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EFFECTIVENESS OF LEARNING RESOURCE SCHOOLS MODEL

Abstract:

The case study on Learning Resource Schools (LRS) was conducted in Gilgit-Baltistan; a challenging and remote province in Pakistan. The centerpiece is the LRS/Cluster model adopted to accommodate both the shift in understanding of effective pedagogy as well as greater administrative devolution. The study is conducted in the backdrop of new education paradigms where new modes of instruction and training are adopted. It tracks the benefits of improving teaching and learning and streamlining administration/costs in an age of 'Education for All' and Universal Primary Education. The study documents both of these considerations as equal important drivers of change in the systems and practices within public education institutions. The analysis of this model in an expanded setting over time, shows evidence of its true efficacy and cost reductions, improving teacher morale and ability, and generating a new type of learner.

Though the particular details of each contextual implementation of the LRS model will vary and grow, the underpinning rationale has (at least partially) been justified. It emphasize on more needs based support that is relevant to the practical experience of ground practitioners especially in rural areas and disconnected villages. The study also details the approach's usefulness in enhancing teachers' learning in pursuit of their own teaching requirements, sharing a limited resource base, enhancing access to information, and improving students learning. In the wake of limited external support for the underprivileged areas, the study establishes the fact that cluster model is integral to a developing a self-sufficient education resource base.

Keywords:

Education Development Improvement

1. INTRODUCTION

EDIP Background

The Education Development and Improvement Programme (EDIP) is an DFAT funded project (May 2010 – June 2015) of the Aga Khan Foundation, Pakistan being implemented in the seven districts of Gilgit-Baltistan, including Gilgit, Astore, Hunza-Nagar, Diamer, Ghizer, Ghanche, and Skardu. The project goal is to enhance access, equity and quality of education with increased gender parity, participation and sustainability of community interventions.

EDIP has regularly showcased innovative models and solutions for the contemporary issues facing the Pakistani education sector as a whole and the specific contextual challenges in Gilgit Baltistan. It is being managed through Aga Khan Development Network (AKDN) implementing partners[1] that provide a maximum amount of off-site support and operational oversight while utilizing the services of local level institutes for in-region activities.

The programme has successfully demonstrated a model of school based mentoring which utilizes a central school approach (known as the Learning Resource School (LRS) that supports a number of feeding schools in its vicinity.

The LRS Model

The use of clusters in school development is becoming a wide-spread practice elsewhere in the world, in both the North and South, such as remote communities in the USA and in educational development programmes in developing countries such as those run by UNICEF, and USAID, in Guatemala and Uganda[2], and AKDN's MERP and the Releasing Confidence and Creativity Programmes in Pakistan. The idea of 'better' schools facilitating other schools has become an important part of school improvement, including the development of teacher leadership for learning through collaborative enquiry[3].

The principle driving force behind the now established movement is research showing the importance of local school leadership in bringing about educational change, and the understanding that down to the teacher level, teachers may not be motivated or capable of inculcating new teaching strategies best suited to the needs and context of their pupils. These teachers are often isolated, and provided meager resources making them unable to effectively reflect on their day-to-day learning and to connect with each other and the

[1] The Aga Khan Development Network (AKDN) brought together a number of development agencies, institutions, and programmes to utilize their expertise in enabling local communities and government departments to take on their responsibility for improvement in educations system inGB. The AKDN agencies had already made a long-term commitment to work in GB, guided by a uniform philosophy of enhanced access, inclusiveness, and improvement to educational services. EDIP was implemented by a consortium of seven AKDN agencies namely FOCUS, Network of Organisations Working for the Persons with Disabilities in Pakistan (NOWPDP) Civil Society Resource Center (CSRC), Aga Khan Education Services, Pakistan (AKESP), Aga Khan University- Institute for Educational Development (AKU-IED) and Aga Khan Planning and Building Services, Pakistan (AKPBSP). The programme used approaches and models that were tested and/or developed based on feedback/results of previous educational programming in GB by these implementing agencies.

2 MacNeil, D.J.(2004): School and Cluster-based Teacher Professional Development: Bringing Teacher Learning to the Schools Working Paper Number 1 under EQUIP's Study of School-based Teacher In-service Programs and Clustering of Schools. USAID

3 Street, H. & Temperley J. (Eds) (2005): Improving Schools Through Collaborative Enquiry London: Continuum

community to develop their pedagogical skills. Their supervision is often sporadic and few effective feedback cycles exist to help them understand and overcome their limitations.

The 'Learning Resource School', is a concept started in the communities of Latin America in the 1960's in the Freirean model of critical pedagogy and self-reflection. It is based on the notion that connectedness to the community and communities of educators as well as a focus on self-reflection for growth, while sharing resources skills and experiences, will greatly improve pedagogy (UNESCO 2008). As the model grew in scope and reputation the duties of cluster based models increased as well. The expectation grew that these schools in light of devolution or an inefficient center would be also able to manage the meaningful devolution of administrative responsibilities.

The cluster based system has now evolved in multiple different contexts to multiple different systems each with varying levels of efficacy (MacNiel 2004). For the AKDN, the use of school-based and cluster-based professional development acknowledges the need to implement curriculum and assessment reforms that emphasize active and collaborative learning and give teachers the opportunity to experience and practice methods that can support them in their classrooms. It also recognizes the need to support more closely teachers who have not been able to benefit from a good education to a high level themselves or good pre-service education courses thus highlighting the need for close in-service support. Relating with peers also allows for a more democratic process which enables teachers to understand and recognize their individual as well as collective areas for growth and solve problems together rather than working in isolation[4]. In addition, women will not have to travel long distances to attend professional development sessions. In Pakistan, the AKDN has successfully implemented Cluster-Based Mentoring model in Sindh, Balochistan and GB out of which the EDIP model in GB is the purpose of this paper.

Background of the EDIP LRSs[5]

The Northern Pakistan Education Programme (NPEP) was a 10 year education programme run by the AKDN with the support of the European Commission. Its aim was to improve access, quality and sustainability of education for in-school and out-of-school children in Northern Areas and Chitral with increased participation from the communities to contribute to the overall socio-economic development of the area. The overall purpose of the project was to increase enrolment, retention and effective learning in AKES, Government and NGO/Community schools, particularly for girls.

NPEP was implemented in two phases. The first phase of NPEP ushered in a huge rise of funding and educational development programmes for AKES, P in 1997. It expanded its role as an indirect provider of education services to a wider range of communities, NGOs and the government. Government linkages increased and government teachers were also invited to trainings. The second phase of NPEP started in 2003 with the overall objective *to contribute to the improvement of access, quality and sustainability of education with increased gender equality and community participation in the Northern Areas and Chitral.* The design was

4 Leu, Elizabeth (2004):Cluster Schools & Teacher Professional Development, An Introduction in EQ Review, Educational Quality in the Developing World, Vol.2, No.2. EQUIP: USAID Also- Leu, E.(2004): The Patterns and Purposes of Localized Teacher Professional Development Programs Academy for Educational Development EQUIP: USAID

applauded for its concentration on targeted capacity building, development of methodologies, strong improvement focus, a strategic partnership with the government and a strong female focus. Attitudinal change, although hard to measure was deemed the core added. EDIP now acts as the successor to the NPEP, as it is based on the lessons learnt and models introduced under NPEP.

Expectation of EDIP LRSs

One of the main findings from NPEP was the realization that future schools support programmes will need to be resource efficient, on-going and accessible to be more effective. The EDIP provided AKDN with an opportunity to develop and test a workable model in this regard.

It was envisaged that a central 'Learning Resource School' (LRS) will serve as a model to support schools in the cluster to increase access, equity and quality. The structure required the development of one base school in each cluster to reach a higher standard of quality and work as a central hub of quality. The assumption was that school-based and cluster-based approaches will be more cost-effective, make better use of local resources, respond to teachers' immediate needs, and provide opportunities for on-site practice and reflection. This approach has been used to good effect in many developing and developed countries.

The cluster-based approach in EDIP was recommended for the difficult and remote areas where logistics would effectively limit the possibility of wider networking and professional collaboration. It would meet the need to support educational leadership, management and professional development on a cluster level, develop schools as learning organizations, and be provided technical and material support, academic direction and mentoring by the implementing partner.

The LRS model was expected to bring academic and professional development, mentoring and monitoring closer to schools in some of the remote, hard to access, disadvantaged areas of GB. The EDIP followed a whole school development model making use of professional development and a cluster-based approach to develop local level support networks; ultimately supporting individual schools more closely through a combination of capacity building programs in the areas of leadership and management, teaching and learning, curriculum and resources, the learning environment and ethos, parents and community and policies, processes and systems. The Cluster based approach would allow for sharing of mutual experiences, best practices, resources, materials and maximize involvement of the community and government staff at Union Council Levels.

Teachers in cluster schools were expected to become more professional and role-models in terms of attitude, content knowledge and pedagogy. They would have an increased awareness of how children learn and increased skill in planning for learning, using various teaching and learning styles, differentiation to meet individual learning needs, a range of appropriate resources and in assessing that learning. They would learn to organize and manage a more inclusive learning-friendly environment that values what children bring to school and have high and clear expectations of achievement.

This has multiple purposes. Primarily it is to improve the pedagogical skills of the teachers but underlying that as noted by Lue (2004), the improvement of pedagogical skills is based on the constructivist notion that the communities of practice will ensure that the new paradigm of education is deeply inculcated within the culture of teaching, and that the old requirements for both teachers and students are updated to current understanding of what is truly effective (as the following two tables help illustrate) (Lue, 2004, p4-6).

Student learning	
Previous approaches	Present approaches
▪ Passive learning ▪ Rote memorization ▪ Teacher centered ▪ Positivist base	▪ Active learning ▪ Use of higher-order thinking skills ▪ Student centered ▪ Constructivist base

Teacher learning	
Previous approaches	Present approaches
▪ Goal is teachers who are competent in following rigid and prescribed classroom routines ▪ Teachers are "trained" to follow patterns ▪ Passive learning model ▪ Cascade model – large centralized workshops or programs ▪ "Expert" driven ▪ Little inclusion of "teacher knowledge" and realities of classrooms ▪ Positivist base	▪ Goal is teachers who are reflective practitioners who can make informed professional choices ▪ Teachers are prepared to be empowered professionals ▪ Active and participatory learning model ▪ School-based model in which all teachers participate ▪ Teacher facilitated (with support materials) ▪ Central importance of "teacher knowledge" and realities of classrooms ▪ Constructivist base

[6]

The EDIP Plan of Action

EDIP is implemented in 108 schools of which over 70% are government schools. These schools are organized into 21 clusters in seven districts of Gilgit-Baltistan and each cluster consists of a hub Learning Resource School (LRS) and feeder schools. The LRS comprise of a secondary school and the feeder units include primary and/or middle schools. In each cluster one Professional Development Teacher (PDT) or a Teacher Educator (TE) is placed to lead the school improvement approach in the entire cluster. The programme will also invest in the capacity development of Government teachers through the AKU-IED M.Ed program. These teachers return to their school clusters to provide services as Professional Development Teachers in their respective clusters.

Schools were envisioned to be the vehicle used to sensitize and enable parents and the community to understand the importance of quality education from early years to matriculation level. There are 109 schools targeted (59 PDCN managed and 50 AKESP managed) in seven districts of GB clustered around a total of 21 LRSs; out of which seven LRSs were of AKESP.

[6] Positivism is an approach to knowledge that regards knowledge as stable and relatively fixed. It emphasizes students knowing particular canons of fixed knowledge as the basis of learning and relatively de-emphasizes issues of perspective, critique, different ways of knowing, and creation of new knowledge.
Constructivism is an approach to knowledge that regards knowledge and learning as more dynamic. It assumes that students know and understand in unique ways and create their own and "new" knowledge. It does not ignore the importance of knowing facts and information, but emphasizes mobilizing that knowledge. In the constructivist notion of learning, knowledge is a more fluid construct, subject to deconstruction, interpretation and reconstruction by the individual learner interacting with both the external knowledge base and his or her knowledge base and the environment.(Lue 2004)

In addition to the various school-based programmes, head teachers, teachers and district educators and managers were provided opportunities to attend various long and short professional development courses within the cluster and at the regional level.

This intervention is aimed at capacity building of schools for inspiring student learning outcomes as well as assisting to develop sustainable networking between secondary and primary schools.

While all schools underwent a physical assessment, only the LRS had new construction in the first three years which was further extended to select feeding schools in no-cost extension phase. EDIP also assisted the LRS in establishing/upgrading library/learning resource centre, building basic physical infrastructure including provision of computers with internet connectivity and power backups.

The Learning Resource Schools aimed to be a model of good practice, also received infrastructure support for good quality classrooms to support the induction and development of two pre-primary classes for children. The LRSs provide a learning resource centre with a library and computers and improved furniture.

In addition, one government and DJ school [7]in each cluster were provided with two Early Childhood Education Development (ECED) rooms. Cluster schools received a substantial level of coaching, mentoring and support to improve over their current performance. Teachers in these schools also attended certified courses such as Advanced Diploma in Educational Leadership and Management, the Certificate in Early Childhood Education and Development and Certificate in Primary Education as well as various needs-based shorter courses, as part of a continuous professional development programme.

Each cluster of 7-8 schools are designated TEs/PDTs who give intensive support to the schools. Their role is to be in school for one to two days a week, conduct monthly cluster workshops, and deliver various teacher and head teacher courses. They also assist the school SMC/CBES/PTA to identify and enroll out of school children into school. They draw on the expertise that lies in the field for school-based and cluster-based staff development, for example identifying teachers who could act as mentors, conduct peer observation and team teaching.

The EDIP considers gender and development a cross-cutting issue that is addressed in several ways. This includes increasing gender awareness and sensitivity and applying gender analysis in the short as well as advanced courses; exploring attitudes, curricula content and pedagogy in the classroom and modeling gender-friendly practice.

The EDIP endeavors to start to move towards developing more inclusive approaches to education. Efforts are made that the staff and teachers plan to meet the needs of both boys and girls with mild to moderate disabilities and cultural and religious backgrounds.

EDIP also addresses the built environment and the physical infrastructure issues in particular. The aim is to ensure that schools are safe and attractive learning environments for children. In the first phase all LRSs have been retrofitted. In relation to disaster

[7] Diamond Jubilee Schools were established in 1946 from the Diamond Jubilee (of Immamat services of Sir Sultan Mohammad Shah, The Aga Khan III) grant: NPEP - AKESP Phase II 2009. All AKESP schools managed with the internal financial resources of AKDN are termed as DJ Schools.

education, trainings were planned on disaster risk reduction in all cluster schools as well as LRSs. Training of schools staff and communities focus to prepare and respond to disaster as well as provide a school safety kit to enable them to cope up with planned and unplanned disasters.

Need for Case Study

The purpose of this case study is to provide a deep understanding on what is the level of support that is provided to the feeder schools from the LRS by gauging through the examples of adaptation in action and to draw out lessons that can be used by others trying to adapt it.

This case study is both a reflective exercise by the project team and an explanation of the model and the successes and lessons learned. It aims to not only present the case for what happened, but also how it differed from expectations. This case study will identify where we started from, what we wanted to change, what actually changed as a result of the work, how that change was achieved, how any resulting impact was measured and include the lessons learned through field implementation.

Study Objective

The specific objective of the study is to analyze whether the benefits of services provided to LRS were in fact also achieved by the feeder schools.

Profile of LRSs: cases in point

LRS Karimabad

LRS Karimabad lies in the heart of Karimabad,Hunza serving a population of around 2000 [8]households. Government Boys Model High School is a well reputed school in the entire Hunza region for its strong educational history. Its alumni consist of various top-notch professionals who are rendering valuable services in Pakistan as well as abroad. The Karimabad High School evolved through various time periods and saw many changes. A Hindu pundit is said to be the first in charge of the school, while another source says that Mr Abdul Aziz Sialkoty was the first head of the school. In 1984, Prime Minister of Pakistan, Mohammad Khan Junejo declared it a Model High School during his visit to Hunza.

In the given context of poverty and lack of confidence of communities on the government run schools, the well-off people started sending their children to the private schools. Lack of government support to this school for the last decade has severely affected the schools progress. Even being the oldest school of GB, the school lacked modern facilities. This is the main reason that this school was selected for EDIP interventions. In 2010, the school came under Educational Development and Improvement Program (EDIP). The school is actively pursuing key project areas like increasing enrolment and reducing drop outs, quality education, community participation, gender sensitivity and inclusiveness. The school is also a declared LRS in the government's education system, however, it is only serving 3 feeding units under EDIP. The school has shown marked difference as compared to baseline conducted in 2010.

LRS Gorikot

Government Boys High School is selected as LRS in Gorikote cluster. Classes from 5th to 10th are running in this school. Secondary level has two sections, one for science and one for arts. There were twelve teachers and 142 students at the time of intervention. This school is catering the educational needs of students with middle and low socio economic background. This school is catering the educational needs of students with middle and low socio economic background. School is situated at the brink of road leading to Deosai national park.

On cloudy days, the level of darkness increases and back benchers students cannot see the writing on black board properly. There is a spacious yard in front of the school. During need assessment it was observed that no interactive teaching methods are being used and teachers use teacher-centered methods, where students are least encouraged for participation in classroom activities. Teachers were using offensive language for students who fail to get teachers' point. There was no concept of lesson planning and scheme of work in the LRS.

Since the school was selected as an LRS under EDIP, various activities are carried out including construction of rooms, seismic retrofitting etc. Teachers are also trained and sensitized on dealing children with special needs. The project reports indicate that there is a significant change in student – teacher behaviour, the details can be seen in the findings section of this case study.

[8] Local source

2. STUDY METHODOLOGY

Methodology

The study was broadly divided into three phases: (i) desk review and study tools development, (ii) field work and information collection, and; (iii) analysis and report writing. Staff of partner agencies was also kept in loop throughout the course of this assignment. All the relevant documents (project proposal, monthly, interim and annual reports, training manuals and reports etc. were reviewed. A draft of study checklist was developed.

Study Methodology

This study is comprised of three phases e.g. phase one (literature review), phase two (data collection and analysis) and phase three (report writing)

Literature Review- Phase I

The desk review of relevant project documents was carried out. Indicators were developed for information collection and validation. On the basis of these selected indicators, checklist was prepared for collecting data.

Information Gathering-Phase II

Information collection was done in more than 5 days. This was carried out in back to back field visits. Meetings were conducted with teachers, head teachers, government officials, LLI representatives, parents, teachers etc. to measure the extent of benefits from LRSs. Almost all classes were observed in the visited schools and were probed on improvement in teachers' methodology.

Data Analysis-Phase III

The data collected from various sources was collated and analyzed for identifying the project achievements and gaps, which led to deriving key conclusions. However, this entailed a considerable sensitivity to, and understanding of, the cultural context in which the data was gathered and the limitations of the study. The analysis focused on achievements, results, and the key processes adapted during the implementation. A sufficient time was allocated to triangulate and synthesize key findings and conclusions.

Study Tools

The study was designed to be a qualitative diagnostic study. The discussion methods used ranged from FGDs, group interviews, individual interviews (SSI), rapid classroom observations, face to face discussions and personal observations. Broad checklists (for Interviews and Focus Group Discussion) were designed based on the discussions held with the project team members at AKF and the feedback from the staff of partner agencies.

Study Sample

Teachers, head teachers, students, representatives of LLIs, government and implementing partners were selected in a sample frame. Out of seven, a total of 4 districts were selected 2 each from Gilgit and Baltistan. A total of eight clusters were visited with coverage of at least 2 LRSs and 2 feeder schools. In district Ghizer 3 clusters (Thingai, Phander, Gopis) and in Hunza (Karimabad) only 1 cluster was observed. Qualitative data was collected during field visits from PDTs, teachers, head teachers, government representatives, LLI members, parents and students. The participants contacted for data collection had varied backgrounds. A detail of all respondents is given in annex 1.

Geographical Location

Following schools were visited to conduct this study.

1. NEF School Gaimash Karimabad
2. GMS Brongshal Karimabad
3. GHS Karimabad
4. FG Middle Schools Dahimal Thingai
5. DJ High School Thingai
6. GPS Shamaran
7. FG Primary School Phander
8. DJ HS Phander
9. GHS Gopis
10. GGMS Gopis
11. GPS Gowt
12. FG High School Shigar
13. GPS Shighar
14. FG High School Khaplu
15. GMS Khaplu

3. FINDINGS AND OBSERVATIONS

LRS Selection and Key Considerations

Under EDIP, in each of the seven districts of Gilgit-Baltistan, large secondary schools, located at centralized places surrounded by primary and middle schools were identified to become Learning Resource School LRS. Utmost care was given that all indicators for selection should focus on effective coordination to increase efficacy of the planned activities and bring in highest number of out of school children aged 3 to 10.

State of School's before EDIP						
LRS School	**Water**	**Electricity**	**Resource Center**	**Computer Lab**	**Library**	**Science Lab**
GHS Karimabad	No	Yes	No	No	Yes	Yes
DJ High School Thingai	Yes	Yes	No	No	No	No
DJ HS Phander	No	Yes	No	No	Yes	Yes
GHS Gopis	Yes	Yes	No	Yes	Yes	No
FG High School Shigar	Yes	Yes	No	Yes	Yes	Yes
FG High School Khaplu	Yes	Yes	No	No	Yes	Yes

It was observed that the distance between feeder schools varies. There are schools which are adjacent to LRSs and some of them are at a distance of almost 2 hours on foot. This posed a challenge the planning and implementation of the project activities; especially those which require effective coordination between the LRSs and feeder schools.

Name of LRS	Feeding	Max Distance		Min Distance	
	Units	Time*	KM	Time*	KM
GHS Karimabad	3	20 min	1.5	15 min	1
DJ High School Thingai	6	1 hr	10	2 min	0.15
DJ HS Phander	6	2 hrs	10	3 min	0.1
GHS Gopis	3	45 min	2	2 min	0.2
FG High School Shigar	3	10 min	1	2 min	0.2
FG High School Khaplu	3	15 min	1.5	5 min	1

* Common mode of transport (on foot/public transport)

The selection of schools was strictly based on the cluster based approach for efficacy and bringing out desired learning outcomes. The table above shows that all schools are found in clusters and the nearest possible schools were selected. However, the large distance of schools from each other is because of the area topology and the scattered population.

The project also allocated sufficient financial and physical resources for PDTs and TEs. It included travel and lodging expenses so that their movement is not restricted to the LRSs and they can easily travel in the feeder schools.

Teachers Mentoring Process

The cluster workshops are organized in LRSs regularly for on the job teachers' training. These training are specifically focused on the felt and unfelt needs of the teachers; sometime identified by the teachers themselves and/or as observed by the PDTs/TEs or head teachers. The trainings or mentoring sessions are carried out in LRSs where all teachers from the feeder schools participate. The PDTs and TEs take lead in organizing these events.

> *In LRS and other feeder units I took model lessons to provide an opportunity for teachers to observe my lessons and see how students are involve in teaching and learning process. Teachers observed my teaching and took notes on each happening in the class. After the class I sat with teachers and discussed the teaching methodology. Teachers shared their findings and improved their teaching practice.*
>
> *A PDT from PDCN*

The mentoring of teachers has shown positive results as children have shown a lot of confidence and relevance in responding to the questions and paying attention to the teacher actively.

Mentoring is a part of the LRS responsibilities and PDTs/TEs being much closer to the LRS develops mentoring plans with consent of the head teacher and invite teachers from feeder schools. This is a better way to manage the day to day learning requirements of the schools. Mentoring is done in Social Studies, English, Mathematics, Science, etc.

One of the important features of teacher mentoring is ECD. After the appointment of ECD teachers in EDIP schools, they are exposed to AKESP/Government schools where ECD classes are functional and teachers are experienced. This enhances their encouragement, empowerment, brings new and innovative ideas and skills to cope up the challenge of starting a new ECD class. The approach is based on the constructivist paradigm, within which teachers immersed in these communities of learning scaffold their knowledge, attitudes and practices with those of other teachers, identifying their weaknesses and redressing these through lessons learnt from others. Previous interventions of AKDN are also instrumental in expanding the tested approaches to a wide range of schools thus increasing the overall number of student beneficiaries.

Using the premises of the LRSs and further strengthening the concept of a learning hub, the teachers of more than 30% of the sample schools have discussed and shared their learning from the training they received at PDCN.

Capacity Enhancement of Teachers and Head Teachers

Pedagogic and Teaching Skills

AKESP and PDCN have enhanced the capacities of teachers and head teachers in various pedagogic and effective teaching methodologies. Most of the teachers in LRSs as well as in feeder schools are now able to understand the child psychology and are treating them appropriately. As an outcome of the training on slow learners' identification, teachers are now vigilant towards child learning abilities and achievements, and

> *A school teacher of Boys Primary School Gowth, a remote village in Ghizer district, has developed lesson plan of two classes he manage. He purchased a large notebook, divided it into relevant sections and planned the lessons for his classes. He is the only teacher in the school and the LRS is almost 2 km away. PDT of the cluster helped him to develop a detailed lesson plan. He is very particular about his schedule and follows the plan very strictly.*
>
> *Personal Observation*

use varied methods to enhance child learning. For example, lessons planning sessions are arranged on regular basis in the schools. A large proportion of school teachers now effectively use lesson planning and its follow-up in EDIP targeted schools. The PDTs helped them out in developing their lesson plan for first year and now the teachers are helping the fresh teachers in developing the same.

School Safety Sessions

The drills and DRR training are also conducted in LRS and the feeder schools. Wherever appropriate the teachers and students are brought together to conduct drills and DRR sessions. The usefulness of these sessions was reflected from the knowledge of students and the focus corners that they developed.

Sensitization on Inclusive Education

The sensitization brought about by the AKF partners on inclusive education in LRS is quite encouraging. The teachers are responding positively to the inclusive education component. The teachers have been trained as master trainers by NOWPDP, and go on to further develop the capacity of other teachers in inclusive education. Construction of disability related infrastructure on self-help basis and teaching from inclusive education perspective are few outcome of the disability related training. This means that teachers have started to focus more on learning and inclusion of girls and the children with disabilities.

Enhanced Peer Learning

One of the main functions of the LRS is to disseminate learning. The teachers from feeder schools and LRSs are brought together to share their knowledge and experience gained from their training. LRSs are also quite useful in highlighting the needs of teachers for subject specific training. The cluster based approach is useful to induct two specialist teachers of one subject in an efficient manner. For example if there were two teachers for one subject, and only one was accommodated for the training, and the other was either inducted in the next cycle or gained expertise from the trained peer group . This is where the LRS has made an effective contribution in selecting relevant teachers and also identifying those teachers who were unable to participate in the training. The teachers in various FGDs informed that the lady teachers were supported by their peer groups in building their capacity after their maternity leaves. Similarly, the newly inducted or transferred teachers were also supported by their peer group.

Provision of Library Books and their Management

EDIP intends to encourage reading of teachers and literacy of students and promote and improve their reading habits. Libraries have been established in all LRSs and feeder schools as well. The schools are in a process of cataloging the books and library management skills are being developed in the schools where books have been provided. AKESP has hired the services of professional librarians who are deployed in the LRSs and regularly provide technical backstopping to the feeder school.

In the no-cost extension phase the libraries have been established in the LRSs as well as the feeder schools as initially coordination issues for libraries amongst LRS and the feeder

schools was found. In the previous phase the libraries were centralized and there was no established mechanism for students and teachers of feeder schools to avail benefits from the libraries. The situation was more aggravated in feeding unit that fall at a significant distance from LRS, but has since been addressed by the extension of the library provision.

Informally, the teachers of feeder schools can access the books from the LRS. The teachers can read books and take them to their home. There have been instances where the teachers have issued books for the feeder schools and further issued it to students.

High standard books were given especially in LRSs. The quality of books was impressive. Provision of these books to the remotest parts of the villages has resulted in very strong community support. However, an important consideration to be explored is whether these books are being utilized effectively or not; given the lack of the desired level of English understanding in teachers as well as students, which might limit their contextual appropriateness.

Provision of Computers and their Management

Before the project intervention, most LRSs had no computers or limited computers which were insufficient to meet the school requirements. All the available computers were not meeting the quality requirements of students as well. The project facilitated to establish computer labs in all LRSs. This initiative has largely been appreciated by The Government and the public at large. The provision of computers, on one hand has facilitated students to study their computer courses effectively and on the other have been beneficial for over all learning enhancement of the students. Majority of the subjects, especially science subjects, are being taught in the schools using computers. The visuals and animated effects create a lasting impact on student learning and understanding. The LRSs were struggling to mainstream the students of the feeder schools to get benefits of the computer lab from LRSs. The nearby feeder schools have taken the advantage of using the computer lab of LRS however, for others it was almost impossible to get the benefits. The will of all head teachers of LRSs exists but they either could not spare time out of their own class timetables for computer classes of feeder schools or there are some other administrative issues e.g. the distance between schools in one cluster. In the no cost extension phase, the feeder schools were also given few computers; the activity being cost intensive, requirement of the feeding schools couldn't be fulfilled at this stage of the project.

> *The keys of library and computer lab are kept within the school. We believe in using the equipment rather than showing it as a decoration item. This means that we ensure that all students have access to the computer labs and library even after the working hours.*
>
> ***Mohammad Iraqi, Principal LRS Shiger***

EDIP allows for the implementation of innovative community and stakeholder driven ideas that have proved to be ameliorative of some of the systemic issues within education in GB. One of these notable initiatives was a community developed and owned alternative energy project that used solar power for running an EDIP project school's computer lab. Though computer labs with Uninterrupted Power Supplies (UPS) were provided to all EDIP Learning Resource School's (LRS), schools in GB receive electricity for only a very short period every day. This understandably limited the use of the computer labs to very short windows, and limited all students' access to Information and Communication Technology. This community initiative however, provided an ideal and cost effective solution that AKDN plans to pilot in select EDIP LRS's.

Provision and Use of Learning Material

The LRS plays an active role in distributing instruction material such as flip charts, drawing charts, markers, teaching kit bags etc. The material is placed in LRS and the school wise material is developed and further disseminated to the feeder schools. The schools have been content with the regular supply of instruction material. Initially the teaching kit bags were also provided to all teachers who have shown satisfaction over the quality of teaching kit bags.

The material is used to its maximum and its usage can been seen all over the school. The teachers and students have developed innovative and informative chart display all over the school. The charts contain motivational as well as inspirational quotes, time tables, school development plans, cartoons, and other creative stuff. The old school environment has been converted to an excellent learning environment where children learn a lot of new ideas related to life skills and behavior improvement.

Involvement of Students in LRSs Activities

Several sample LRSs have shown that they welcome participation of the children from feeder schools in LRS co-curricular and extra-curricular activities. The children participation in confidence and knowledge building activities in their feeder schools is low because of limited activities. This is one of the key benefits for the children of feeding units. However, at certain occasions, there are certain cases where the involvement of feeder schools in the LRSs is not possible due to management and logistical restraints. For example, in Hunza the LRS was celebrating 100 years of existence and a number of activities were planned but the LRSs hall did not had the capacity to accommodate the students of feeder schools.

Willingness of Head Teachers

There already exists an '*indigenous*' link between LRS and the feeder school. The LRS in this case acts as an administrative hub for management and administrative related matters. The teachers of the feeder schools get their salaries and recommend their leaves from the principal of the high school; they cannot get disconnected from each other and hence it is adding a lot of value to the project deliverables. It was found the head teachers were not told to facilitate the feeder schools in a systematic manner. While going through the responses, most of the head teachers of LRSs are found willing to share their facilities with the feeder schools. They consider that the children of feeder schools shall be equally facilitated in their learning as ultimately they will come to the same high school. There are examples of this extended support as some of the LRSs donated their furniture to the feeder schools from their own pool and also extended sports goods and musical instruments etc.

This willingness of head teachers is strongly challenged by certain logistical factors. Keeping in view the number of students of at least threefeeder schools, it is difficult to involve students in activities and benefits from LRS resources. For example enrollment of LRSs Hunza is 452 and it is quite difficult to manage the influx of above 500 students from other feeder schools. Much to our surprise, there are several head teachers who have accepted this challenge and have extended their support to the feeder school.

Role of PDT/TEs/Senior Academic Coordinator

PDT/TE is a strong link between LRS and Feeder Schools. They support and bolster the head teachers, which is a factor behind their success. They have become an influential force

and the head teachers are much responsive to their guidelines. They are central force of the project as all school level project activities are carried out by the PDTs/TEs. They lay a lot of emphasis on improvement in school and child learning. They regularly monitor the lesson plans developed by teachers and other activities of the teachers. They are empowered enough to talk to head teachers about the performance and regularity of head teachers. This has been found that any activities initiated through PDT/TE have likely chances to be successful. They have remained supportive in maintaining liaison of LRS with the feeder schools.

In AKESP clusters, Senior Academic Coordinators are hired. The role of a Senior Academic Coordinator is to contribute in professional development of the Teacher Educators and provide inputs in overall school improvement. It is mainly done through building on the job capacity of Teachers Educators, Head teachers and the teachers of LRS and feeder schools. They also conduct classroom observations and identify key improvement areas in teaching methodologies and develop action and follow up plans. Overall they help the project manager to implement the project as per design, identify/rectify gaps, coordinate reporting arrangements and ensure their timely delivery to the AKESP regional office Gilgit.

> *"To improve their teaching and learning skills I introduced the concept of writing reflective journal. After having a session on reflective writing in LRS, I assigned them a task to write reflections on each workshop and present on the next workshop. At the beginning most of the teachers were reluctant for writing reflections but gradually they started writing. I collected all reflections form teachers and was given positive feedback and put many questions for clarification of their comments. At the end of one year the teachers of this feeding school were writing very critical reflections"*
>
> *A PDT of PDCN*

Role of LLIs

LLIs are referred as Local Level Institutions; which are PTCs, SMCs, MSGs and other social group associated and working for the betterment of a specific school. The response of head teachers on the role of LLIs in school and child improvement varied. Precisely, half of the head teachers responded that parents/LLIs are playing their due role in school improvement and half responded otherwise. However, all head teachers agreed to the importance of LLIs in EDIP and that the response of LLIs is getting better day by day.

> *"If we give importance to community and involve them in school affairs they contribute a lot; I experienced practically."*
>
> *PDT from PDCN*

The training of LLIs was being held in two LRSs, and it was an opportunity to discuss this further with LLIs members. First, a small briefing was carried out about the objective of study and then on the cluster based approach. According to them, the members of LLIs take it as an opportunity to sit together during trainings and other sessions. They found it meet together more frequently. The LLI members of the feeder school reported that the LRS based trainings have added value to their knowledge. This also mobilizes their efforts by sharing experience from the peer groups especially the members of LRS LLIs. This might not have happened if the trainings would have been conducted at the feeder school or community level alone.

4. Lessons Learnt

i. First and foremost, distance between the LRS and feeding units is of much importance. If the distance is considered far, in the given context, the efficiency of the model is affected. Students of the feeding units cannot or somewhat get the benefits of the project interventions, especially from the hard component. It is evident from the benefits of computer lab, libraries etc. Therefore, the distance between the schools must be a critical element of the selection criteria.

ii. If the selection of the feeder schools from a close proximity is not possible, as in case of GB, then certain administrative and logistical measures may be adapted for students and teachers; which mean putting relevant provision in the programme budgets. This will ease the mobility and enhances access to the LRSs and its benefits. Although it seems quite ambitious for an implementing agency but this may result in an enhanced learning of the feeder school students.

iii. Coordination between the LRS and the Feeder Schools is another important factor. The indigenous dependency of the feeder schools on LRS, as per government structure, has made coordination quite useful. The efficacy of the coordination depends upon the activism of the PDT. The PDTs with enhanced number of visits in the feeder schools have developed better coordination and vice versa. There are various ways which may be adapted at the local level to bring about better coordination among LRSs and the feeder schools. In most occasions, the schools and PDTs are taking it very seriously and have adapted local circumstances.

iv. The schools which engage the students of feeder schools in co-curricular and extra-curricular activities have better coordination and student's satisfaction. Although no scientific satisfaction survey or method was carried, but students who were engaged in co-curricular and extra-curricular activities shown their content and were inspired and encouraged. In feeder schools these opportunities are relatively lesser and hence the LRS head should make arrangements to invite children from the feeder schools.

v. The provision of library books was never enough until the library staff and the management of the school issensitized on the use and management of library books. The library management was given a key consideration in no-cost extension phase of EDIP. In the previous phase when only library books were handed over and very little consideration was given, managing library and streamline library services was a greater challenge. The library books are not only beneficial for students and teachers only. In most of the cases the community has urged on using the school library for their knowledge enhancement. Although it is a not a bar in the system, however, it may follow a proper library management system for adjoining areas. This may require a detailed discussion at the head office level by involving Regional Manager.

vi. It was observed that the books provided to the schools, especially to AKESP schools are written in higher standard of English. Keeping in view the remote rural settlements, and the teachers' level of understanding English, their efficacy needs to be further probed and discussed. Having said this, it should not be a discouragement as the implications and/or benefits of these books are unclear. The books may be organized into levels and the teachers should encourage children to start from lower level with gradual improvement in their reading habits.

vii. The teachers of the feeder schools have been seen sending their students to LRSs for using computer lab and library. This is a wonderful practice and its replication can enhance student learning.

viii. The model potentially can increase the efficiencies in administrative costs of schools. This consideration is likely what prompted the government to adopt it only for resource disbursement amongst clustered schools. However this adoption contributes little to the improvement of pedagogical skills. One reason that can be attributed to this is the 'project effect'. The project effect explains the difficulty of correctly gauging the level of government support to donor funded initiatives. It will not be until the conclusion of the programme that the government's willingness to continue with the model will be visible.

5. Conclusion

The Cluster model is a response to both the shift in our understanding of effective pedagogy as well as a response to greater administrative devolution. As such it provides two functions, one of improving teaching and learning, and one of streamlining administration and costs in an age of 'Education for All' and Pakistan's commitment to Universal Primary Education. Both of these considerations are equally important drivers of change in the systems and practices within the public education institutions.

Within the ambit of this study the quantitative aspects of administrative improvements cannot be commented on. The data has not been compiled in a meaningful way to make any claims beyond the immediate scope of the schools. A deeper quantitative analysis of the models in an expanded setting over time will show its true efficacy in cost reduction and greater efficiencies. The qualitative aspects of improving teacher morale and ability, as well as generating a new type of learner are more easily evident. The new education paradigms demand that new modes of instruction and training be adopted and the cluster based approach provides that new model.

The qualitative aspects, as depicted in this study, clearly showcase the greater efficiency and effectiveness of the cluster based approach. The approach is useful for enhancing teachers learning in pursuit of their own teaching requirements, sharing the limited resource base, enhancing access to information, and students learning. In EDIP schools, the approach significantly developed LRSs into learning hubs in the remotest settlements of GB. In the wake of limited external support for the underprivileged areas, the cluster model has evolved into a self-sufficient learning resource base. The softer and immovable components like training, mentoring, information sharing, decision making etc. have resulted in positive outcomes. Enhancing teaching abilities, student knowledge, confidence and creativity, and involvement of the local stakeholders, and the enrollment increase are attributed to these softer components. However, extending the benefits of the hard components like computer labs, libraries and construction, from the LRS to feeder schools required a great deal more effort and financial input. As stated earlier, there are various methods which can be adapted on a case by case basis to mitigate these challenges.

Though the particular details of each contextual implementation of the LRS model will vary and grow (as even the AKDN model has over time) the underpinning rationale has (at least partially) been justified. The LRS model provides more needs based support that is relevant

to the practical experience of ground practitioners, and has the added benefit of proximity to students and teachers residence in rural and disconnected villages. Provinces in Pakistan have already adopted various cluster based models modified to their particular contexts. As GB in particular has just been granted greater responsibilities for handing its own education under Pakistan's new devolution initiative, its education institutions are still in their nascent stages, and appropriate capacities still need to be developed. However given the success of the model so far, it will be interesting to note whether the LRS and cluster based approach will be adopted into its new Education Strategy.

Bibliography

Giordano, Elizabeth A., and International Institute for Educational Planning. *School Clusters and Teacher Resource Centres*. Paris: UNESCO, International Institute for Educational Planning, 2008. Print.

Leu, Elizabeth (2004):Cluster Schools & Teacher Professional Development, An Introduction in EQ Review, Educational Quality in the Developing World, Vol.2, No.2. EQUIP: USAID Also- Leu, E.(2004): The Patterns and Purposes of Localized Teacher Professional Development Programs Academy for Educational Development EQUIP: USAID

MacNeil, D.J.(2004): School and Cluster-based Teacher Professional Development: Bringing Teacher Learning to the Schools Working paper Number 1 under EQUIP's Study of School-based Teacher In-service Programs and Clustering of Schools. USAID

Street, H. & Temperley J. (Eds) (2005): Improving Schools Through Collaborative Enquiry London: Continuum

ANNEX 1

Respondents

Sr No	Name	Sex	Designation	School/Area
1	Deedar Bano	F	Teacher	NEF School Gaimash Karimabad
2	Seema Jabeen	F	Teacher	NEF School Gaimash Karimabad
3	Naik Parveen	F	Teacher	NEF School Gaimash Karimabad
4	Shireen	F	Teacher	NEF School Gaimash Karimabad
5	Ruqqaya	F	Student	NEF School Gaimash Karimabad
6	Ishrat	F	Student	NEF School Gaimash Karimabad
7	Husnain	M	Student	NEF School Gaimash Karimabad
8	Nazimuddin	M	Head Master	GMS Brongshal Karimabad
9	Ghulamuddin	M	Teacher	GMS Brongshal Karimabad
10	Tawakkal Mohammad	M	Head Teacher	GHS Karimabad
11	Faqir Mohammad	M	Old Head teacher	GHS Karimabad
12	Ali Bahadur	M	Head Teacher	FG Middle Schools Dahima Thingai
13	Mohammad Akbar	M	Teacher	FG Middle Schools Dahima Thingai
14	Zar Mohammad	M	Head Teacher	DJ High School Thingai
15	Liaqat Ali	M	Librarian	DJ High School Thingai
16	Mohammad Aslam	M	Head Teacher	GPS Shamaran
17	Shaheen Khan	M	Head Teacher	FG Primary School Phander
18	Sher Madad Shah	M	Teacher/Librarian	FG Primary School Phander
19	Saeed Firozuddin	M	Head Teacher	DJ HS Phander
20	Khush Rab	M	Head Teacher	GHS Gopis
21	Syed Ameer Hussain	M	Teacher	GHS Gopis
22	Gulsher	M	Teacher	GHS Gopis
23	Subhan Shah	M	Teacher	GHS Gopis
24	Syed Aliyar	M	Teacher	GHS Gopis
25	Zahid Wali	M	Teacher	GHS Gopis
26	Nasreen	F	Head Teacher	GGMS Gopis
27	Gulshan	F	Teacher	GGMS Gopis

Sr No	Name	Sex	Designation	School/Area
28	Sultana	F	Teacher	GGMS Gopis
29	Parveen	F	Teacher	GGMS Gopis
30	Saleema	F	Teacher	GGMS Gopis
31	Nelofar	F	Teacher	GGMS Gopis
32	Naseema	F	Teacher	GGMS Gopis
33	Shamim	F	Teacher	GGMS Gopis
34	Gulnar	F	Teacher	GGMS Gopis
35	Hajj Bibi	F	Teacher	GGMS Gopis
36	Shah Farman	M	Head Teacher	GPS Gowt
37	Syed Mohammad Iraqi	M	Head Teacher	FG High School Shigar
38	Shabbir Hussain	M	Head Teacher	GPS Shighar
39	Haji Mohammad Jaffer	M	Head Teacher	FG High School Khaplu
40	Abdul Salam	M	Teacher	GMS Khaplu Sargaib
41	Abdul Hakeem	M	DDEO Education	Gilgit
42	Ismail Khan	M	ADEO	Gilgit
43	Rahat ullah	M	ADEO	Gilgit
44	Masoom Shah	M	ADEO	Gilgit
45	Dr Moladad	M	Head PDCN	Gilgit
46	Khadija Khan	F	Regional Head AKESP	Gilgit Baltistan
47	Bahadur Ali	M	PC EDIP AKESP	Gilgit Baltistan

ANNEX 2

Summary of Activities carried out with Typical LRS

Capacity Development

- A course on - what does it mean to be a teacher
- Adult Literacy sessions with mothers are conducted
- Advanced Diploma: Educational Leadership & Management (AD:ELM)
- Awareness sessions/home visits for parents, religious and community leaders and potential students..
- Awareness for teachers on child friendly environment and teaching practices
- Awareness sessions - enroll out of school children
- Awareness sessions on retention
- Training on Project implementation and TNA
- Training for teacher educators / AEOs to provide academic support to schools
- Workshop for members of LLIS and SMCs/MSGs on ToRs and skills
- CE: Early Childhood Educational Development
- Training on Community Mobilization and Gender Awareness
- Conduct 5 day center-based subject-wise training course
- Training for teachers to improve their classroom practices and to make them child friendly.
- Conduct cluster workshops/sessions per month on various themes
- Conduct refresher course on library
- Conduct training on Library atomization
- Conduct workshop on ICT integration across curriculum.
- Conduct workshop on ICT literacy curriculum / maintenance and trouble shooting of computer lab
- CPE: (Curriculum) Social Studies Course
- CPE: Curriculum: Content -based workshop for English teachers (Middle and secondary level)
- CPE: Curriculum: Content- based workshop for primary Maths teachers
- CPE: Curriculum: Content- based workshop for primary science teachers
- CPE: Curriculum: Content- based workshop for teachers of Chemistry (secondary level)
- CPE: Curriculum: Content -based workshop for teachers of Maths (Middle and secondary level)
- CPE: Curriculum: Content- based workshop for teachers of Physics (secondary level)
- CPE: Curriculum: Content-based workshop for teachers of Biology (secondary level)
- CPE: Curriculum: Content-based workshop for teachers of Urdu (middle and secondary level)
- CPE: Curriculum: Content-based workshop for teachers of Urdu (Primary level)
- CPE: Early Childhood Educational Development
- CPE: Educational Leadership and Management (CPE: ELM)
- CPE: ELM Workshop for Head Teachers
- CPE: ICT Skills
- CPE: ICT Training
- CPE: Inclusive Education
- CPE: Innovative Pedagogies
- CPE: Mathematics
- CPE: Mentoring Skills
- CPE: Writing skills for primary language teachers
- CPE: Science
- Training on dealing with perceptions on disabilities
- Sessions and drills on DRR and school safety
- Training on ECD
- Preparatory English Language Course for new students M.Ed

- Enroll and develop selected candidates through M.Ed. program.
- Training on Good Governance and Resource Mobilization
- Training on Inclusive Education
- Training on Library management
- Masters in Education from AKU
- Training on Networking and Communication
- Training on School Development and Gender & Education
- Training on Report Writing and Documentation
- TOT on Disaster Risk Reduction
- Training for development of school safety manual
- Training of Basic English
- Training of Maths (Middle and Secondary)
- Training of Physics Chemistry Bio and Secondary English

Construction

- Renovate school facilities (Whitewash, small repairs, etc)
- Seismic Retrofitting
- Construction of rooms
- Construction of toilet blocks
- Construction of LRCs
- Topographic Survey of Schools
- Hazard Risk Assessment of Schools

Inputs and Resource Provision

- Computer machines with necessary paraphernalia
- Library books with shelves
- Science laboratory equipment
- Stationary and other learning materials
- Schools Books and Uniforms (in select LRSs)
- Furniture (tables, desks, blackboards, cupboards etc)
- ECD learning material, carpets etc.
- Sports goods

List of Abbreviations

AEOs	Assistant Education Officer
AKESP	Aga Khan Education Services Pakistan
AKF(P)	Aga Khan Foundation Pakistan
AKPBS	Aga Khan Planning and Building Services
AKU–IED	Aga Khan University-Institute for Educational Development –
CPE	Continuous Professional Education
CSOs	Civil Society Organizations
CSRC	Civil Society Resource Center
CWDs	Children with Disabilities
ECD	Early Childhood Development
EDIP	Education Development and Improvement Programme
FGDs	Focus Group Discussions
FHRD	Female Human Resource Development
G-B	Gilgit-Baltistan
HDP	Human Development Programme
HTs	Head Teachers
LLIs	Local Level Institutions
LRCs	Learning Resource Centers
LRSs	Learning Resource Schools
LSOs	Local Support Organizations
M&E	Monitoring and Evaluation
M.Ed.	Whole School Improvement Programme
MER	Monitoring Evaluation and Research
MIS	Management Information System
MOI	Memorandum of Intent
MoU	Memorandum of Understanding
MTE	Mid-Term Evaluation
NGOs	Non-Government Organization
NOWPDP	Network of Organisations Working for Persons With Disabilities in Pakistan
PC	Provincial Coordinator
PDCN	Professional Development Center North
PDT	Professional Development Teacher
RBM	Results Based Management
SDP	System Development Process
SMCs	School Management Committees
TE	Teacher Educator
TNA	Training Needs Assessment
ToT	Training of Trainers
VECs.	Village Education Committees