A REVIEW OF BARRIERS AND CHALLENGES FOR ICT-BASED EDUCATION IN CONFLICTED AREAS OF JAMMU AND KASHMIR

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Abstract
The state of education in Kashmir is an intractable situation, especially given the reality that the region has largely existed as a conflict zone for decades. Despite the recent arsonist attacks and the more subtle effects of the conflict on schooling and education, education in Kashmir has much to celebrate in terms of resilience, long-term development and as a glimmer of hope in the tragic conflict. Although ICT has the potential to improve education system of a valley to a great extent, yet it is not the case in the conflicted areas. There are multiple issues and challenges confronting the implementation of ICT education in schools and educational institutions in these areas of Kashmir and the problems are much more magnified in case of schools located in conflicted areas.

This study utilized review method to examine the various barriers and challenges that hinder optimization of ICT-based education in conflicted areas of Jammu and Kashmir. The Investigator used collection of documentary data for the present investigation. The constraints which hamper the successful implementation of ICT-based education have been identified as: Physical attacks on schools, Occupation of school facilities, financial costs of conflict on education and the Internet shutdown both in terms of frequency and duration.

Keywords: Barriers, Challenges, ICT, Conflicted Areas, Jammu, Kashmir.

Introduction
Understanding the education sector in Kashmir valley by examining its history and development, if compared with the present scenario education seems disturbed due to ongoing conflict. The effect of disturbed situations and insurgency in the state has a diverse attack upon the citizen building institutions like education sector. Insurgency from past years has now brought the education sector at stake and risk. Education system in Kashmir which seems broken due to the jerks of insurgency from time to time. Now the condition has got worsened in such a way that instead of developing the valuable products from the institutions, it lacks the capacity to develop innovative thinking among the students. On the other side due to the drastic situations in the valley, the education system makes
changes every day as situations are being dominant over the sector and its system works as per the
demand of situation in the valley which is surely not worth to give positive results instead it will
distract the system. The conflict in J&K has been going on for the last three decades. It has had
multidimensional impact on Kashmiri society, polity, economy and education. The break-down of
law and order has adversely impacted on the educational development of Kashmir. The space for
educational activities has severely shrunken since the emergence of the conflict. An atmosphere of
fear and chaos has especially gripped the valley of Kashmir. Education in Kashmir takes place
within this complex state of conflict and as a representation of the cultural profile of the community;
schools are at the center or caught in the crossfire of conflict. The immediate impact of conflict on
education includes, but is not limited to, destruction or damage of school infrastructure, school
closure, and the use of schools to accommodate. The 30-year-old conflict has seriously undermined
the country's enormous development potential. The total costs of conflict, death, disability,
displacement, psychological trauma, violence and terror are not quantifiable. In the valley of
Kashmir, the consequences of this long period of conflict are felt in every sphere of life. There is a
widespread sense of insecurity and vulnerability especially among the student population. The
theoretical links between violent conflict and education are numerous and complex. Most directly,
conflict may constrain the supply of education through physical damage to education infrastructure
the result of direct attacks on schools or through the occupation of school facilities by military or
rebel groups (GCPEA, 2014; O'Malley, 2010; O’Malley, 2011). Conflict may sap education funding,
either because funds are diverted towards military spending (Lai & Thyne, 2007) or because of
overall economic declines during war (Blattman & Miguel, 2010), leaving less for education and
other public expenditures. Conflict can impede access to quality education through the destruction or
occupation of schools, decrease funding for education, and diminish the teaching workforce
(Omoeva, Hatch, & Moussa, 2016). School attendance decreases when students feel unsafe; schools
are targets of violent attacks; or travel to school increases the likelihood of attack, kidnapping, or

The year 2011 saw India making a major push towards digitizing education. To make
students understand the content in an interactive and innovative method, the schools have now
deployed smart classes where children weary from bookish knowledge are getting an insight into the
world of information beyond textual learning. Introduction of smart classrooms as ICT tool has
enabled children to visualize various topics and offer open feedback. ICT is perceived as one of the
means by which education and training can reach greater number of people to ease the accessing of
knowledge at the educational and vocational level. At the same time, the trend of ICT-based learning
in Jammu and Kashmir is not encouraging. The slow growth of ICT in the state of Jammu and
Kashmir can be attributed to various factors which includes about three decades of militancy. The
impacts of conflict on ICT-based education may have significant implications for the quality and
type of education provided. The usage of ICT` in schools may improve the teaching learning process
and can help the students as well as teachers to understand some complex matters in the classrooms
but it is only possible if the ICT-based education is available in the schools. It may be said that
teaching and learning process in the schools can be improved by inculcating the usage of (ICT). The
successful ICT” initiatives meet three intertwined objects: availability (status), accessibility (usage) and demands. To know the actual position of ICT-based education in schools of Jammu and Kashmir which has been affected by the insurgency more often in the span of more than 3 decades led the researcher to think and select a problem relating the status ICT-based education in the schools of J&K.

Several studies have been conducted by different educationists to evaluate the role of ICT on quality of education in secondary and higher secondary levels. However, no comprehensive attempt has yet been made to make the impact assessment of ICT-based education in the schools of conflicted areas of Jammu and Kashmir. An attempt has been made in this paper to analyze scientifically all those barriers and challenges which are concerned, with the ongoing conflict in J&K and hampers the ICT-based education in the higher secondary schools of conflicted areas.

**Objective**
To identify the various barriers and challenges that hinder optimization of ICT-based education in conflicted areas of Jammu and Kashmir.

**Methodology**
This present study is based on review seeking to identify the barriers and challenges of ICT-based education in conflicted areas of Jammu and Kashmir. The data for the present study has been collected from secondary sources. The method of data collection included a systematic review of documents, books, journals, newspapers, published and unpublished research work, various search engines, are also used.

**Findings**

**Disruptions in Education in Kashmir:**
The conflict in past as well as in today is a major obstacle which turned the education of valley in to detestable conditions. (Ganie and Mohi ud Din Touseef 2015). The education system in Kashmir since past as well as in current is facing many challenges and the question here arises how to tackle these challenges in order to bring improvement in the field of education. In fact, the conflict situation in past as well as in today is a major obstacle which turned the education of valley in to detestable conditions. Mannaan and Dar (2017) looked at different sources of data and estimated that, ‘a total of almost 13 % of school buildings were lost in the state of J&K due to either being targeted/burnt (6.37 %), or occupied by security forces (6.7 %)’. J&K is a hilly terrain with a very limited educational infrastructure, which was worsened by the occupation and destruction of schools especially in the rural areas and that likely disrupted schooling. The destruction of educational infrastructure represents one of the greatest developmental setbacks for the communities affected by conflict. Although most of these schools occupied by the security were evacuated and the buildings targeted were re-constructed, a number of schools are still surrounded by the security forces in the valley. All these factors including, damages to school infrastructure, occupation of schools,
restrictions on mobility, reduction in school days, absenteeism and difficulties in commuting to schools were likely to create impediments in access to education. What is also important to realize that these factors also affected the quality of education? An Oxfam’s report, ‘The Impact of Violence on the Student Community’ revealed that quality of education has suffered a lot in Kashmir because of the conflict (Kashani, et. al, 2003).

Long standing political and security issues in Kashmir have already handicapped several educational institutions. One of the primary reasons behind schools and colleges remaining closed for prolonged periods of time is the political turmoil. After 2016 turmoil, schools were shut for almost six to seven months and a major factor was the violence and stone pelting on the streets that made it challenging for both teachers and students to reach school. While an Internet shutdown certainly exacerbates problems as students are unable to access study material and assignments online, it would be an exaggeration to lay the blame for disruptions in education in Kashmir at the altar of an Internet blackout. To protect their children from the deprivations and upheavals of living in a perpetual conflict, a significant number of parents in Kashmir are compelled to send them outside the region for schooling. Many college students and research scholars also migrate to India and abroad seeking a stable and undisrupted education, and access to opportunities. This displacement from their homes and separation from families is premised on the implicit acknowledgement that life in Kashmir is subject to constant violence, interruptions and curfews, and cannot provide a nurturing environment for a student. Some parents are also reluctant to keep their children home for fear of violence, which is often especially directed against the youth. Adolescents are therefore forced to make an impossibly hard choice at an early age, between continuing to stay with their family, or pursuing better career options elsewhere. These students must contend not only with interruptions in communications, but with the underlying fear of the uncertain.

**Physical Attacks on Schools:**
The study indicated that there is no proper ICT infrastructure in the institutions for imparting quality and technology oriented education. It is not only due to non-availability of required hardware and software, old or poor hardware, in appropriate software and poor management of ICT resources, non-availability of digital resources etc. but also due physical attacks on schools which can have devastating consequences not only on the lives of students, and education, but also on the ability of those facilities to function properly. Such attacks may therefore compromise the fundamental right to education. While education in the schools could not be carried out properly. What was left in the shape of school buildings, were either burnt by the militants or taken over by security forces (Dabla, 2010). Attacks often reduce the capacity of schools limit safe access to education and sometimes render these facilities completely unusable leading to their forced closure. The rate of attacks on schools in India rose sharply in 2016. Attacks on schools occurred across all conflict-affected regions of India. In 2016, the northern state of Jammu and Kashmir also saw a marked increase of attacks on schools linked to violent protests. The majority of attacks on schools occurred at night and did not cause casualties. GCPEA (2018) identified media reports of 58 attacks on schools that year. The majority of these incidents took place in Jammu and Kashmir. Economic Survey Report, 2016.
Almost 31 school buildings were gutted during the five-month long unrest. In 2016, schooling was conducted only for a period of four months in Kashmir valley, it said. It is observed that exposure to violence and armed conflict reduces the quantity of education attained by students of conflict areas and the main contributories to the lessening of attainment of quantity of education include destruction of infrastructure, fear of sending children to schools, incorporation of youth into armed groups, negative economic shocks to households and forced displacement. In Jammu and Kashmir, unidentified assailants burned scores of schools. These attacks occurred against a backdrop of violent protests. According to Human Rights Watch (2017) at least 32 schools were set on fire between August and the end of the year. In response, the High Court of Jammu and Kashmir directed government officials to take the necessary measures to protect them. Schools across the state were closed from July 2016, to March 2017. It was under great wrench for the last three years. Numbers of schools, colleges and some reputed public libraries with a rich collection of books have been set ablaze and were reduced to ashes. The 1700 Government schools in the Kashmir Valley did not have their own building and were being run in the hired accommodation.

Occupation of School Facilities:
There are thus not only a significant number of attacks on centres of learning with the objective of destroying places where the young gather, but those places are also used as centres of recruitment and re-education in favour of the armed group occupying the centre. Many of the walls of these centres are used for propaganda purposes. The United Nations has observed that schools had been used as barracks, weapon storage facilities, command centres, detention centres, interrogation facilities and attack positions with firearms and weapons of observation (Naciones Unidas. Asamblea General, 2013). “Military use of schools” refers to a wide range of activities in which armed forces or armed groups use the physical space of a school in support of the military effort, whether temporarily or for a protracted period of time. The term includes, but is not limited to, the use of schools as military barracks, weapons and ammunition storage, command centers, defensive positioning, observation posts, firing positions, interrogation and detention centers, training facilities, and recruiting grounds. Several human rights bodies, along with the US Department of State, expressed concern over the continued military use of educational institutions and the presence of security forces near schools during the 2013-2017 reporting period; although rates of military use appeared to be lower than in the 2009-2013 period covered in Education under Attack 2014 (Human Rights Watch, World Report 2015). The majority of military use occurred in regions of India affected by conflict military use of schools was also reported in Jammu and Kashmir state. In several cases, schools that were in use or had recently been used by armed forces were attacked with explosives (Telegraph, 2014; Hindustan Times, 2014; The Hindu, 2014; Times of India, 2014; Telegraph India, January 11, 2015.

Financial Costs of Conflict on Education:
In economic terms, it is known that periods of conflict are seriously detrimental to the conditions of the country and, obviously, spending on arms and defence rockets. O’Hare and Southall (2007) provide data which reveals that spending on education and health is significantly lower and that
spending on defence is significantly higher if there has been a recent conflict. An Education for All monitoring report –No progress in reducing global number of children out of school– (UNESCO, 2014) demonstrates that if wealthy countries were to reallocate 6 days of military spending to education, the deficit of 16 billion dollars required annually to achieve education for all would be eliminated, enabling the education of all the children in the world in 2015 (UNESCO, 2011). Attacks and damage create clear costs for the sector in terms of rebuilding and replacing, and it is relatively straightforward to generate some rough estimates of the impact of these attacks on the education system wherever they are reported. But the impact that conflict has on access to learning also represents a cost to society, both in itself and through its impact on wider societal and economic goals. These impacts are much harder to monetize, but there is a growing body of literature on the quantitative impact of conflict on education to draw upon. Similarly, the financial costs of the impact depend on the timing and length of the period of conflict being considered. The most visible impacts of violent conflict include the destruction of infrastructure, as well as the collapse of government provision of goods and services, including schooling, due to lack of financial resources or the diversion of finances to military efforts (Stewart et al., 2001a, 2001b). In addition, heightened perceptions of violence and insecurity may affect the recruitment of teachers to some areas, and disrupt exam systems, the supply of teaching materials and the development and update of curricula (UNESCO 2011). These effects have been observed in several conflict-affected areas and severely constrain the supply of schooling and the recovery of education systems in conflict-affected areas (O’Malley, 2007, 2010; UNESCO 2011).

In contexts of conflict and crisis, the government’s ability to deliver quality education can be significantly weakened (Novelli, 2016). This is especially the case in developing country contexts, where public service provision and capacity may already be low. In active armed conflict or in acute crises, the government may be overwhelmed by public needs for basic services (such as water, food, and shelter) and therefore provide limited or no support to schools and educators (JBS International, 2013). The breakdown of bureaucratic systems and a lack of available resources can lead to gaps in payment of teacher salaries, delays in distributing teaching and learning materials, or a complete halt in state education provision.

Internet Shutdown:
The internet is usually the first administrative casualty when any law & order situation arises in the Kashmir Valley, which has been restive and agitated over the last two decades. ICT-based education requires strong high speed secure internet connectivity for implementation and proper functioning. J&K tops the list of Indian states that have witnessed most number of internet shutdowns. The incessant disruption of internet services prevents students from accessing online education resources. Schools in the Valley, meanwhile, rely on traditional means in the absence of the e-learning systems. Even when teachers and students do have access to these resources to stay updated, internet shutdowns make them unreliable. Therefore, teachers and schools stick to conventional means. India leads the world in ordering internet shutdowns, and both in terms of frequency and duration Jammu & Kashmir accounts for more than two-thirds of Indian shutdowns. However, from being long-
lasting, these shutdowns are now implemented for a finite duration and hyper-localised, often ordered only around a single mobile tower.

There have been 226 documented internet shutdowns in Jammu & Kashmir since the year 2012. Mobile internet data speed in Kashmir is currently restricted to 2G internet (250kbps). Even this access remains extremely precarious as localized shutdowns of the internet in most conflicted districts or areas. The internet is undoubtedly an essential educational infrastructure in any context, for it is the base of almost all virtual learning. The same cannot be said for the approximately 30,000 schools and 400 institutions of higher education in Jammu & Kashmir, which are all systematically, denied access to the internet. Globally, teachers and professors began sending assignments and homework, and even setting exams, online. While the shift online has been rocky for many, since all do not have equal access to the internet, or to smart phones, the problems in Kashmir have been compounded by the prolonged and unpredictable nature of the shutdown, and are therefore of a different order. Students and faculty members pursuing online courses from various platforms that offer Distance Learning were also severely disadvantaged. While an encouraging array of learning options were available via the ‘massive open online courses’ (MOOCs), access still seemed remote.

James Griffiths (2019) cited by Mudasir Firdosi (2020) the internet shut down in J&K, crippling researchers and students in schools, colleges, and universities across the mountainous state. According to the data available from the Software Freedom Law Centre, India, which monitors internet shutdown in India, the government authorities in Kashmir have started to prohibit it internet services in 2012. Such limits on the Internet were mainly imposed on the celebrations of Independence and Republic Day. So long as these two days’ activities wrap up, citizens were granted links to Internet facilities. Started in 2012, Internet accesses in the valley were suspended three times to keep knowledge from spreading the web channels is broad. The State maintained its program of regular shutdowns on the Internet and proceeded to increase the amount of prohibitions year after year. India had a 67% share of the total internet shutdowns in the world in the year 2018 of which 47% of them have taken place in Jammu and Kashmir only. Not only this, the Government authorities started another trend of suspending internet services to a particular area wherever any gunfight between armed forces and militants took place. On December 16 the internet blockade imposed in Kashmir became the longest ever imposed by a democratic state, at 134 days. The conflict-ridden northern state of Jammu and Kashmir in India saw 55 internet shutdowns in 2019. This was a decrease compared to the previous year, when there were 65 noted internet shutdowns in the valley. As seen from the graph, the number of internet blackouts has been increasing with each year, pointing to an alarming violation of internet freedom for Indian citizens. The internet shutdown that started in Jammu and Kashmir (J&K) on August 5, 2019, and was eased only on January 15, 2020, is the longest internet shutdown ever in any democracy (Mitch Prothero 2019 cited by Mudasir Firdosi 2020). The Software Freedom Law Centre, which tracks internet shutdowns here, also told Reuters that governments have imposed over 373 internet shutdowns in India since January 2012, over half of them (180) in Jammu and Kashmir. The ongoing internet blockade has had an unprecedented impact on educational institutes and students’ alike. Moreover, data on Internet shutdowns in Kashmir clearly shows a trend towards shutdowns in conflicted areas and districts as
compared to other areas. Educational loss to regions which witness frequent shutdowns, mostly conflicted districts, could mean relatively higher proportion of loss. It indicated that the impacts of shutdowns are regressive, i.e., they impact conflicted areas of valley relatively more than non-conflicted areas.

**Conclusion**

The ongoing insurgency is a major hindrance in the promotion and development of education in Kashmir. Infact, the insurgency in past as well as in today is a major obstacle which turned the education of valley in to detestable conditions. Insurgency has created many problems and these incidences are considered as a major factor when studying the educational structure of Kashmir. This study has highlighted the impact of protracted conflict on ICT-based education in Jammu and Kashmir. At the conflicted areas of the said region, the constraints in the successful implementation of effective ICT-based education have been identified as: physical attacks on schools, occupation of school facilities, financial costs of conflict on education and the Internet shutdown. Conflict situations invariably take a toll on education through physical destruction/damage to education facilities; acute lack of school buildings, finances required to rehabilitate, reconstruct and rebuild infrastructure and the prolonged Internet blackouts both in terms of frequency and duration and the general challenges involved in trying to carry on education with ever present threat of violence. “Denial of educational opportunities often means denial of future for young people- thereby perpetuating the negative effects of conflict.” Since the situation of Kashmir valley is extremely volatile, it is imperative that the government devise creative and innovative solutions. These solutions, however, would need to be adaptable to the deep uncertainties and constantly changing dynamics in the region. These solutions could include a effective ICT-based educational platforms for teaching-learning process. If the students of Kashmir are to have access to continuous education, accessibility and flexibility are essential. This requires logistical and longer-term sustainable funding initiatives to strengthen the initiatives and implementation in areas of conflict specially aimed at higher secondary school level.

**Recommendation**

The present study has academic significance in providing the new information and updating the existing knowledge base of the subject. It gives clear and strong information about the various barriers and challenges that hinder optimization of ICT-based education in conflicted areas of Jammu and Kashmir. This piece of study proves very much helpful the policy makers and concerned organizations especially (who is presently handling the schools of conflicted areas of Kashmir) in the utilizations of ICT-based education in the schools of Jammu and Kashmir. Further it helps the policy makers to develop a concrete strategy towards educational sector of Kashmir.

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