



SOCIAL DIVERSITY AND TEACHER EDUCATION: CHALLENGES, OPPORTUNITIES AND INNOVATIVE PRACTICES

AUTHORS: MS. JUMANA RAMPURAWALA, MR. VALENTINE BORGES & MS. ELIZABETH MEHTA MBE

NOVEMBER 2017

Table of Contents

Abstract.....	2
1. Background.....	3
1.1. Muktangan Integrated Teacher Education Programme.....	3
1.2. History of Muktangan	3
2. Muktangan vs Mainstream Education	4
2.1. Apathy in Our Education System.....	4
2.2. Our Interpretation.....	4
2.3. The Muktangan Theory of Change.....	5
2.3.1 Long Term Goals	5
2.3.2 Who do we serve at Muktangan.....	6
3. Muktangan Model of Sustainable Change	6
3.1. Deciphering the Model.....	7
3.2. Three Year Modular Muktangan Integrated Teacher Education Programme (MITEP).....	7
3.2.1 Pre-service Teacher Education	8
3.2.2 In-service Teacher Education	9
3.3. Development Appraisal System.....	10
3.4. School Programme.....	10
3.4.1 Muktangan Schools and Curriculum.....	10
3.4.2 Muktangan Classrooms.....	11
4. Impact of the Muktangan Model	12
4.1. Impact of MITEP	12
4.1.1 Social Impact.....	12
4.1.2 Impact on Teacher Motivation	13
4.1.3 Economic Prowess	13
4.2. Impact of Teaching Pedagogy.....	14
4.2.1 Non-academic Aspects	14
4.2.2 Academic Performance	15
5. Summary	16
6. Acknowledgement	17
7. References	17

Abstract

This paper raises questions on the need for quality in pre-service and in-service teacher education programmes (TEP) in India. It is an attempt to showcase the best practices of Muktangan's adopted Hub and Spoke alternative, innovative model being implemented in government schools of Mumbai, where children from nearby slums go.

Mumbai has the highest proportion of slum-dwelling households (41.3%) comprising of ghettos of social-cultural, religious, linguistic and ethnic diversity. Slum children generally access government-run vernacular-medium primary schools offering free education, or low-cost private English-medium schools, as English medium government schools are scarce.

The learning environment in the government schools and the low-cost private schools are not always responsive to the culturally diverse nature of students.

Megalithic bureaucracy and poor teacher education lead to little empathy for marginalized slum children. The developmentally inappropriate text material, out-dated teaching pedagogy and emphasis on rote-memorisation rather than conceptual understanding in schools and teacher education colleges has become a vicious circle which needs to be changed.

The paper discusses how 'decentralization to the community' could resolve this predicament. This translates to community members, especially women, as child-centric teachers becoming change-agents for education within the community.

The paper refers to the Muktangan TEP which is embedded in the community where teachers and students come from the same socio-cultural background. In this model commitment and sustainability is greater, no de-conditioning of traditional pedagogy is needed, re-ignites their own interest in education, there is greater understanding of student needs, more responsive to the student's socio-cultural-linguist background.

Key words:

Muktangan Integrated Teacher Education Program (MITEP), Municipal Corporation of Greater Mumbai (MCGM) Secondary School Certificate (SSC), National Curriculum Framework (NCF), National Curriculum Framework for Teacher Education (NCFTE), Higher Secondary School Certificate (HSC), Curriculum Understanding and Design (CUD), Lesson Design Meeting (LDM), Mumbai Public School (MPS), National Centre for Performing Arts (NCPA), hub and spoke, community model,

1 Background

1.1 Muktang Integrated Teacher Education Programme

There are over 1 million government schools in India where children access an education that does not guarantee minimum level foundation skills. Despite the recommended constructivist approach of the National Curriculum Frameworks (2005), teaching methods continue on the premises of rote memorisation. Pre-service teacher education centres continue to remain isolated from schools, and thus do not provide an opportunity to budding teacher trainees to sharpen their practical skills and attitudes. The Muktang Integrated Teacher Education Program (MITEP) endeavours to bridge this vital gap in the curriculum, by introducing an active constructivist learning methodology embedded with a rigorous school internship platform. Teachers who undergo this intervention are likely to be educational change-makers with the skills & attitudes to design and implement a relevant curriculum for the 21st century.

1.2 History of Muktang

Muktangan is an initiative of the Paragon Charitable Trust founded by Ms. Elizabeth Mehta MBE in 2003 to address quality lacunae in education. With over 30 years of experience in the field of education, Muktangan was conceived as an integrated model of school and teacher education. According to the model, local marginalised community members (mainly women), after intensive training in a child-centred preschool pedagogy, set up the first preschool in June 2003 on the premises of a Municipal Corporation of Greater Mumbai (MCGM) school. Acknowledging the children's enthusiasm for learning, the local community members and the city's municipal corporation encouraged and entrusted Muktangan to develop an English-medium primary and later secondary school following the secondary school certificate (SSC) Maharashtra state board syllabus. The first grade (standard 1) started in 2004 with higher grades being added each year in the same school. Alongside the community-based teacher education programme developed into a full year's programme.

In 2007, following the success of the pilot school the MCGM requested Muktangan to take under its ambit 6 more English-medium schools in the G South Ward of Mumbai. The need for additional human resources was overwhelmingly met by the enthusiastic community women who viewed the project as an avenue not only for educational but personal transformation. Since then Muktangan has grown to over a 500-member teaching and administrative faculty, comprising of classroom teachers, librarians, information technology, music, art and craft teachers, special educators, teacher educators and school leaders. The integrated teacher education programme has now evolved to a 3-year modular programme bench-marked for best practices by institutions across India. While the teacher education centre is the hub of developmental initiatives, the 7 schools are the laboratories for action research that feeds into the pedagogy development year-after-year. In recent years, Muktangan's adopted hub and spoke model has been endorsed by educationists,

government officials and non-government organizations leading to a number of organisations partnering with Muktangan.

2 Muktangan vs Mainstream Education

2.1 Apathy in our Education System

According to the Tendulkar Commission over 13.7% (over 50 million) of India's population lives in urban cities under stressful economic conditions. Maharashtra accounts for a little less than 10% (over 40 lakh) of those classified in the urban-poor category (Planning Commission, Government of India, 2012). Research reflects that children from urban low-income families have access to schools with high student-teacher ratios which enforce rote learning methods in their classrooms. Since conventional teacher education institutes lack integration between theory and practice, the obvious outcome of such a system are teachers and ultimately their students who study by rote memorisation. Unfortunately, over the years this long neglected systemic anomaly has resulted in about half of all children in standard five in India being unable to read standard 2-level text. To add to this predicament close to 86% of parents in a metropolitan city like Mumbai whose children study in vernacular medium schools would prefer to have access to English medium schools (PRAJA Foundation Report, 2013). Data on the attendance rate of school children reflect the apathetic reality of Indian schools. The attendance rate is between 45-60% for students from low-to-middle income class families in urban areas of India. In Maharashtra it is about 88% for ages 6-10 years and 85% for ages 11-13 years (Balatchandirane, 2007). Notably these anomalies explain why less than 40% students in standard five in government schools demonstrate the potential to do simple subtraction and division problems (ASER Report 2014), equally dismal is the fact that 1 out of 4 teachers in India are absent on any given day (World Bank & Harvard University Study). To add to this apathy, school teachers in India occupy the lowest rung of the education bureaucracy and have little or no say in terms of tasks allotted to them of census data gathering, surveys and other non-academic duties that eat into their teaching time (National Focus Group Position Paper, 2006). One must acknowledge that a mere rise in school enrollment is not the task at hand but addressing the issues of curriculum and pedagogy require equal and critical attention; perhaps even special treatment for the socially under-privileged learners to help them achieve equality of outcome (National Focus Group Position Paper, 2006).

2.2 Our Interpretation

As revealed in the ASER report, it is unfortunate that the exponential rise in school enrollment numbers do not reflect an increase in the student learning levels at present. At the classroom level, the quality of teaching and learning is driven by the qualities of the teacher. A teacher as an empowered change maker will demonstrate greater motivation to drive a positive change in education as compared to a teacher who is appointed to fill a vacant post. Intrinsic motivation can potentially play a major role in bringing positive change

in education. By engaging determined adults who are part of the same community as the students come from, often develop into intrinsically motivated change agents.

It is an undisputed fact that 21st century education will demand 21st century skills not only from students but also from those who impart education (i.e. teachers & teacher educators). Nevertheless this demands a more integrated and synchronised change in the teaching pedagogy at both the government and non-government teacher education centres and schools. This metamorphoses the role of teachers and teacher-educators into empowered change agents as against the conventionally thought mere “classroom presence” yielding insignificant impact.

It is evident from the years of relentless efforts of a number of non-government organisations, that communities in turn can be directed to find solutions to their own issues. Community members (mainly women) who are given the right learning environment not only develop into quality teachers, but also into role models for other community members. Continual efforts by such organisations that have established themselves in community change over the years have eventually generated evolved models of change with tangible results that can be replicated elsewhere.

2.3 The Muktangan Theory of Change

The Muktangan model advocates engaging adults from the urban low-income housing communities to be empowered change-makers. The model indulges in enrolling adults to a comprehensive pre-service programme followed by an in-service programme on the active-constructivist philosophy re-enforced with timely professional development workshops transforming motivated adults into 21st century teachers. When children from low-income families are taught by teachers from their own communities, who are trained in inclusive and child-friendly methods, they access an education that is relevant, engaging and progressive.

2.3.1 Long-term Goals

Muktangan envisions an inclusive, empowered world in which all live in harmony with freedom of expression, respect and with integrity’. The mission of Muktangan is ‘to evolve sustainable, replicable inclusive model of quality child-centered teacher education and school programmes in partnership with marginalised communities and to advocate them to the larger system’. The teacher education programme is planned to develop motivated adults from the community to be catalysts for educational growth in the under-served communities across the city and eventually across the country. The school curriculum is designed to provide students with a holistic education that develops their knowledge, skills and attitudes to blossom into contributing global citizens.

2.3.2 Who do we serve at Mukangan?

The Mukangan programme is designed to address the needs of adults by motivating and empowering them to be change-agents within the community they live. These empowered change-makers in turn are engaged in serving children from their very own community. Mukangan students come from families whose working members seek employment in the unorganised sectors in urban Mumbai and gross an annual income below 1.5 lakh INR that is relatively low for those living in South Mumbai. Parents of less than half of these students may not have completed their secondary education in any medium in any board of certification and live in relatively poor or unauthorised housing colonies or shanties. The picture is as dismal with the teacher trainees, with 100% coming from economically marginalised backgrounds with a family size of five or more members and an annual income below 1.5 lakh INR. It is observed that up to 70% of those enrolled may have studied up to standard 12 (higher secondary certificate) in vernacular-medium schools.

3 The Mukangan Model of Sustainable Change

Muktangan integrates teacher education as a hub with 7 English-medium Mumbai Public School (MPS) as spokes (Figure 1). The model is sustainable with change-agents blossoming from the same community where the need for change necessitates and the beneficiaries for change-advocacy are the children and adults of the same community. The programme is supported by the Municipal Corporation of Greater Mumbai (MCGM) in terms of building infrastructure and financially by corporate partners, high-net worth individuals and several goodwill ambassadors and volunteers who trust the Mukangan philosophy of education for the community, by the community in the true sense of the word.

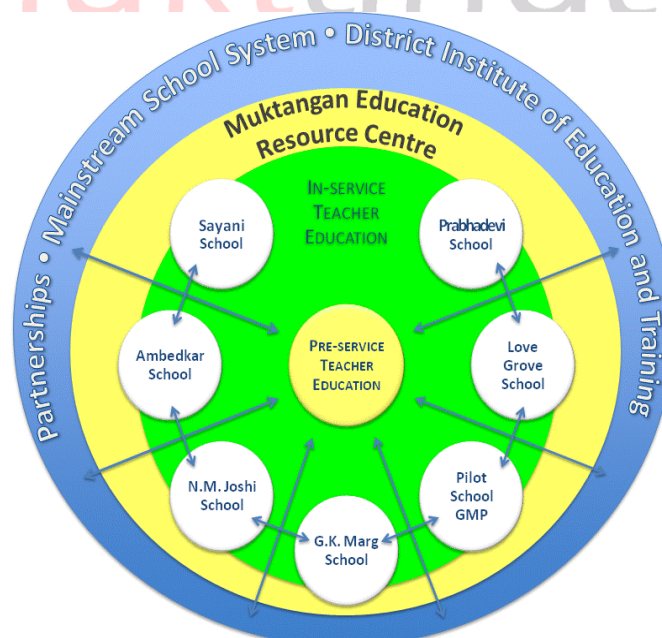


Figure 1. Teacher education centre integrated with the school system: Each strengthens the other using a 'hub and spokes' approach.

3.1 Deciphering the Model

The two-way arrows in figure 1 indicate the free flow of knowledge, both within and across Muktangan mentored schools and its 11 departments and its partnering organizations and individuals.

All the schools along with the teacher education centre operate within the MPS facilities. The school programme follows the Secondary School Certificate (SSC), Maharashtra state board prescribed syllabus while the MITEP course work has been designed in line with the principles of the NCF 2005, Syllabus of National Diploma in Elementary Education, NCFTE 2009, RTE Act 2009 and also learnings incorporated from pedagogical research in the classroom by our specialised teacher educators. The key difference of the Muktangan model is in the constructivist pedagogy and the processes that enable teachers to develop continuously.

The rigorous classroom internships during pre-service training and weekly curriculum design meetings as part of in-service training conducted by specialised teacher educators enhance the free flow of learning (figure 2). As on 2016, Muktangan has developed 30 subject specific community teacher educators who are responsible for both pre-service and in-service training.

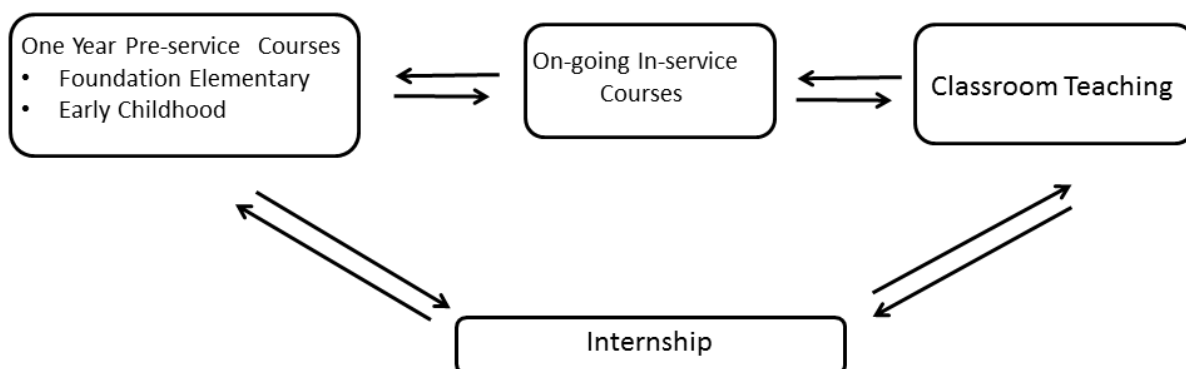


Figure 2. Muktangan's Feedback Loop involves teachers educators' at all three levels

3.2 Three Year Modular Muktangan Integrated Teacher Education Programme (MITEP)

Muktangan conducts two teacher education programmes, namely early childhood education programme to develop preschool teachers and foundation programme for elementary

education. The three year modular programme consists of full-time, year 1, pre-service and part time year 2 & 3 in-service.

3.2.1 Pre-service Teacher Education

The first year of the foundation programme lays the foundations for elementary-teacher's professional, social and psychometric skill-set development. The year comprises of elementary courses delivered five and a half days (about 39 hours) a week and comprise of three and a half contact or theory days and two practical or internship days each week for 35 weeks. The typical profile of a teacher in Muktangan is an individual between the age group 18 to 45 (mostly women) from economically marginalised family. Most applicants to the programme are state board educated Higher Secondary School Certificate (HSC) pass-outs from vernacular-medium educational institutions.

The course structure comprises of subjects such as Learning and Cognition (focuses on brain and learning theories), Child Development (focuses on developmental milestone), and Teacher Learner and Society (focuses on social issues in our society and equity), Educational Beliefs and Understanding Self (focuses on understanding personal beliefs and educational beliefs), Language and Literacy (focuses on acquisition of language and emergent literacy), Proficiency in English (focuses on trainees acquiring proficiency in English language education), Foundation Math's (focuses on basic mathematical thinking), Information Technology and Library (focuses on IT skills and library skills in education), Workshop and Skill Development (focuses on making low-cost teaching & learning materials for classroom use and skills of using them) and School Curriculum and Pedagogy (focuses on school curricular and pedagogical theories) and co-curricular subjects such as Music (focuses on use of music in education), Health and Physical Education (focuses on foundation of science, health, hygiene and motor development).

The objective of the pre-service program is to develop community members into child-friendly teachers who believe that a child is an active-constructive learner and not an empty pot which needs to be filled with stagnant knowledge from the syllabus. The contact classes are done through an active-constructive approach using case study, group discussions, debates and role plays so that trainee teachers understand and experience the efficacy of the constructivist approach, thereby implementing it as a teacher.

Over 300 hours of school based internship during the academic year ensures that student teachers develop necessary practical skills, and are able to assimilate theoretical concepts through practical classroom observation and projects. Internship class is assigned to the student teacher at the beginning of the year where they continue throughout the year. In internship the student teacher works with the children and participates actively in all the classroom transactions. The student teacher follows two children from the internship class whose development progress is tracked, culminating into a case study at the end of the year. They also work on any one developmental area of both the case study participants. They assist teachers and children throughout the day and record their observations and learnings which are discussed in the tutorial with their mentors. The interns also have a one

month internship in the preschool so that they view child development in a holistic way rather than separate stages.

The student teachers also have tutorials for which they are assigned a mentor faculty who meets them once a week for 45 minutes during which they have reflective discussions on classroom processes and subject pedagogy observed in the internship class and / or in the contact class.

The student teachers are assessed in a continuous comprehensive way. Each subject course includes formative and summative assessments which comprises of projects, assignments, reports, focused group discussions, multiple choice questions, paper-pen tests and others .

Qualitative appraisal is done for critical attributes and key performance areas every quarter through an appraisal rubric, in which they do a self appraisal and then with an appraiser plot a final level through consensus. They also set goals together which is reviewed in every quarter.

3.2.2 In-service Teacher Education

Those who successfully complete the foundation program are then placed as pre-school or primary teachers in the lower grades in Muktangan mentored schools or in those mentored by our partnering organisations. Subject specific pedagogy is built-in through the process of weekly Curriculum Understanding & Design (CUD) meetings. The CUD meetings primarily focus on concept building, curricular processes and content understanding related to the subject and standard they teach and are designed by senior teacher educators called lead subject faculty and coordinated by Muktangan's experienced junior teacher educators developed from the community called subject faculty. The CUD provides the in-service teachers a platform for reflective learning as fellow teachers share their opinions and experiences during discussions mediated by lead faculty members. The teachers thereafter participate in lesson design meetings (LDM) facilitated by Muktangan's experienced community subject faculty. LDMs provide a platform for, designing classroom learning experiences, and reflection on previous week's planning and execution. To ensure continuous proficiency development in English proficiency and subject pedagogy, these practicing teachers attend weekly English proficiency sessions and a 2-year course comprising of subject-specific weekly pedagogy modules namely Pedagogy of Language, Pedagogy of Mathematics, Pedagogy of Science, Pedagogy of Social Studies, Special Education, Early Childhood Education, School Librarianship, School Leadership and Counseling Skills.

3.3 Development Appraisal System

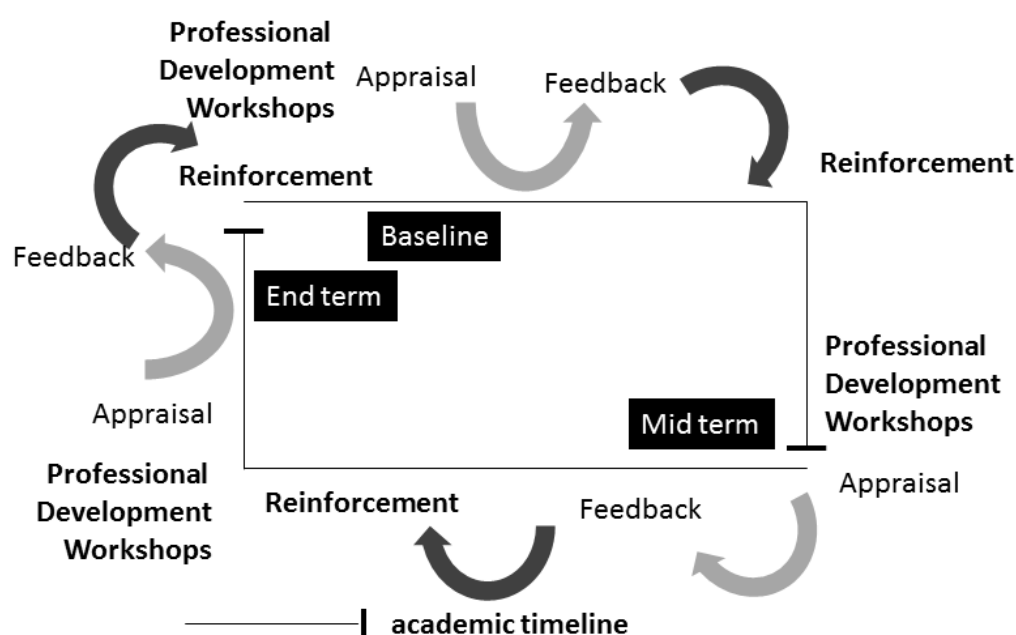


Figure 3. DAS flowchart indicating the appraisal process at Mukangan.

Muktangan has followed an observation-and-feedback based double-blind process as represented in figure 3, for pre-service trainees and in-service teachers and faculty for quality assessment of the programmes efficacy. The subject experts and subject faculty observe and score teachers in classrooms once a week and thereafter engage in a reflective dialogue noting action points for change. These changes are tracked by subject experts and subject faculty and the reflections serve as reinforcements in designing professional development workshops during the year. This system is more of a 'cyclic developmental tool' focused on providing inputs to improvise classroom deliverance and programme quality. Importantly, this process leads to the movement of the teachers to teaching in the higher grades and eventually becoming subject-specific teacher educators and school leaders.

3.4 School Programme

3.4.1 Muktangan Schools and Curriculum

Muktangan mentors seven English-medium MPS spread across nine campuses within the 2 kilometre radius from the teacher education centre. Each school has a child centered pre-school attached and while the pilot school has reached up to std 10 the other six schools are currently up to standard 9 and will go up to standard 10 in the year 2017-18.

Muktangan understands the needs of every life it touches and recognises the potential and strength of each child in lieu of their familial and economic backgrounds. Muktangan schools have about 12% differently-able students or those students who may be categorised as learning-disabled by the current system across all standards (1 - 10). With this in mind the

Muktangan school curriculum is based on 'emergent literacy', active constructivist, and inclusive collaborative pedagogy. The subjects comprise of those prescribed by the state syllabus. Additionally the Muktangan syllabus enforces all round development through Information and Computer Technology (ICT), holistic studies through Art & Craft, Drama, Dance, Physical Education and Music from standard one. Each of the Muktangan school has a children's choir who are trained in western and Indian classical singing and they regularly perform at the National Centre for Performing Arts (NCPA). Besides the curriculum also includes departments of Library for reading promotion, Learning Resource Group for students with specific learning challenges and the Socio-emotional department that provides circle time discussions within peer-groups, pastoral care and counseling.

Students are not to be considered as mere young people for whom adults device solutions. They are critical observers of the socio-cultural ecosystem around them and should be part of discussions and given an opportunity to think of solutions to related to education and future opportunities (National Focus Group Position Paper, 2006) With this in mind Muktangan has partnered with organisations like the river-side school in Ahmedabad and adapted the Design for Change (internally termed MUKTPATH) module for the std 9 students and with Reniscience Education in Mumbai to participate in the nationwide research initiative where students engage in realising problems around them, think of solutions, collect and analyse data, evaluate solutions and to an extent even participate in problem solving. Muktangan has also launched a program called "World of Exposure" for the students of standard eight to expose the children to different fields and career options. This enables them to recognise their interests and potentials so that they are able to make appropriate choices for further endeavours.

3.4.2 Muktangan Classrooms

Each Muktangan classroom is designed to cater to the active-constructivist pedagogy practices that the model strongly adheres to. Active-constructive learning is best delivered in small groups, which is why each classroom has a maximum teacher-to-student ratio of 1:15. To achieve this with limited teaching space, each Muktangan classroom is divided into three groups, each with a separate teacher and their own blackboard and resources. The teacher's role would be to provide a secure environment for students to express themselves and simultaneously interact with each other (National Focus Group Position Paper, 2006). In order to facilitate this, Muktangan teachers sit with their group of students, rather than tower over them, as Muktangan promotes a discussion-based model of learning unlike the conventional teacher-led sessions. Each classroom is dedicated to a subject, be it languages, ICT, humanities, mathematics or science and is equipped with stackable furniture that can be cleared for floor activities, resource cupboards hosting subject related resource material and books and display boards to reinforce visual augmentation.

Muktangan follows a Continuous Comprehensive Evaluation since its inception. The teachers are trained in observing children and give importance to formative assessment over summative examinations. The students observations are fed into review and planning of lessons every week. Muktangan is also in the process of developing a student tracking system for the core subjects. The student tracking for Maths standard 1 to 7 was piloted last

year in all Muktang schools and is being used by teachers to improve the learning levels for individual children through differentiated instruction which is data driven.

For our students and their families, a Muktang education doesn't end with the school bell. For many, issues at home often make learning a challenge and hence Muktang teachers work closely with the families through regular parent-teacher-meetings, home visits, and open day discussion of the students they teach, supporting their student's success in the classroom as well as making Muktang an agent for more wide-reaching community change.

At Muktang, parents attend regular meetings with teachers, as well as language classes and other workshops. They often supervise the children on field-trips and volunteer in fruit-cutting for mid-day snack time; while several have gone on to train as Muktang teachers themselves.

"What an inspiring school! You are doing wonderful work in showing the way to grow and influence."

Howard Gardners' visit to Muktang Schools - January 2012

4 Impact of The Muktang Model

Since 2003 over 4000 community families have benefitted from the Muktang model. Muktang's community model of school & teacher education with its participatory processes is recognised by several leading educationists and academicians in India and worldwide. Muktang has partnered for outreach with leading government and non government organizations like UNICEF, MSCERT, and TISS in areas related to teacher education and research and continues to be called upon for pedagogical expertise as knowledge partners.

4.1 Impact of MITEP

4.1.1 Social Impact

The Muktang model as on 2016 has evolved over a decade and has transformed the lives in terms of social-up-liftment and economical prowess of over 500 community members. The model is sustainable in the true sense of the word, employing over 500 change-agents, some of whom did meagre jobs or had little to no income, as classroom teachers, librarians, special educators, facilitators, schools leaders and school administrators.

Excerpts from TISS "Muktang Impact Study" 2013

"Being a Muktang teacher has created self reliance, confidence and a sense of identity and has brought them affirmation from family and community enhancing their self respect and dignity".

"Muktang's presence in the area has strengthen the community's interest and motivation in schooling their children"

4.1.2 Impact on Teacher Motivation

In 2010 the Research Unit of the College of Social Work, Nirmala Niketan funded by Tech Mahindra (a private enterprise) evaluated the educational program implemented by Mukhtangan. The research team assessed the level of motivation among the community teachers. An overwhelming number of teachers were in love with their job with over 80% showed intrinsic motivation toward their profession (Figure 4).

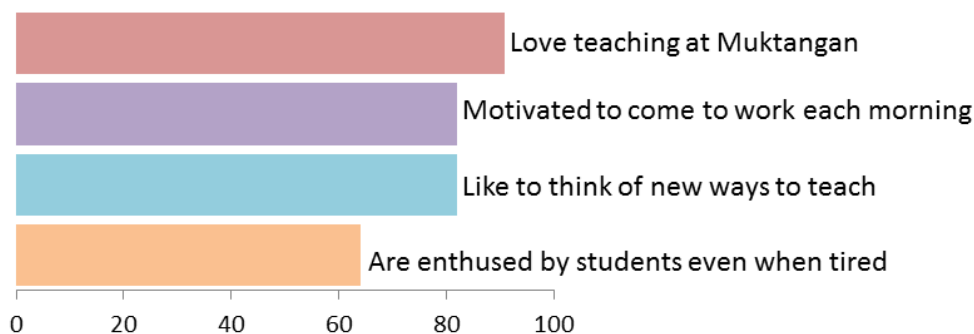


Figure 4. Mukhtangan impact on teacher motivation

4.1.3 Economic Prowess

In a recent study by the Tata Institute of Social Sciences, Mumbai evaluated the outcome of the decade long TEP on economic upliftment of community members involved in the programme. Data indicates that close to 80% of these empowered change-agents have directly contributed toward doubling their family income, since joining (TISS Mukhtangan Impact Study, 2013). This empowerment has brought about an exponential rise in the family income along with job security and financial stability (figure 5).

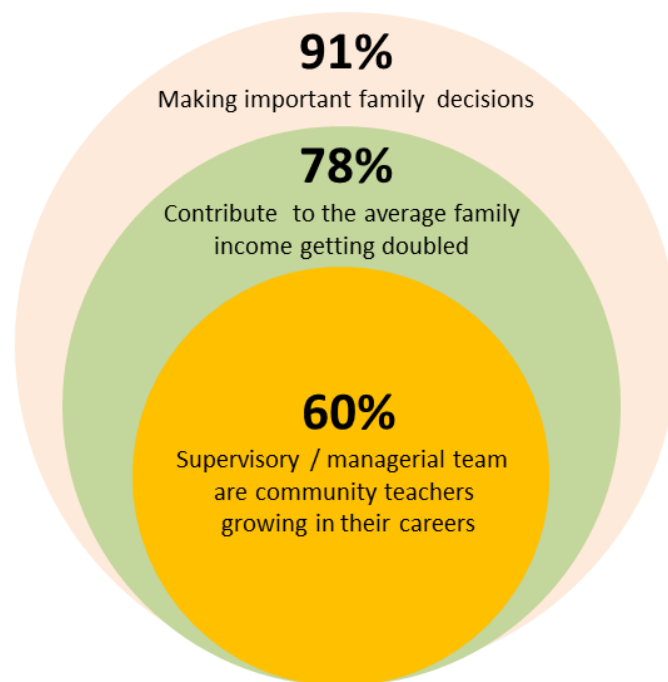


Figure 5. Mukhtangan impact on community members

4.2 Impact of Teaching Pedagogy

The Mukhtangan teachers who are trained in curricular practices and pedagogy based on the 'emergent literacy', active constructive, inclusive and collaborative learning approach has had a significant impact on the academic as well as non-academic outcomes of the students.

4.2.1 Non-academic Aspects

Mukhtangan's unique model of education has reaped timely and tangible benefits for its young minds. Mukhtangan's circle time session reinstate the importance of 'inclusive' processes where every voice (of children, teachers and parents) is heard, Mukhtangan's constant educational endeavour has been to ensure each child's development in the social, emotional, values, physical and aesthetic domains, while children work to grow together rather than compete with their classmates.

The TISS - Mukhtangan Impact Study (2013) reveals that "*Mukhtangan education provides an environment where students are exposed beyond the classroom and are provided with resources beyond text books making the child value knowledge in a different way unlike that from other mainstream schools*".

(Tata Institute of Social Sciences - Mukhtangan Impact Study, 2013)

4.2.2 Academic Performance

The Muktang model has a proven track record in scholastic performances of its students. Muktang schools have a student drop-out rate of under 4% which is way below the national level of 38% for government-mentored schools across any medium (Elementary Education in India Analytical Tables 2014-15, Mehta). Muktang students have a 100% passing percentage at the SSC exams since the first batch that passed out in 2013-14 (table 1).

Table 1. SSC performance of Muktang

	2013-14	2014-15	2015-16
Passing percentage	100%	100%	100%
Special Children (Learning disabled)	19%	12%	10%
Top percentage	86.2	92.4	94.8
Above 60 percent	98%	85%	80%
Below 50 percent	-	-	2%
Top score in Mathematics	93	98	98
Top score in English	86	86	88

Among the most striking developmental outcomes is that of differently-abled children. A student of Muktang was certified with mild autism. While most government-run schools in the city would have excluded the student from their rolls, the student successfully cleared the SSC Board exams with 76% aggregate marks in the academic year 2014-15. The

student is currently pursuing Junior College at a leading college in Mumbai. This stands testimony to Muktangan's inclusive philosophy of learning and growing together.

5. Summary

Muktangan echoes the need for a comprehensive pre-service and continuous in-service teacher education. Muktangan is a community model, where the community teachers come with fewer pre-conceived notions and are more motivated to work for the children of the community, since they can relate to their background and challenges. Muktangan is working to bring about change in education by improving the quality of teacher education, which in turn will lead to a better quality of school education thereby addressing the issue of children from under-served backgrounds from dropping out. Muktangan advocates that, the teacher education and school cannot function in isolation of each other but rather integration of 'learnings' need to flow from the schools to teacher education and vice-verse. Since its inception, Muktangan follows an observation-and-feedback based double-blind process for pre-service and in-service quality assessment. The broad goal of Muktangan's teacher education is to develop teachers who are reflective critical thinkers, responsible planners and organizers of active constructive, critical pedagogy and effective communicators. This system is more of a 'cyclic developmental tool' focused on providing inputs to improvise classroom deliverance and program quality. Importantly, this process is continual and is key to developing a learning organization.

To bring about any change all stake holders need to be involved hence Muktangan works in collaboration including all stake holders. There is a dearth of teacher educators in the country and hence Muktangan is attempting to create a self-sustainable model of subject specific community teachers and teacher educators who are involved in schools as well as teacher education thereby bringing about integration

Muktangan has taken up a three-year project (2014 to 2017) in the rural area to test out the model in a different context and has been successful in establishing it in the Wada district of Maharashtra where it is supplementing the quality of education in the Anganwadis and standard one and two in the rural tribal belt.

Muktangan has initiated a three year, third party assessment of the quality of education in the seven Muktangan mentored MPS secondary schools (standard eight to standard 10) in the year 2015. Muktangan is striving to become an educational resource centre which will be a think tank to bring about quality changes in teacher and school education.

6. Acknowledgment

The authors thank Mr K. S. Satose for his help in providing Muktangan data and Ms Gauravi Jadhav for her inputs on the developmental appraisal system.

7. References

National Steering Committee (2005). "National Curriculum Framework". New Delhi: National Council for Education, Research and Training.

Planning Commission of India (2012). Number and Percentage of Population Below Poverty Line by states - 2011-12 based on Tendulkar Methodology. Retrieved July 31 2016, from <https://data.gov.in/catalog/below-poverty-line-india>

Praja Annual Report. (2013). Mumbai: Praja Foundation.

Balatchandirane, G. 2007. "Gender discrimination in education and economic development: A study of Asia". Chiba - Japan: Institute of developing economies, Japan external trade organisation.

Annual Status of Education Report. (2014). New Delhi: Pratham.

Michael Kremer, Nazmul Choudhury, F Halsey Rogers, Karthik Muralidharan, & Jeffrey Hamme (2004). "Teacher absence in India: A snapshot". Journal of European Economic Association, 2, 1-10.

National Focus Group (2006). "National Focus Group on Gender Issues in Education". New Delhi: National Council for Education, Research and Training.

Disha Nawani, Nandini Manjrekar, Sabah Khan, & Divekar, R (2012). The Muktangan project in Municipal Corporation schools of Mumbai: An impact assessment study. Mumbai: Tata Institute of Social Sciences.

Arun C Mehta (2015). Elementary Education in India: Analytical Tables 2014-15. New Delhi: National University of Education Planning and Administration.