomous

model. The non-formal and informal learning can take place even without formal education and literacy. The other important theme which needs careful attention in the context of the SDGs is the ability of education and learning to create economic, social and environmental externalities without which SDG4 will not be able to influence other SDGs. The optimism on the positive returns on investment in education is being increasingly questioned. Pritchett, in his analytical study, argues that formal education "contributed much less to growth than expected" and called for reformation so that "investments…in cognitive skills pay off" (2000: 28,29).

Transition to Lifelong Learning and the Role of Open and Distance Learning

Lifelong Learning can become a reality only when formal education, non-formal learning and social learning are integrated effectively. Referring to the diversity in the definitions of lifelong learning, the 2001 Beijing International Conference on Lifelong Learning points out:

> Many are still unable to distinguish between lifelong learning as a common sense principle—of learning from the cradle to the grave — and lifelong learning as an educational principle that has to be realized in policies, programs and projects. One of the main challenges in this area then is to clarify the assumptions underlying the use of this concept (Medel-Añonuevo, 2002, p. xx).

Lifelong Learning is an integration of three theoretical perspectives: pedagogy (theory of teaching), andragogy (theory of self-directed learning) and heutagogy (theory of self-determined learning (Kanwar et al 2013).   Blaschke (2012, p. 60) citing Canning (2010) points out that the heutagogical approach can be viewed as a progression from pedagogy to andragogy to heutagogy, with learners likewise progressing in maturity and autonomy. Based on this premise, Blaschke has offered a framework in the form of a pyramid which reflects the lifelong learning process:
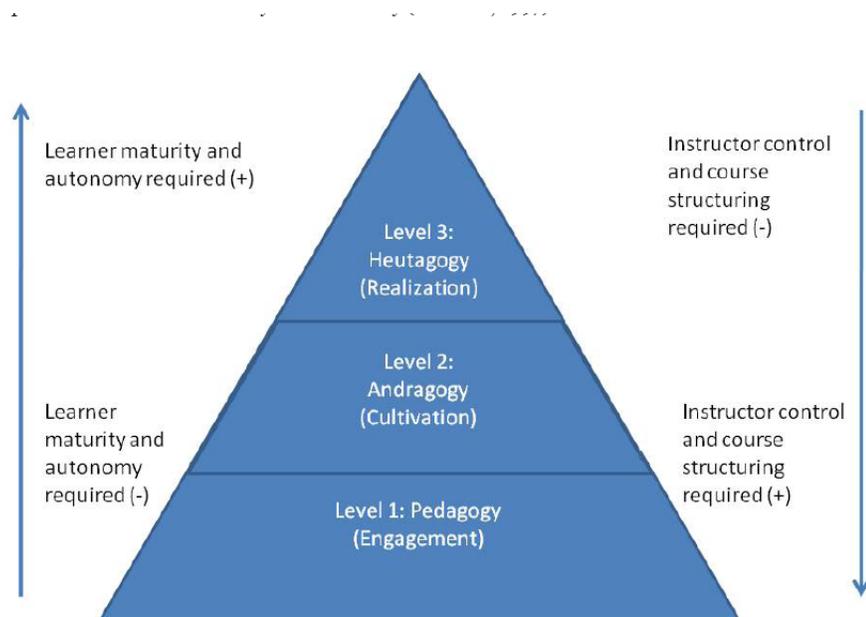

Fig 1: Progression from pedagogy to andragogy then to heutagogy

Source: Blaschke (2012, p. 60).

As McAuliffe et al (2008) point out, one of the important challenges in operationalising lifelong learning, particularly heutagogy, is the "removal of the educator" which "makes the concept of heutagogy" and lifelong learning impractical (p.15). However, there are universities in Australia and the UK which have attempted to integrate heutagogy and lifelong learning in higher educational institutions. According to Blaschke (2012) heutagogical approaches and lifelong learning in formal learning is possible through learner-defined learning contracts, flexible curriculum, learner-directed questions, flexible and negotiated assessments and collaborative learning. While discussing heutagogy in the context of ICT and eLearning Hase (2009) opines "what is clear is that learning is no longer solely the jurisdiction of educational institutions and formal or structured education programs, a situation that has been made even more apparent by ICT. People are learning continuously and in multiple contexts, and workplaces are dynamic sites or environments in which such learning occurs" (p.50).

The ODL community is yet to make advances in the direction of lifelong learning. It still follows the conventional pedagogical framework in its approach. However, attempts are being made to perceive ODL in the context of heutagogy. Msila (2014:250) refers to the new heutagogical open and distance Learning (ODL) module- Being a Professional Teacher, at the University of South Africa (UNISA) which "heralds ways in which the future ODL programs will be run". But the focus of the ODL community in non-formal and informal learning is still at a minimal level. While discussing non-formal and informal learning in the context of ODL, Latchem (2014) points out that they "have a great potential for helping a wide range of learners achieve more desirable and rewarding circumstances for themselves and their communities" and feels that "developments and issues in these two important modes of provision are insufficiently represented in the literature of open and distance learning " (2014).

Non-formal Learning in Agriculture

While the statistics talk about the access to formal education, a major portion of the adult labour force are in the agriculture and informal sectors. The FAO (2012) estimates that the agricultural sector alone employs more than a billion people, representing one in three of all workers particularly in developing countries. These sectors also have a very high proportion of female participation.

In the agricultural sector, extension is seen as a method through which education, training and learning are facilitated among the farmers and labourers. The investments in agricultural extension in Asian countries during the 60s and 70s impacted the productivity and production of wheat and rice and studies show that rate of return (particularly social rate of return) were very high ranging from 15% to 110% (Gill, 1989). However over a period of time, this trend started declining in Asia and even during the peak green revolution period, crops other than wheat and rice did not yield similar results.

Roseboom (2004) shows that in the late 80s, one extension agent covered 1800 to 2900 farmers. Presumably this may not have included the women in the farm households (due to the lack of an engendered approach) and landless agricultural labourers. GFRAS (2012) points out that only 5% of women rural workers have access to extension services and in India, and the present extension coverage reaches only 6.8% of farmers.

The inadequacy in education and learning in agriculture and the informal sector is a big challenge in human resource development. While there are many reasons for such inadequacy, the perspective on

education and learning has played a major role. The term "extension" emerged from the nineteenth century practice of some of the British universities extending their classroom to adult education in the neighbouring communities. This practice was later adopted by the Land-Grant Colleges in the USA to designate the extramural work concerned with serving the needs of farm families (FAO:1997). Thus extension essentially borrowed a didactic educational framework. In this process, following Paulo Freire's analogy, a farmer is perceived as an empty account to be filled by the teacher through a jug and mug approach.

Such a didactic approach is pinned on conventional pedagogy, and necessitates a huge resource base if more than one billion people are to be capacitated. In the absence of such a resource base, the farming communities responded to this challenge by strengthening social learning, farmer-to-farmer exchange of information and community based knowledge management. Conley and Udry (2008) point out the impact of such social learning, a form of informal learning, among pineapple farmers in Ghana. In another study Udry (2010) refers to the inability of social learning to create an impact among farmers in Kenya. Network linkages, social capital and interaction with formal research and education systems could be the factors for the differential impact of social learning.

SECTION 2 LIFELONG LEARNING: AN EXPERIENCE OF A PROJECT

Lifelong Learning for Farmers (L3F)

The Commonwealth of Learning launched a project "Lifelong Learning for Farmers (L3F) " in selected developing countries in the Commonwealth to empower farming communities. L3F aims at linking three types of capital; social capital, human capital and financial capital which will help in spiraling the development process as shown in figure 1.

Figure 2: L3F Approach
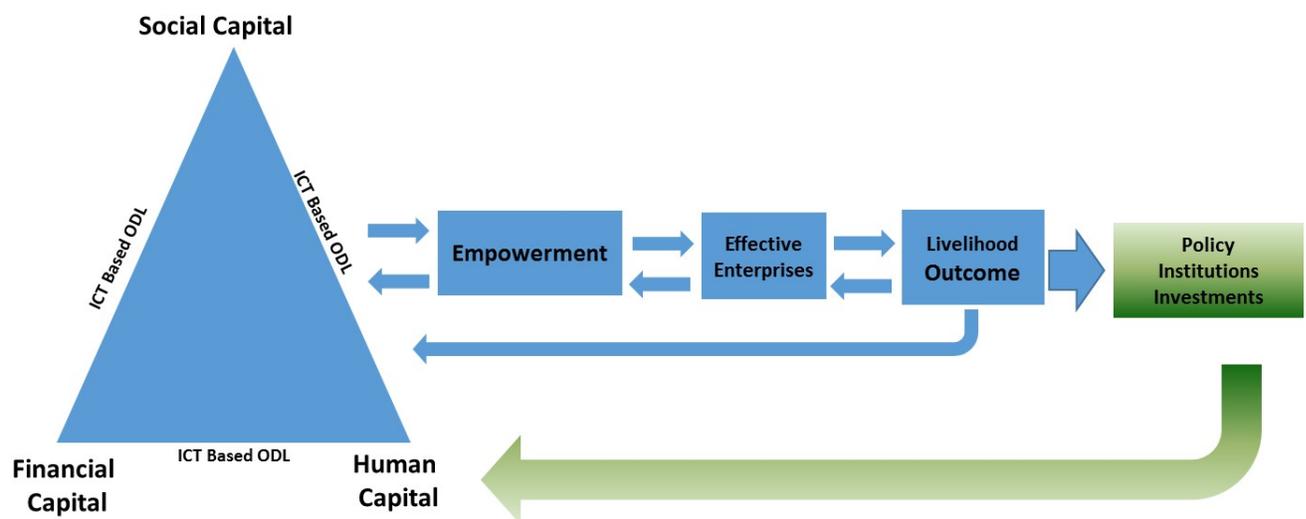
A holistic approach including these linkages will help strengthen the empowerment of participating communities, leading to effective enterprises, which in turn will strengthen livelihood outcomes.

The L3F approach, based on Roling's (1988) framework, consists of the following premises:

- Agricultural extension is a facilitation process through which a community is empowered to manage agricultural knowledge systems and agricultural information systems.
- Extension takes place in the context of already established social capital such as cooperatives, self-help groups (SHGs), and associations etc., which form a strong active utiliser constituency. Cognitive social capital is a precondition for lifelong learning.
- The community is not a mere consumer of information, but a partner in knowledge management and dissemination.
- Facilitating Self-Directed and Self-Determined Learning and Horizontal Transfer of Knowledge using Open and Distance Learning (ODL) methodologies among the active utiliser constituency is an important dimension of L3F.
- Learning and extension can be a self-sustaining process with secondary stakeholders supporting L3F within a win-win framework. For instance, blending rural credit with appropriate capacity building can lead to better performance in terms of productivity, returns and non-performing assets (NPA) levels. These gains would lead the financial institutions to support L3F.
- Capacity building will also enlarge the market for bank credit among small and marginal farmers and among other marginalised sections of the rural poor, particularly women. ODL will be able to strengthen the capacity building process by reaching a large number of people at a reduced cost. It will also help to reduce the opportunity costs of the farmers, particularly women, in learning.
- Modern Information and Communication Technologies (ICTs) such as rural internet kiosks, rural tele-centres, mobile phones, community radio, etc. can facilitate the capacity building process in a spatial-temporal context which is financially viable, economically feasible and socially acceptable.

The secondary stakeholders like financial institutions, ICT companies and markets, as well as the rural poor as primary stakeholders, stand to gain with the above premises, which is based on a win-win framework. This strategy can help primary stakeholders enhance their enterprises and motivate secondary stakeholders to help build a self-sustainable, self-replicable development process.

Human Capital and L3F

Strengthening human capital is a precondition for development. In L3F, human capital has been perceived purely from learning, knowledge acquisition, reflective practices, skills, and competencies among the participating farming communities. The initiative is based on a participatory approach in which everyone is a "learner" and social learning is a crucial aspect of the programme. The initiative integrates the concepts of pedagogy, andragogy and heutagogy in a blended learning format. Such blended learning takes place in the context of vertical flow of knowledge (from universities, research institutions, secondary stakeholders to the primary stakeholders) and horizontal flow of knowledge (between the primary stakeholders in the context of community knowledge management). The horizontal flow of knowledge is encouraged through group and community based learning. Semi-structured asynchronous learning is emphasised in the context of vertical flow of knowledge, whereas structured group-based learning as well as informal learning are encouraged in the horizontal flow of knowledge.

Social capital provides the basis for social learning and horizontal transfer of knowledge while financial capital provides a context or a fulcrum around which the learning is built. Integrating social capital and

Lifelong Learning (L3), Baker (2006) has derived a concept of Social Learning Capital (SLC) which refers to certain "social connections, networks and relationships acting as a resource to help people to access knowledge and advance their learning through co-operation with others, over time".

Learning materials are developed at the local level with the participating community playing a major role. The process of developing, using, reusing (and in some case abandoning) learning materials is highly dynamic and spatial-temporal in nature. However, the quality of the learning is under constant monitoring both by the community as well as by the experts.

A substantial number of L3F participants are illiterate or semi-literate, and therefore the learning takes place in a multi-media context using audio-visual interaction; hence, ICT plays a vital role in L3F. The technology is placed in the socio-cultural context, keeping in view the financial feasibility, infrastructural viability and social acceptability. Since mobile phones have penetrated rural areas, they are used to strengthen learning wherever relevant. Other self-learning technologies such as CDs/DVDs and mass media such as community radios are also exploited to strengthen learning.

L3F project in Kenya and Ghana

L3F project was launched in Kakamega county of Western Kenya during 2009-10 and in the Northern, Volta and Upper East regions of Ghana during 2013. Two Non-Governmental organizations (NGOs) initiated the phases of mobilisation, organisation, capacity building, technical support and systems management among the target communities. They introduced 'table banking' as a form of community banking in which the support groups came together and participate in saving as well intra-group and inter-group lending. These support groups were federated into a Savings and Credit Cooperative (SACCO). Around 5000 participants in Kenya and 900 participants in Ghana are active in the L3F project.

The community and experts identified the normative needs as well as the felt needs vis-à-vis learning. Financial literacy, Savings and Credit Cooperative management, gender issues, agricultural productivity, poultry management, marketing and health issues concerning HIV were identified as the key areas of learning. Courses were developed in consultation with experts, marketing agencies, the government extension system and the communities, and delivered through radios, DVDs and other blended learning methods.

Lifelong Learning and Empowerment

A study was conducted during 2015 and 2016 to ascertain the role of Lifelong Learning in the empowering the communities. "Lifelong Learning" in the project was perceived in following terms:

Table 1: Components of Lifelong Learning

	Theoretical Approach	Salient Features
1	Pedagogy	- Face to Face Training given by experts - ICT based Learning from universities and research institutions - Generic curriculums developed by universities - Experts as trainers, trainings evaluated by experts

2	Andragogy	• Curriculum developed by experts • ICT based learning from universities and research institutions- with community radio and mobile phones • Context-specific, local problem-centred , task-centred learning materials prepared from the feedback from the participating communities. • Guided by experts but learning takes place within the community based groups. • Learning sequences, temporal aspects are defined by the learners • Experts and NGOs as facilitators. • Learning evaluated by experts
3	Heutagogy	• Learning design developed by "Table Banking" group • Content developed by the members of the "Table Banking Group" • Learning process defined by each learner • Social Learning • Content vetted by the experts • Content in audio format shared with other groups • Experiences shared at intra-group and inter-group level. • Learning through radios, Television, mobile phones and newspaper (in the case of literate members) • Community and the learners-self-evaluation

Based on a theoretical framework which conceptualises Lifelong Learning as encompassing pedagogy, andragogy and heutagogy (Kanwar et al, 2013) a composite Lifelong Learning Index (L3 Index) was developed from three indicators, one for each of the aforementioned concepts. The indicator for pedagogy was a Training Index. This index is composed of questions asking respondents whether they had received training in 5 different areas during 2014-16. 'Yes' was coded as 1 and 'No' was coded as 0, and an average on a 0-1 scale was calculated. Andragogy was represented by a question on whether respondents regularly listened to messages, CDs or radio programmes on agriculture, animal husbandry or finance developed by experts during group meetings. 'Yes' was coded as 1 and 'No' as 0. Heutagogy was captured in a question which asked respondents how often they discussed their learning with others. This would include sharing their experiences in the group meetings, sharing the materials developed by them with other members and other groups or exchanging specific information through mobile phones with the group members. This variable was dummy coded with 'regularly' as 1, and all other options as 0. The composite Lifelong Learning Index, comprised of these variables, was converted to a 0-1 scale.

COL perceives empowerment as "the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them"- in the context of resources, agency and achievements (Kabeer,1999) . Development agencies are already involved in measuring empowerment through qualitative and quantitative data and techniques (IFPRI, 2014). But COL felt that the empowerment is not a uni-linear, homogenous process and there are different dimensions and different levels. Hence it developed a three dimensional framework for measuring empowerment through an index.

The framework looks at empowerment at three levels: Household, community and enterprise. The mechanism of choice is captured in the Degrees which include: Knowledge, Resources, and Desire and Action. The third dimension addresses the aspects such as Psychological/ Emotional, Social/ Cultural, Economic/ Entrepreneurial and Political/ Legal. Through this three dimensional framework, COL believes that the resources, agency and achievements for making choices can be captured well. The index measures the empowerment in a 0 to 1 scale where 0 is completely disempowered and 1 is fully empowered (Carr et al, 2015).

The relationship between education and empowerment has been discussed in social science literature (Carr et al 2015). McLaren (2005) following Freire's notion of empowerment argues that empowerment is distinct from building skills and competencies, which are derived from formal education. Canning and Callan (2010) have looked into students taking control of their own learning and engaging in reflective practice through heutagogy, resulting in "competency and capability through self-awareness, articulation of feelings, experiences, and ideas, engagement in group discussion, self-directed investigation in developing independent ideas, and self-confidence" (Blaschke, 2012, p. 64).

In this paper, the effect of Lifelong Learning on empowerment has been assessed in the L3F project areas in Kenya and Ghana.

Methodology

This study utilises data collected as part of a programme evaluation study of the Lifelong Learning for Farmers (L3F) Programme supported by the Commonwealth of Learning (COL) and implemented by Kenya AIDS Intervention and Prevention Project Group (KAIPPG). Though the L3F project of KAIPPG covered around 4500 women, the study focused on the backyard poultry farmers among these women.

Primary data was collected through a structured questionnaire, administered face to face, to three categories of backyard poultry farmers- an intervention group and two control groups- in Kakamega County, Kenya. Using a two stage stratified random sampling, three categories of villages were identified: i) villages with members of Lifelong Learning for Farmers (L3F); ii) villages with members of a self-help group, but not participating in L3F; and iii) villages with neither members of L3F nor support groups. Groups ii) and iii) were the control groups. In the second stages, households engaged in backyard poultry farming were selected randomly (Table 2).

Table 2: Sample Structure in Kenya

	Total Number of Households	Sample size
L3F Village List	98	98
Non-L3F Village List but on KAIPPG program	105	61
Non L3F non KAIPPG Village with poultry	100	60
Total	303	219

❖ *Sample size for 5% margin of error, 99% Confidence level, response distribution of 50%*

In Ghana, four communities from the two districts of Savelegu-Nanton and Central Gonja were randomly selected where L3F is being implemented. Among the total number of L3F participants of

around 900, the sample randomly covered 127 participants. Unlike Kenya, there were only two categories in Ghana. i) Participants involved in L3F and ii) Participant households who are not involved in L3F (Table 3). Also unlike Kenya, the survey in Ghana did not focus on a specific enterprise.

Table 3: Sample Structure in Ghana

S/N	COMMUNITY	Number of households			Number of sampled households		
		L3F Household	Non L3F Households	Total	L3F Household	Non L3F Households	Total
	In four communities in two districts	127	535	662	105	119	224

- *Sample size for 8% margin of error, 99% Confidence level, response distribution of 50%*

A detailed questionnaire was employed and data were collected on family, education and occupation pattern, involvement in L3F and other programmes, details about various types of learning and attitudinal questions with a 7 point response scale to assess empowerment.

Lifelong Learning and Empowerment Relationship

The L3F project, due to its target based approach, focused on marginalised groups and women. In terms of education, nearly 15% of the respondents in Kenya and 90% of the respondents in Ghana did not go to school. Most of the Kenyan respondents had received secondary education.

Kenya has a high lifelong learning Index with L3F group topping the list. The other two control groups have lower index scores and significantly differ from the L3F group. In contrast, Ghana overall has a substantially lower index score compared to Kenya, even though the L3F group in Ghana has a significantly higher index score compared to the control groups (Table 4).

Table 4: Lifelong Learning Index in Kenya-_Inter-group and intra-group differences.

Kenya									
			Mean Difference	Std Error	Sig.		Mean Difference	Std.Error	Sig.
L3F (Gr1)	.9478 (SD)	In relation to Gr2	.10337	.01651	.000	In relation to Gr3	.17281	.01651	.000
SHG-Non L3F (Gr2)	.8444 (SD)	In relation to Gr1	.10337	.01651	.000	In relation to Gr3	.06944	.01842	.001
Non-SHG Non L3F	.7750 (SD)	In relation to Gr1	.17281	.01651	.000	In relation to Gr2	.06944	.01842	.001

(Gr3)									
Ghana									
L3F (Gr A)	.2955 (SD .2826)	In relation to Gr B	.09836	.03969	.014	-	-	-	-
Non-L3F (Gr B)	.1971 (SD .1971)	-	-	-	-	-	-	-	-

The differences between the two countries in terms of learning could be due to the following factors:

1. The L3F project in Kenya started in 2009-10 while in Ghana, it started only during 2014.
2. The involvement of knowledge institutions in offering training programmes was high in Kenya compared to Ghana.
3. The credit flow from the financial institutions was substantial in Kenya with preconditions on learning. Ghana did not get such credit facilities.
4. Kenya used various types of technologies such as mobile phones, community radios and CDs. Due to infrastructural challenges CD based learning was the only major tool in Ghana.
5. The higher level of school education could also be a contributing factor.

However, the data indicates that within each country, the L3F group has a significantly higher level of learning compared to the control groups.

The empowerment index also shows interesting variations (Table 5).

Table 5: Empowerment Index in Kenya and Ghana

Kenya		
	Mean	Std. Dev
L3F (Gr1)	.6790	.03086
SHG-Non L3F (Gr2)	.5837	.06364
Non-SHG Non L3F (Gr3)	.5512	.07958
Ghana		
L3F (Gr A)	.6838	.07897
Non-L3F (Gr B)	.6443	.05576

*Differences between groups within country significant at $p < .05$

Within both countries, the L3F groups show a significantly higher empowerment index compared to the non-L3F groups. While in Ghana the difference is narrower, Kenya shows a substantial difference.

However, when the empowerment is viewed in terms of gender differences an interesting picture emerges as the following figures show (Figure 3 and 4):

1. Females in the L3F group have higher empowerment scores than the males in the control groups in both the countries.
2. The difference between male and female empowerment scores in Kenya is narrower when compared to the other two control groups.
3. Ghana shows a higher empowerment score for females compared to the males in L3F group. On the other hand the non-L3F females' empowerment score is lower than their male counterpart's in the control group.

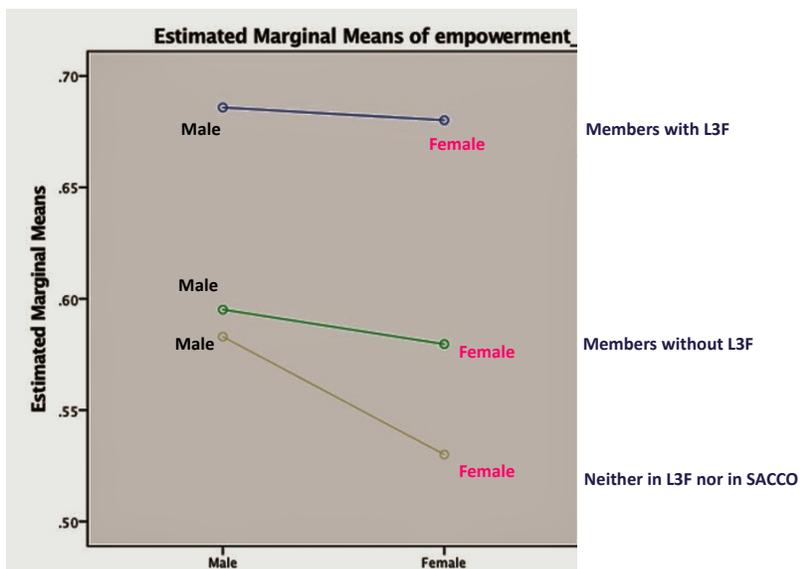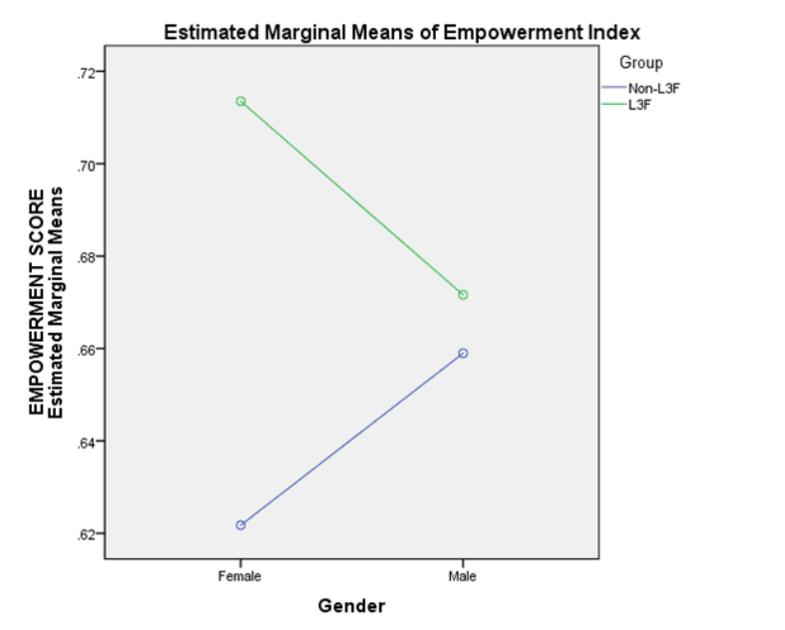Fig.3 Empowerment Scores: Gender Differentials in Kenya

Fig. 4 Empowerment Scores: Gender Differentials in Ghana

The three dimensional framework of empowerment assumes that the rate of empowerment may vary from one dimension to other dimension. A study in Uganda (Carr et al 2015) points out that the empowerment scores at the enterprise level is higher than at the household level substantiating an argument from IFAD (2014) which states that "many efforts to support women's empowerment focus on strengthening women's economic opportunities and decision-making capacities in groups or organisations. However, the same women often remain disempowered at the household level". In Kenya the empowerment scores at the enterprise level are substantially higher than the empowerment scores in other two realms. In contrast, in Ghana the household realm has a higher empowerment score compared to the enterprise and community realms (Table 6).

Table 6: Empowerment in Three Realms

	L3F (Gr1) in Kenya	SHG-Non L3F (Gr2) in Kenya	Non-SHG Non L3F (Gr3) in Kenya	L3F (Gr A) in Ghana	Non-L3F (Gr B) in Ghana
Mean Empowerment at the **Household** Level	.6421	.5795	.5513	.7039	.6623
Std.Dev	.03783	.05815	.07861	.0802	.0996
Mean Empowerment at the **Community** Level	.6316	.5500	.5496	.6802	.6475
Std.Dev	.03186	.05708	.06937	.1139	.1168

	.8336	.6417	.5609	.6102	.5867
Mean Empowerment at the **Enterprise** Level					
Std.Dev	.04357	.12737	.14423	.0786	.0742

*Differences between groups within country significant at p<.05

Determinants of Empowerment

It is evident from the he regression analysis in Table 7, that the dummy variable of L3F is a significant factor in determining empowerment index scores in Kenya. While gender and number of years of schooling are significant to some extent, their influence in empowerment is comparatively less. In Ghana, L3F is the only significant factor in empowerment, though its role is not as strong as seen in Kenya. Unlike Kenya, L3F participants in Ghana did not get access to credit from financial institutions which restricted the entrepreneurial activities among them. Since the project began only in 2013-14, the social capital had not properly matured. In spite of these challenges L3F still emerged as a significant factor in empowering the participants particularly women.

Table 7 Determinants of Empowerment in Kenya

Regression Model

N=219   , adjusted R squared= .492, standard error of the estimate= .057344, significance= p<.05

	Coefficient	Std. Error	t statistic	p value
(Constant)	.539	.019	27.958	.000
Sex	.020	.009	2.276	.024
Age	.000	.000	.417	.677
Number of years spent in schooling	.002	.001	1.961	.051
L3F membership	.114	.008	14.354	.000

Table 7 Determinants of Empowerment in Ghana

Regression Model

N=224   , adjusted R squared= .019, standard error of the estimate= .06907, significance= p>.05

	Coefficient	Std. Error	t statistic	p value

(Constant)	.655	.022	30.315	.000
Sex	.000	.012	-.017	.986
Age	.000	.000	-.312	.756
Number of years spent in schooling	.002	.002	.930	.354
L3F membership	.027	.011	2.458	.015

Conclusion

A review of literature shows that there are two broad categories regarding the approaches of education: "Learning in Education" and "Learning in Development". However these two categories are not dichotomous in nature. Rather, they should be seen as a continuum. As Table 8 points out, "Learning in Education" is at the output level. If the SDGs are to be achieved, the education system should look beyond "Learning in Education" and address issues in "Learning in Development". Without such an approach the ability of education to influence externalities in social, economic and environmental spheres will be limited. This would also mean that formal education needs to understand and integrate non-formal learning and informal learning to strengthen lifelong learning.

Table 8: Learning for Sustainable Development

Category	Description	Significance	Approach
IMPACT	Quality of Life, Food Security, Peace, Sustainable Development	What learners achieve	Learn in Development
OUTCOME	Competency, Employability, Entrepreneurship, Empowerment, Higher Income, Equity	What learners do	
OUTPUTS	Credentials, Performance, Policies, Competency, Capacity Built	What we achieve	Learning in Education
ACTIVITIES	Mobilization, Materials Development, Delivery, Teaching, Learning, Assessment	What we do	
INPUTS	Human and Financial Resources, Technology	What we invest	

Source: modified from Margarita F Guerrero (UNSIAP)Margarita F Guerrero (UNSIAP)

ODLAA has a major role to play in this regard. The Pacific Island states are facing challenges in economic growth, social inclusion and environmental conservation. Issues such as climate change, migration and domestic violence must be addressed. In this context, Lifelong Learning is an essential tool which can help the Pacific to face challenges. Australia is already playing a major role in integrating heutagogy in

formal education and in promoting lifelong learning. Its experience can help the Pacific to address the SDGs through effective human resource development.

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