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Retrofitting ICT in Teacher Education for Community Development

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ABSTRACT *The issue of what counts as robust and viable teacher education has been debated for a long time and still concerns teachers, educators, practitioners, researchers and other sensitive minds. Institutions of teacher education and research have unequivocally recognized the rationale of community development driven by initiatives resulting in increased involvement, enhanced responsiveness and improved conditions of local communities. However, this write-up looks at the ICT-enabled teacher education system which is a matter of not only sound philosophical proposition but also of beneficial implications to be realized through the amelioration in practical and systemic strategies for community development. The study is designed with an objective to develop insights of retrofitting ICT tools, technologies and other applications and appreciate the amelioration in the existing teacher education for community development. The paper also discusses how tech - driven instructional strategies and pedagogical practices can empower institutions of teacher education to enact towards making local communities more participatory and outcome-oriented.*

KEYWORDS: ICT; Pedagogy; Community Development; Teacher Education

Overview

Teacher education serves as a forum for the exchange of knowledge, attitudes and skills required for the fulfillment of community development needs. Community development is a broad term applied to the practices and academic disciplines of civic leaders, activists, involved citizens and professionals to improve various aspects of local communities (Wikipedia, 2012, p.1). It is a skilled process where individuals initiate and involve in the issues of community members and interact with each other in order to explore the unexplored. In the context, the strategy many teacher education institutions primarily adopt is to put in place the physical infrastructure. Although, this is a significant strategy, it needs to be linked closely with the other practical and systemic strategies. Community development is a structured intervention that gives communities greater control over the conditions that affect their lives (Community Development Foundation, 2012, p.1). One of the philosophical propositions of community development is the belief that communities cannot be helped unless they themselves agree and give over to the skilled process of self development. As a part of skilled process, community development is crucially concerned with the issues of powerlessness and active engagement of local community members in the issues which directly or indirectly affect their lives. Ostensibly, one has to look at the skilled process of how responsive teacher education institutions are to the needs, aspirations and expectations of communities.

Tech-Driven Teacher Education for Community Development

Teacher education which usually stands for focusing on teaching skill development, academic learning, attitudes and interest development prepares learners towards outcome-based instruction. Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community (Wikipedia, 2012, p.1). To be able to do this, university departments and other institutions of teacher education are required to have not only policies in place but a full-fledged infrastructure – human and non-human resources.

At the turn of 21st century, teacher education marks a historic shift towards innovative and technology integrated pedagogical practices keeping in view the contextually comprehensive framework. Although within the educational setting, teachers' sincerity, commitment and holistic attitudes towards community development are determined by their sense of involvement in designing, developing and applying innovative instructional practices. The aspiration at the heart of the effort to build knowledge societies is underpinned by the conviction that knowledge, as the source of empowerment and capacity building, may be a decisive instrument of development (UNESCO, 2005, p.159). As shown in figure-1, to enhance and strengthen learning and the learning conditions, it becomes inevitable to put all efforts into planning, designing and developing pedagogical strategies commensurate with the ICTs, communities' interests, preferences and diverse backgrounds.



Figure-1: Community Development through ICT-Pedagogy Integrated Teacher Education

Commensurate with the global requirements, newer technologies are revolutionizing the instructional practices for community development. Historically, ICT has tended to be introduced in higher education first to support administrative data processing requirements, such as student registration, financial management, office word processing, and internal communications (Bates, 2000, p.83). The fact to which pointed attention needs to be drawn is that the new technological tools, devices and applications each with distinctive potentials are to be integrated in the pursuit of learning, knowledge and education of teachers committed for community development.

ICT-pedagogy integration in teacher education empowers all those involved in planning, practicing and managing community development. Improving the conditions of communities through the diffusion of information and skills and diversification of pedagogical practices are the main objectives of tech-driven teacher education. A vibrant institution of teacher education prepares the learners for new ideas and experimentations, emphasizes on the contents and methodologies relevant to the learners' profile and constructs visions of new learning realities to accelerate community development.

In recent years, the teacher education institutions have taken firm steps on strengthening infrastructure and outcome-oriented functioning. In the context, institutional governance has to ensure that there is a balanced and holistic approach in developing quality in the domain of teacher education. Moreover, it is increasingly agreed that identifying and integrating suitable media and technologies for prospective teachers and instructors becomes even more critical. For a relatively more heterogeneous society like ours, ensuring quality teacher education necessitates the incorporation of various strategies-interventions leading to community development.

ICT-Enabled Pedagogical Interventions

At the turn of the 21st century, new information and communication technologies (NICTs) are a major factor in redesigning the entire business of instructional transactions for wider community development. They also have the potential to transform the nature of education – where and how learning takes place and the roles of students and teachers in the learning process (UNESCO, 2002, p.13). From the community development perspective, researches, policy analysts, managers and other educational practitioners recommend the judicious application of technological tools, applications and other appliances.

Teachers teaching with technology provide knowledge, attitudes, behaviors and skills to the learners required to meet the challenges and needs of the local communities. They also help produce rapid changes in the community at large.



Figure-2: ICT-enabled Pedagogical Interventions for Community Development

Figure-2 shows the underlying implications of technology-enabled pedagogical interventions in teacher education for wider community development which is the need of the hour. Aiming towards gaining more from technology for optimum results needs to be our immediate focus (D'Souza, M.J.S., 2012, p.11). Teacher education not only builds confidence among the prospective teachers but also encourages in depth knowledge of pedagogical practices along with the relevant subject-matter. It persuades instructional procedure and emphasizes on effectiveness, efficiency and expeditiousness in the pursuit of learning, knowledge and education.

The institutions of teacher education have to contemplate on the initiative of webcasting their programmes and courses of studies to reach the unreached. The judicious use of technological tools, devices and applications help the community members in general and learners in particular access, apply and manipulate the knowledge, attitudes and skills in varied settings. Given the quality teachers, web-designing and technological infrastructure and webcasting programmes are becoming the necessity of today's communities and other learning groups. Technology is, by definition, a means to an end, not an end in itself (Bates, A.W., 2000, p.45). Ostensibly, retrofitting in teacher education system will lay great emphasis on innovative pedagogical practices for benefit the local communities.

Possible Benefits

The new technologies give even more importance than the infostructure in the transmission of knowledge, experiences and attitudes required is to make it work. Educators train prospective teachers to support local needs of community development.

It has been constantly observed that majority of the learners today have ample choice of quality learning through web–based resources. Possible benefits of tech-driven pedagogical practices in teacher education includes - accelerating the learning process, infusing virtual inputs, catering to the diverse learning groups, scope of redesigning the process and more importantly enhanced quality in the pursuit of heightened instructional transactions.

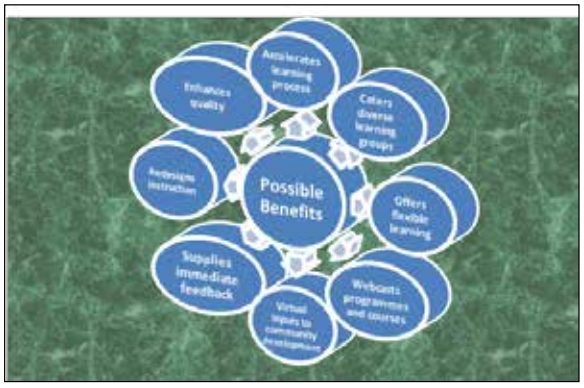


Figure-3: Possible Benefits of Tech-driven Pedagogical Practices in Teacher Education

As figure-3 reveals, tech-driven pedagogy in teacher education has its own rationales and advantages which are outlined below:

- Accelerates learning process,
- Caters diverse learning groups,
- Offers flexible learning,
- Webcasts programmes and courses,
- Provides immediate feedback,
- Delivery of programmes and courses through webcast,
- Quick and easy redesigning of instruction,
- Simplified delivery mechanism,
- Multimedia based expression, and
- Provides wide scope for virtual inputs.

Besides above, there are many more possible advantages of tech-driven pedagogical practices in teacher education in the context of community development that need to be reflected.

Likely Challenges

While looking at the current educational practices it is obvious that the ICTs are changing the modus operandi of educational transactions with the rapid development of new hardware, software and courseware. The challenge confronting our educational systems is how to transform the curriculum and teaching-learning process to provide students with the skills to function effectively in this dynamic, information–rich and continuously changing environment (UNESCO, 2002, p.15). There are many challenges in the pursuit of community development through teacher education especially when it comes to technology integrated pedagogical initiatives; a few of them are as follows:

- identifying the tech-driven pedagogical strategies,
- ascertaining its operational effectiveness,
- managing tech-enabled infrastructure,
- promoting active and representative participation,
- engaging community members to address the community issues in hand,
- funding arrangement of tech-enabled applications,
- making the content delivery quick and cost-effective,
- enhancing leadership capacities of communities through ICT-driven teacher education, and
- using full range of action strategies to work towards the well being of the community.

There are many more challenges in the pursuit of community development through tech-driven teacher education which need to be addressed on priority basis. This may require well-tried and well-intended strategies relating to policies, infrastructure, monitoring agencies, administrative inputs and other technological interventions. There is global support and interest across the whole education sector for the development and integration of ICT into education policy, curriculum and practice (Shah, A. & Godiyal, S. 2009, p.105). With systemic research practice, evaluation strategy and viable monitoring agency the idea of community development through tech-driven teacher education may sooner or later get currency.

Concluding Remarks

At the turn of the 21st century, due to global revolution in ICT and its many ramifications, the transformations at all educational levels are not only radical but also productive and far reaching. However, the issue of outcome–oriented teacher education for community development assumes significance when institutions of higher learning and research take into account not only the technological imperatives but to advance instruction effectively, efficiently and expeditiously. These tech-driven institutions have to reach the diverse learning groups and thereby addressing heterogeneity in the communities shall be praiseworthy and commendable. It is hoped that the teacher education institutions would come forward with an interest of technology integration to not only sustain but also as an obligation to expand the horizons of innovation and best practices in the teacher education system for community development.

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