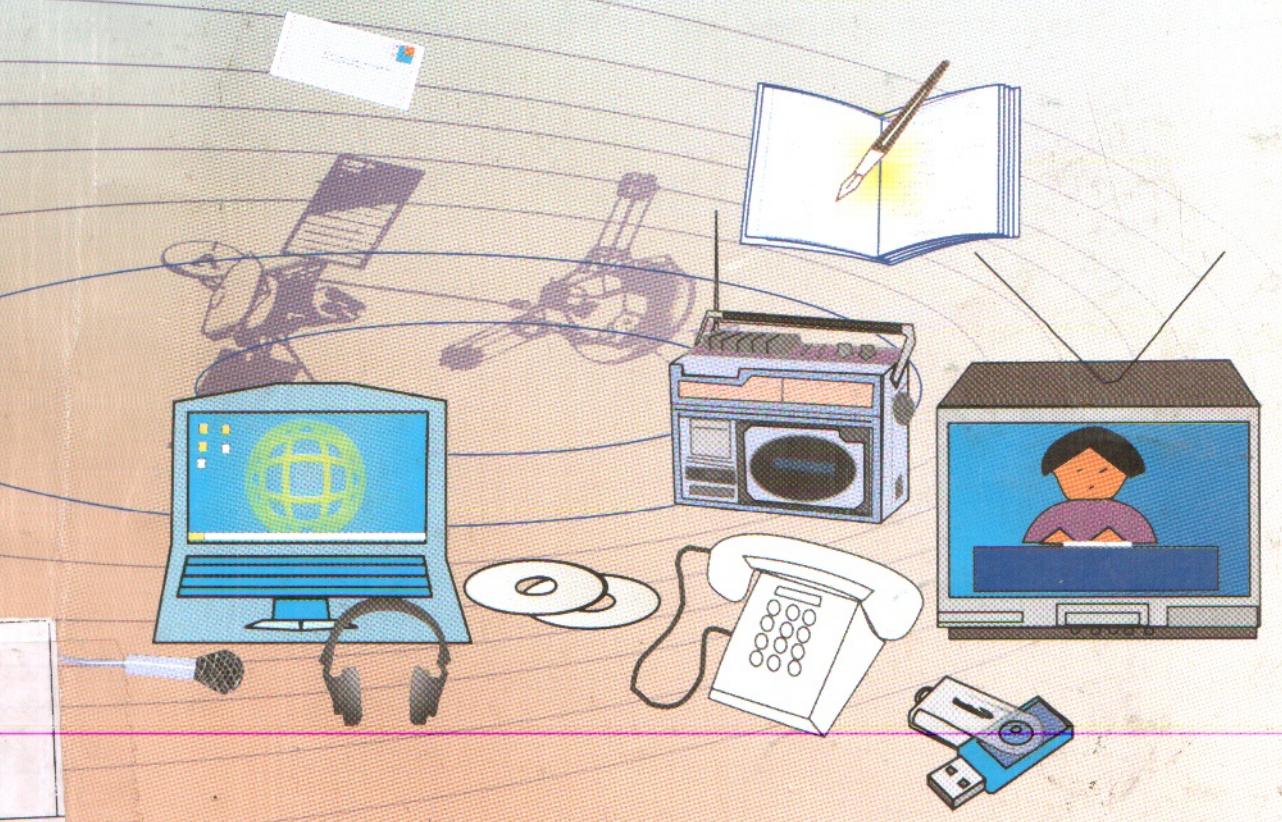
दूर शिक्षा

DISTANCE EDUCATION



२०६८

दूर शिक्षा

Distance Education

वर्ष ९, असार, २०६८ Vol. 9 June, 2011

नेपाल सरकार
शिक्षा मन्त्रालय
शैक्षिक जनशक्ति विकास केन्द्र
सानोठिमी, भक्तपुर
२०६८

प्रकाशक

नेपाल सरकार

शिक्षा मन्त्रालय

शैक्षिक जनशक्ति विकास केन्द्र

सानोठिमी, भक्तपुर ।

(लेख रचनाहरूमा अभिव्यक्त भएका लेखकहरूका विचार निजी अभिव्यक्ति हुन् । यस पत्रिकामा नेपाली भाषाको वर्ण विन्यास त्रिभुवन विश्व विद्यालय, उच्च माध्यमिक शिक्षा परिषद तथा नेपाल प्रज्ञा प्रतिष्ठानद्वारा स्वीकृत पछिल्लो नियम अनुसार गरिएको छ ।)

कम्प्युटर लेआउट

डिल्ली अधिकारी

आवरण डिजाइन

सुमन बज्राचार्य

नेपाल सरकार

श्री गंगालाल तुलाधर
मन्त्री
शिक्षा

निजी सचिवालय
केशरमहल, काठमाडौं ।

फोन नं. ४४७१४९९
४४७१४६९०

फ्याक्स् नं. ४४३५१४०

पत्र सं

च. नं.

मिति:-

२०६८।३।१६

विषय:-

शुभकामना ।

देश विकासको मेरुदण्डको रूपमा रहेको शिक्षा क्षेत्रसंग सम्बन्धित मानव संसाधनको पेशागत क्षमता अभिवृद्धि गराउने कार्यका लागि स्थापित शैक्षिक जनशक्ति विकास केन्द्रले वार्षिक रुपमा प्रकाशन गर्दै आएको "दूर शिक्षा" को नवौं अङ्क प्रकाशन गर्न लागेकोमा धाप पाउँदा खुसी लागेको छ ।

वर्तमान विश्व परिवेशमा प्रतिस्पर्धी जनशक्ति निर्माण गर्ने कार्यमा शिक्षा क्षेत्रको महत्वपूर्ण योगदान रहन्छ । यसको लागि आवश्यक पर्ने गुणस्तरीय शिक्षा आज चुनौतिको रुपमा देखा परेको छ । उक्त तथ्यलाई मनन गर्दै शैक्षिक, प्राविधिकहरूमा पेशागत दक्षता, श्रृजनशीलता र रचनात्मकता अभिवृद्धि गराउन शैक्षिक जनशक्ति विकास केन्द्र अझ खरो रूपमा प्रस्तुत हुनेछ भन्ने आशा एवं विश्वास राख्दछु ।

अन्तमा, प्रकाशित सामग्री शैक्षिक अनुसन्धानकर्ता, विद्यार्थी, शिक्षक, कर्मचारी लगायत सम्बन्धित सरोकारवालाहरुं उपयोगी हुनेछ । यस प्रकाशनले निरन्तरता प्राप्त गरिरहनेछ भन्ने विश्वासका साथ शुभकामना व्यक्त गर्दछु ।

.....
गंगालाल तुलाधर
मन्त्री
शिक्षा

नेपाल सरकार

शिक्षा मन्त्रालय

(..शाखा)

फोन नं. { ४४११७०४, ४४१८०११, ४४१८१९१, ४४१८७८४

केशरमहल,
काठमाडौं, नेपाल ।

पत्र संख्या:-
चलानी नं.:-

मिति: २०६८/०३/१५

विषय :- **शुभकामना**

शिक्षा मन्त्रालय अन्तर्गत विद्यालय स्तरदेखि मन्त्रालय तहसम्म कार्यरत मानव संसाधनको पेसागत कार्यक्षमता अभिवृद्धिका लागि स्थापित शैक्षिक जनशक्ति विकास केन्द्रले वार्षिक रुपमा प्रकाशन गर्दै आएको **दूर शिक्षा**को प्रकाशनको निरन्तरता अन्तर्गत यसको नवौं अङ्क प्रकाशन गर्न लागेको जानकारी पाउँदा खुसी लागेको छ ।

शिक्षा देश विकासको अभिन्न अङ्ग हो भन्ने मान्यताका साथ यसको गुणस्तरीयताको सन्दर्भ त्यतिकै टड्कारो रुपमा देखा पर्दै आएको छ । यस केन्द्रले शिक्षा क्षेत्रमा आइरहेका नयाँ प्रविधि र विचारलाई आत्मसात गरी नयाँ सन्दर्भमा देशले खोजेको जस्तो गुणस्तरीय जनशक्ति उत्पादन गर्न विविध प्रकारका कार्यहरू गर्दै आइ रहेको छ । शिक्षाको पहुँच र गुणस्तरीयता वृद्धिका लागि दूर तथा खुला शिक्षा, खुला सिकाइ, खुला विद्यालय, खुला विश्वविद्यालयको माग र चासो सर्वत्र बढीरहेको सन्दर्भमा मूलत तीनै विषयहरूलाई केन्द्रित गरी यो सामग्री प्रकाशन गर्न लागेकोमा हार्दिक धन्यवाद दिन चाहन्छु ।

यस सामग्रीमा रहेका लेख, रचनाहरू शिक्षा क्षेत्रसँग सरोकार राख्ने अनुसन्धानकर्ता, विद्यार्थी, शिक्षक, कर्मचारी लगायत अन्य सरोकारवालाहरूका लागि पनि उपयोगी हुनेछ भन्ने विश्वासका साथ प्रकाशनको निरन्तरताका लागि हार्दिक शुभकामना व्यक्त गर्दछु ।

शंकरप्रसाद पाण्डे
सचिव

प्राक्कथन

शिक्षा मन्त्रालय अन्तरगत मानवीय संसाधनको विकासका लागि नेतृत्वदायी निकायका रूपमा शैक्षिक जनशक्ति विकास केन्द्र स्थापित भएको हो । शिक्षकको पेसागत विकासका लागि नीति तर्जुमा र कार्यक्रम विकास गरी कार्यान्वयन गर्ने, शैक्षिक व्यवस्थापनमा कार्यरत पेसाकर्मीहरू एवं शिक्षाका सरोकारवालाहरूको दक्षता अभिवृद्धि गर्नका लागि विभिन्न प्रकारका तालिम, गोष्ठी र सेमिनारहरू सञ्चालन हुँदै आएका छन् । सार्वजनिक विद्यालयको स्वीकृत दरबन्दीमा कार्यरत ९८.२% स्थायी शिक्षकहरूलाई १० महिने सेवाकालीन तालिम प्रदान गरी सकिएको छ । हाल विद्यालयमा कार्यरत सम्पूर्ण शिक्षकका लागि छोटो अवधिको आवश्यकतामा आधारित एवं कक्षाकोठा केन्द्रित शिक्षकको पेसागत विकास कार्यक्रम सम्पूर्ण शैक्षिक तालिम केन्द्र, अगुवा स्रोतकेन्द्र र स्रोतकेन्द्र मार्फत सञ्चालन भैरहेको छ । यसका साथै शिक्षा क्षेत्रसँग सम्बन्धित विविध पक्षहरूका बारेमा अध्ययन अनुसन्धान कार्यलाई अगाडि बढाउँदै अन्तरराष्ट्रिय स्तरमै मान्यता प्राप्त पेसागत स्नातकोत्तर तथा विद्यावारिधिका कार्यक्रमहरू समेत सञ्चालन गर्न सक्ने स्वायत्त संस्थाको रूपमा विकास हुने भावी सोच र अठोटका साथ यो केन्द्र अगाडि बढिरहेको छ ।

परिवर्तित सन्दर्भमा केन्द्रका दायित्व र अभिभारहरू वृद्धि हुँदै गएका छन् । आफ्ना कार्यक्रमलाई नयाँ क्षेत्रमा विस्तार गर्नु पर्ने चुनौती थपिएका छन् । दूर तथा खुला शिक्षाको बिस्तार एउटा संभाव्य क्षेत्र हो । यस केन्द्रका कार्य र भावी दृष्टिकोणका बारेमा सम्बन्धित सरोकारवालाहरू तथा सहयोगी समक्ष सूचना प्रवाह हुनु आवश्यक छ । शैक्षिक जनशक्ति विकास केन्दले शैक्षिक सूचना केन्द्रको रूपमा आफ्नो पहिचान दिई शिक्षाका सबै निकायका कार्यक्रम र सूचनालाई नियमितरुपमा प्रसारण गरी सरोकारवालाहरूलाई सुसूचित गराउने अठोटका साथ अगाडि बढ्ने योजना पनि बनाएको छ ।

अहिले पाठकहरू समक्ष खोजमूलक, अनुसन्धनात्मक र नयाँ विचारहरूको सँगालोको रूपमा दूर तथा खुला शिक्षासँग सम्बन्धित लेखहरू सङ्कलन गरी दूर शिक्षाको नवौं अङ्क प्रकाशन गर्न लागेका छौं । हाम्रो यस प्रकाशनले शिक्षा क्षेत्रमा कार्यरत शिक्षा प्रशासक, योजनाकार, अनुसन्धानकर्ता, व्यवस्थापक, शिक्षक, अभिभावक र विद्यार्थीहरूलाई समेत उल्लेख्य सहयोग पुऱ्याउन सकोस् भन्ने हाम्रो अपेक्षा रहेको छ ।

यो सामग्रीलाई यस रूपमा प्रकाशन गर्न योग्य तुल्याउन आआफ्नो क्षेत्रबाट सहयोग गर्नु हुने सम्पूर्ण विद्वान लेखकहरू, विशेषज्ञहरू, अनुसन्धानकर्ताहरू, सम्पादन कार्यमा सङ्लग्न सम्पादन मण्डलका सदस्यहरू लगायत अन्य सम्पूर्ण महानुभावहरू धन्यवादका पात्र हुनुहुन्छ ।

अन्तमा, यस प्रकाशनको निरन्तरता र गुणस्तरीयताका लागि यहाँहरूको रचनात्मक तथा अमूल्य सल्लाह र सुझावका लागि यस केन्द्र हार्दिक अपेक्षा राख्दछ ।

असार, २०६८

लक्ष्मीराम पौडेल
कार्यकारी निर्देशक
शैक्षिक जनशक्ति विकास केन्द्र

विषयसूची

आकाशीय तरङ्ग शिक्षालय : सर्वौषधि बनाउने कि ?

डा. विद्यानाथ कोइराला
प्राध्यापक, त्रि.वि.वि.

सार

शिक्षाका तौरतरिका फेरिए । गुरुकहाँ चेलाचेली धाउने । गुरुलाई ज्ञानको अथाह स्रोत मान्ने । समय फेरियो । गुरु शिक्षक भए । चेलाचेली विद्यार्थी भए । शिक्षकले सिकाउनु पर्ने सीमा फेरियो । त्यही सीमाभित्र मात्र विद्यार्थीले सिक्ने भए । दुवैको भेट विद्यालयमा हुने भयो । विद्यालयमा पढाउने र पढ्ने भए । क्याम्पसमा सुनाउने र सुन्ने भए । फेरि समय बदलिँदै छ । शिक्षक सहजकर्ता भए । विद्यार्थी सिकारु । दुवै घरमा बस्ने भए । आफूले जानेका विषय तरङ्गमा छोड्ने भए । लिनेले तरङ्गबाट लिने भए । यसको अर्थ हो आकाशीय शिक्षालयमा सहजकर्ता र सिकारुको सङ्गमस्थल बनाउनु पर्‍यो । त्यसका लागि पूर्वाधारको विकासमा ध्यान केन्द्रित गर्ने कि ? उपाय सुझाउनेले उपाय दिने कि ? फेरि तरङ्गबाटै फैलावट गर्ने कि ?

को धाउने ?

विद्यार्थी धायौं । इतिहास त्यही भन्छ । गुरु घरमा बस्यौं । चेलाचेली गुरुकै घरमा गयौं । कालखण्ड फेरियो । दुवै धाउन थाल्यौं । शिक्षक स्कुल धाउने । विद्यार्थी स्कुल धाउने । शिक्षक घरै बस्ने । विद्यार्थी घरै बस्ने । पहिलो कालखण्डमा गुरुले घर सिगार्‍यौं । आफ्नै घर । आफ्नै कुटी । त्यसमा चेलाचेलीले सधायौं । गुरु आदेशकै रहे । चेलाचेली ज्यामी । दोस्रो कालखण्डमा स्कुल कसैको रहेन । न शिक्षकको । न विद्यार्थीको । परिणामत: केहीलाई छोडेर हेर्दा स्कुल बेवारिसे बन्यो । त्यसैले न शिक्षकले सिगार्‍यौं । न विद्यार्थीले । तेस्रो कालखण्डले सबैलाई मुक्ति दियो । संस्था सिङ्गै नपर्ने । न शिक्षकले । न विद्यार्थीले । यसरी धाउनेहरू बदल्दा शिक्षाको जिम्मेवारी बदलियो । खुला शिक्षालयले जिन्दगी सहज बनाइ दियो । जीवन धाउनेहरू थन्किए । यही थन्काइमा शिक्षाको स्वरूप बदल्न सकिन्छ कि ?

धाउनेको अपेक्षा

चेलाचेली धाउँदा ब्रह्मज्ञान खोजौं । दिएकैमा पुग्ने । त्यसैले गुरुब्रह्मा । गुरुविष्णु । शिक्षक र विद्यार्थी धाउँदा शिक्षक ब्रह्मा भएनन् । अर्थात् विद्यार्थीलाई शिक्षकको ज्ञान अपुग भयो । यस मानेमा विद्यार्थीले धेरै खोज्यौं । शिक्षकले थोरै दियौं । यो बुझाइले भन्छ - शिक्षक कमजोर हौं । भयौं । विद्यार्थी महत्वाकाङ्क्षी ! तर धाउँदा धाउँदा हाम्रा अपेक्षाहरू भिन्निए । दुवै ज्ञानका स्रष्टा भयौं । वितरक भयौं । नियन्त्रक भयौं । यसरी भिन्निँदा धाउनेहरूले गर्दा शिक्षकको भूमिका बदलियो । विद्यार्थीको भूमिका बदलियो । के हामी बदलिएको भूमिका स्विकार्न सक्छौं ? आवश्यकता बुझ्न सक्छौं ? परिवेश चिन्न सक्छौं ?

अपेक्षा पुरा गर्ने उपाय

तरङ्ग ब्रह्मा । गुरुब्रह्मा अपुग भएछन् । शिक्षक ब्रह्मा हुनै सकेन छन् । त्यसैले तरङ्ग ब्रह्मा स्विकार्ने हो भने शिक्षालय बदलौं । शिक्षक बदलौं । विद्यार्थी बदलौं । शिक्षक बदल्दा सर्जक शिक्षक खोजौं । फुलको बोटमा विज्ञान पढाउने । सामाजिक पढाउने । अर्थशास्त्र पढाउने । राजनीति पढाउने । गणित पढाउने । भूगोल पढाउने । विज्ञान पढाउँदा डाँठ, जरा, टुप्पा । गणित पढाउँदा त्यसैका पात कृति ?

हाँगा कति ? काण्ड र हाँगाको आनुपातिक मोटाइ कति ? पात र बोटको अनुपात कति ? सामाजिक पढाउँदा यो फुलको ककसले उपयोग गऱ्यो ? केमा गऱ्यो ? त्यसको ज्ञान के ? अनुभव के ? अर्थशास्त्र पढाउँदा त्यही फुलको केके बिक्छ ? फुल मात्रै ? फल मात्रै ? डाँठ मात्रै ? बोक्रा मात्रै ? जरा मात्रै ? को क्रेता हो ? को विक्रेता हो ? राजनीति पढाउँदा त्यही फुलको विक्रीमा को लाग्यो ? कसले मस्ती गऱ्यो ? को अन्यायमा पऱ्यो ? न्यायमा बदल्न गर्ने के त ?

अर्को उपाय हो - विद्यार्थी शोधक (researcher) बनाऔँ । टिपोटक (note taker) बनाऔँ । प्रयोगशालाको वैज्ञानिक विद्यार्थी जस्तो । सानो शोध । बाखाले कुन घाँस खायो ? कस्तो दिसा गऱ्यो ? दुध कस्तो थियो ? किन त्यस्तो भयो ? घाँस बदले के होला ? दाना बदले के होला ? यी र यस्ता शोधहरू । त्यही शोधमा कक्षा अनुसारको सोच जोडिदिने । ठूलो कक्षामा सूत्र बनाउने । सानोमा अनुभव खोजाउने । शिक्षक पनि सँगै लाग्ने । यस्ता शोधबाट सार निकाल्ने । हाँसपाटी तेस्रो उपाय हो - सबैको शिक्षालय बनाउने । तरङ्ग शिक्षालय । पहिलो शिक्षालय केहीको थियो । दोस्रो शिक्षालय धेरैको भयो । तरङ्ग शिक्षालय तेस्रो । सबैको । रेडियो हुँदा सबैको बन्ने । टेलिभिजन हुँदा सबैको बन्ने । मोबाइल र फोन हुँदा व्यक्तिगत बन्ने । अनलाइन बन्दा फेरि सबैको बन्ने । अर्थात डमरु दिने । धार्मिकले बुझे महादेवको प्रतीक । सङ्गीतज्ञले बुझे साधन । गणितज्ञले बुझे अङ्क गणित । बीज गणित । रेखा गणित । वैज्ञानिकले बुझे ध्वनि । नाटककारले बुझे नाद । अर्थात डमरु जस्तो विषय वस्तु छान्ने । त्यही विषय वस्तुका कुरा सबैखाले तरङ्गमा पढाउने । बुद्धि र रहरको गच्छे अनुसार घरका सबैले पढ्ने । घरैमा नै छलफल गर्ने । बाजेबज्यैको सोचमा डमरुले के सिकायो ? बाआमाको सोचमा के सिकायो ? छोराछोरीको सोचमा के सिकायो ? यी तिन सिकाइहरूले के जानियो ? के थप ज्ञान ? के थप सिप ? के थप अभिवृत्ति ?

चौथो उपाय हो - पात्रसँगको सहकार्य । यो उपायले ज्ञानहरूको सम्बन्ध थाहा लाग्छ । अल्वर्ट आइन्सटाइनको सापेक्षतावाद द्वैत हो भन्ने कुरा । द्वैत उपनिषदीय ज्ञान हो । न्यायको ज्ञान । वैशेषिकको ज्ञान । साङ्ख्यको ज्ञान । यसो हुँदा अल्बर्ट आइन्सटाइनको पश्चिमी उचाइ र हाम्रो पूर्वीय उचाइको वैचारिक सीमा थाहा हुन्छ । क्वान्टम सिद्धान्तको बिग व्याङ्ग र हिन्दू पुर्खाको गगनभेदीको सहसम्बन्ध बुझिन्छ । स्टिफेन हकिन्सको सबै चिजको सिद्धान्त (theory of everything) र पूर्वीय दर्शनको वेदान्त बिचको अन्तर सम्बन्ध थाहा हुन्छ । को होचो को अग्लो अर्को पाटो हो । बुद्धिको सहसम्बन्ध अर्को । यसरी प्राज्ञले नयाँ बुद्धि बनाउन सक्छन् । मार्क्सको निर्णयात्मक आर्थिक द्वन्द्व (determiniz economic conflict) मा हावामासले सञ्चारको पाटो थपे जस्तो । त्यही सञ्चारमा उनले सामाजिक पुनर्निमाणको सिद्धान्त बनाएको जस्तो । यसरी विगतका प्राज्ञमा तागत खोज्ने । सभ्यता खोज्ने । दरार खोज्ने । त्यही खोजमा आफ्नो नवीनता स्थापित गर्ने । विचारगत नवीनता । प्रस्तुतिगत नवीनता । परिणतिगत नवीनता । सिद्धान्तगत नवीनता ।

उपाय पुरा गर्ने साधन

उपायहरू अनेकन छन् । मैले केहीको उदाहरण दिएँ । तर ती उपायहरू कसले पूरा गर्छ त ? मैले माथि भनेझैं तरङ्ग शिक्षालय (wave school) ले । त्यो शिक्षातयका सबै अवयवहरू हामीसँग छन् । बाल गीतीय बोलीमा "टालाटुली" । अबको काम हो - तिनलाई बटुल्ने । उन्ने । पुतली बनाउने । कति राम्री पुतली । भनाइको अर्थ हो - हामीसँग रेडियोहरू छन् । टिभीहरू छन् । अनलाइनहरू छन् ।

शिक्षालयहरू छन् । मोबाइल र स्थिर दुवैखाले फोनहरू छन् । गर्न बाँकी एउटै चिज छ - यी सबैलाई जोडजाड पार्ने । शिक्षालयको नाम दिने । तरङ्ग शिक्षालय । खुला शिक्षालयभन्दा निर्णायकहरूले बुझेनन् । खुला कसरी हुन्छ रे ? खुलाको पनि भर्ना रे ? जाँच रे ? समकक्षता रे ? यस्ता रेहरू धेरै छन् । खुला विश्व विद्यालयभन्दा वी.ए./एम.ए./पी.एच.डी. मात्रै पढाउने रे । के यस्ता "साँघुराहरू" लाई तरङ्ग शिक्षालयभन्दा अर्थ लाग्ला त ? माथिका उपायहरूको अर्थ लाग्ला त ? शिक्षा व्यापक भयो भन्न सकिएला त ? व्यापक बनाउन नसके हामी असफल हुन्छौं र भयौं भन्न सकिएला त ? कतै गुरुब्रह्मा गुरुविष्णु फेरिएला त ? शिक्षक ब्रह्मा बदलिन सकिएला त ? तरङ्ग ब्रह्माको मान्यताले अहिलेको उर्लिदो शैक्षिक आवश्यकता पूरा होला त ? शिक्षकको आवश्यकता । विद्यार्थीको आवश्यकता । बजारको आवश्यकता । अभिभावकको आवश्यकता । कतै पुन: घोत्लिने कि ?

खुला विद्यालयको वर्तमान अवस्था र सञ्चालनमा देखिएका चुनौतीहरू

मित्रनाथ गतौला
उपनिर्देशक, शैजविके.

नेपालमा शिक्षाको इतिहास त्यति लामो नभए तापनि औपचारिक तथा नियमित शिक्षामा छिटो फड्को मारेको स्थिति देखिन्छ । विद्यालयहरूको विस्तारका साथै विद्यालय उमेर समूहका अधिकांश बालबालिकाहरू विद्यालयमा भर्ना भएको अवस्था छ । तर नियमित रूपमा विद्यालय शिक्षामा नआएका र बिचमा नै विद्यालय छाड्न बाध्य भएकाहरूका लागि खासै कार्यक्रम बनाएर लागु गरेको पाइँदैन । तर यो समूहलाई दृष्टिगत गरी दूर शिक्षा तथा खुला सिकाइको बारेमा लामो समयदेखि बहस पैरवी हुँदै आएको छ । नेपालमा खुला विद्यालयको आवश्यकता भएको तथ्य विभिन्न आयोगका प्रतिवेदनहरू, ऐन, नियमहरूले औंल्याएका छन् । शाही उच्च शिक्षा आयोग, २०४० ले खुला शिक्षाको अवधारणा अगाडि सार्‍यो भने राष्ट्रिय शिक्षा आयोग, २०४९ तथा उच्चस्तरीय राष्ट्रिय शिक्षा आयोग, २०५५ ले दूर शिक्षा तथा खुला सिकाइ मार्फत शिक्षक तालिमका कार्यक्रमहरू सञ्चालन गर्ने एवम् विद्यालय शिक्षा प्रदान गर्ने व्यवस्था उल्लेख गरेको छ । त्यसै गरी सबैका लागि शिक्षा राष्ट्रिय कार्य योजना, (२००२-२०१५) ले आजीवन सिकाइको अभिवृद्धिका निम्ति खुला सिकाइका अवसरहरूको सिर्जना गर्ने रणनीति अङ्गीकार गरेको छ । त्यसै गरी सबैका लागि शिक्षा, शिक्षक शिक्षण आयोजना र माध्यमिक शिक्षा सहयोग कार्यक्रमका उद्देश्यहरूमा अवसरबाट वञ्चित समुदाय, अनुत्तीर्ण विद्यार्थी, महिला वर्ग, रोजगारी समूह आदिलाई गुणात्मक शिक्षा प्रदान गर्न वैकल्पिक अवसरहरू सिर्जना गर्ने भन्ने उल्लेख छ । यसरी नै नवौं पञ्चवर्षीय योजना (२०५४- २०५९) र दसौं पञ्चवर्षीय योजना (२०५९- २०६४) ले दूर शिक्षा मार्फत विद्यालय तहको शिक्षा प्रदान गर्न खुला विद्यालयहरूको स्थापना गर्नुका अतिरिक्त विभिन्न शैक्षिक कार्यक्रमहरू सञ्चालन गर्ने नीति अवलम्बन गरेको छ ।

त्यसैगरी नेपालको तिन वर्षे अन्तरिम योजनाले दूर शिक्षा तथा खुला सिकाइलाई निम्नानुसारका रणनीतिहरूमा प्राथमिकता दिएको छ :

रणनीति

१. खुला शिक्षाको समेत प्रयोग गरी शिक्षाको अवसर सबै नेपाली नागरिकहरूको पहुँचभित्र सुनिश्चित गर्ने,

२. प्रत्येक नागरिकका लागि माध्यमिक तहसम्मको निःशुल्क शिक्षा पाउने अधिकार स्थापित गर्ने,

३. खुला विद्यालयको स्थापना गरी उच्च शिक्षासम्म सर्वसाधारणको पहुँच सुनिश्चित गर्ने,

४. देश सुहाउँदो खुला तथा दूर शिक्षामा उपयुक्त पद्धतिको अनुसन्धान र विकासमा जोड दिने ।

शिक्षा नियमावली, २०५९ को परिच्छेद १० दफा ५६ मा दूर शिक्षा सम्बन्धी व्यवस्था गरेर शैक्षिक जनशक्ति विकास केन्द्रको दूर शिक्षा तथा खुला सिकाइ महाशाखालाई खुला विद्यालयको सम्बन्धन दिने

अख्तियारी दिएर शिक्षा सचिवको अध्यक्षतामा दूर शिक्षा समितिको व्यवस्था गरी काम, कर्तव्य तोकी संस्थागत गर्ने प्रयास गरेको देखिन्छ।

खुला शिक्षा तथा दूर सिकाइ सम्बन्धी नीति, २०६३

दूर दृष्टि

विभिन्न आवश्यकता र चाहना बोकेका विशेषत: अवसरबाट वञ्चित समुदाय, महिला तथा कामदारहरूलाई शिक्षा पाउने अधिकारको सुनिश्चितता गर्न, औपचारिक शिक्षाको पहुँच पुऱ्याई उनीहरूको व्यक्तिगत विकासका अवसर प्रदान गर्न दूर शिक्षा प्रणालीबाट खुला शिक्षाको विकल्प सिर्जना गर्ने।

नीतिगत उद्देश्य

१. विद्यमान शिक्षा प्रणाली अन्तर्गत विद्यालय तहको शिक्षाबाट वञ्चित बाल बालिकाहरूका निमित्त शिक्षाको पहुँच विस्तार गर्नु,

२. परम्परागत शिक्षाको अवसरबाट वञ्चित समुदायताई विद्यालय र उच्च शिक्षाको पहुँच विस्तार गर्नु,

३. सूचना र सञ्चार प्रविधिको प्रयोगबाट परम्परागत शिक्षाको गुणस्तर सुधार गर्न विभिन्न किसिमका सहयोगी प्रक्रिया र सामग्रीको विकास गर्नु,

४. खुला र दूर शिक्षा प्रणालीलाई मिश्रित प्रणालीको प्रयोगबाट जीवन पर्यन्त शिक्षा, निरन्तर शिक्षा एवम् व्यावहारिक दक्षता अभिवृद्धि गर्नु,

५. राष्ट्रिय र अन्तराष्ट्रिय श्रम बजारको आवश्यकता अनुरूप काम खोज्ने श्रमशक्तिको चाहना बमोजिम सिपमा आधारित विषयहरूमा शिक्षा प्रदान गर्ने अवसर प्रदान गर्नु,

६. जातीय र आदिवासी समुदायको परम्परागत सिप र अनुभवलाई प्रमाणित गर्ने अवस्था सिर्जना गर्नु।

नीति

१. विभिन्न चाहना भएका सिकारुहरूका लागि शिक्षामा पहुँचको विस्तार गर्ने,

२. परम्परागत शिक्षाको गुणस्तर वृद्धि गर्ने,

३. जीवनपर्यन्त शिक्षा र पेसागत विकासको अभिवृद्धि गर्ने,

४. ज्ञान र सिपको प्रमाणीकरण गर्ने पद्धतिको स्थापना गर्ने।

पाठ्यक्रम विकास केन्द्रले विकास गरेको राष्ट्रिय पाठ्यक्रमको प्रारूप, २०६३ मा खुला शिक्षाको नीतिगत व्यवस्था, सबैलाई शिक्षाको अवसर प्रदान गर्न विद्यालय शिक्षालाई खुला शिक्षा प्रणाली मार्फत व्यापक गरिने छ। सूचना एवम् सञ्चार प्रविधि तथा स्वसिकाइ सामग्रीहरू विकास गरिने छ। धार्मिक शैक्षिक संस्था तथा वैकल्पिक शिक्षा प्रणालीबाट शिक्षा आर्जन गरेका व्यक्तिहरूलाई निश्चित मूल्याङ्कन प्रक्रियाद्वारा प्रमाण पत्र दिई शिक्षाको मूलधारमा समाहित हुने व्यवस्था मिलाइने उल्लेख छ।

यसमा शिक्षालाई दुई प्रकारले व्यवस्थित गरिएको छ

१. अनौपचारिक शिक्षा हासिल गरेका तर प्रमाणित हुन नसकेका र विद्यालय शिक्षामा समावेश हुन इच्छुक व्यक्तिलाई उनीहरूको शैक्षिक अवस्थाको प्रमाणीकरण गरी निर्दिष्ट औपचारिकीभित्रको कक्षामा प्रवेश गर्न पाउने अवसर खुला गरिनेछ।

२. विविध कारणबाट शैक्षिक अवसर प्राप्त गर्न नसकेका विद्यालय उमेर समूहका बाल

वालिकाहरूलाई खुला शिक्षाको व्यवस्था गरी औपचारिक शिक्षा सरहको विद्यालय शिक्षा लिन पाउने संस्थागत विकास गरी कार्यक्रमलाई योजनाबद्ध ढङ्गबाट सञ्चालन गरिने छ।

विद्यालय क्षेत्र सुधार कार्यक्रम, २०६४

विद्यालय क्षेत्र सुधार कार्यक्रममा खुला तथा वैकल्पिक शिक्षाका बारेमा निम्नानुसार व्यवस्था भएको पाइन्छ:

१. जनताका विविध आवश्यकता तथा रुचिलाई सम्बोधन गर्न औपचारिक तथा वैकल्पिक शिक्षा पद्धति दुवै माध्यम अपनाइने छ।

२. वैकल्पिक शिक्षा पद्धतिमा खुला, लचिलो, घुम्ती विद्यालयहरू स्थापना गरी शिक्षाको समकक्षी मान्यता समेत हुने छ।

३. अधिकार र पहुँच सम्बन्धी औचित्यमा कक्षा ९-१२ को संरचनाले विद्यार्थीहरूलाई कक्षा १० मात्र पुरा गर्ने व्यवस्थाको सट्टा कक्षा १२ पुरा गर्ने अवसर मिल्ने छ र माध्यमिक तहका विद्यार्थीलाई अनौपचारिक, व्यावसायिक तथा खुला सिकाइका लागि ढोका खोली दुर्गम क्षेत्रका विद्यार्थीहरूले अवसर पाउने भएकाले समताको मुद्दालाई सम्बोधन गर्न भनी किटानी गरेको छ।

यसरी नै विद्यालय शिक्षामा चरणबद्ध रूपले विद्यार्थीहरूलाई प्राविधिक र व्यावसायिक शिक्षा सम्बन्धी ज्ञान र सिप पनि प्रदान गरिनेछ र मदरसा, गुम्बा, विहार, गुरुकुल, फेदाङ्वा आदिजस्ता शिक्षाका परम्परागत पद्धतिहरूलाई शिक्षाको मूलधारमा ल्याइने र वैकल्पिक तथा खुला सिकाइको व्यवस्था समेत मिलाइने छ भनी तोकेको छ।

दूर शिक्षा तथा खुला सिकाइका क्षेत्रमा देखिएका चुनौतीहरू

वर्तमान अवस्थामा दूर शिक्षा तथा खुला सिकाइका क्षेत्रमा शिक्षाको पहुँचको विस्तार, पाठ्यक्रम तथा स्वअध्ययन सामग्री, शिक्षक तालिम, संस्थागत संरचना, गुणस्तर अभिवृद्धि, उच्च शिक्षा, प्रबोधीकरण, चेतनामूलक कार्यक्रम निर्दिष्ट मूल्याङ्कन प्रणाली आदि सञ्चातनमा समस्या एवम् चुनौतीहरू रहेका छन्। ती चुनौतीहरू निम्नानुसार रहेका देखिन्छन् :

१. दूर शिक्षा तथा खुला सिकाइ पद्धतिमार्फत केकस्ता कार्यक्रमहरू सञ्चालन गर्ने, त्यसको लक्षित वर्ग को हुने ? जस्ता पक्षमा नीतिगत अस्पष्टता रहेको छ। विद्यमान नीतिमा दोहोरोपना रहेकाले कार्यक्रम सञ्चालनमा द्विविधा उत्पन्न भई विद्यालय शिक्षा सञ्चालनमा समेत एकरूपता कायम गर्न सकिएको अवस्था छैन।

२. लक्षित वर्गको पहुँचमा यो कार्यक्रम सञ्चालन हुनु पर्नेमा त्यस्तो हुन नसकिरहेको अवस्था छ। विविध कारणबाट शिक्षाको अवसर नपाएका वा बिचैमा अवसरबाट बञ्चित भएका व्यक्तिहरूसम्म यसको पहुँच तथा विस्तार हुन सकेको छैन, जसबाट लक्षित वर्ग लाभान्वित हुने अवसरबाट वञ्चित रहेको छ।

३. विद्यालय तह कक्षा १ - १२ को शैक्षिक कार्यक्रम र उच्च शिक्षाको कार्यक्रम कहाँबाट सञ्चालन हुने, व्यवस्थापन पक्ष को र कस्तो रहने भन्ने स्पष्ट छैन। हाल विद्यालयस्तरको कार्यक्रम पनि विभिन्न संस्थाहरूबाट अलग अलग रूपमा सञ्चालन भइरहेको छ भने

स्थानीय स्तरमा यस पद्धतिका लागि कुनै संयन्त्रको विकास भएको देखिँदैन ।

४. दूर शिक्षा तथा खुला सिकाइ नयाँ क्षेत्र भएकाले यसमा आवश्यक पर्ने दक्ष र योग्य जनशक्तिको अभाव रहेको छ । यसको दर्शनलाई आत्मसात् गर्ने क्षमतावान्, योग्य लेखक, स्क्रिप्ट लेखक, सफ्टवेयर उत्पादक, स्वअध्ययन सामग्री विकास कर्ता, ODL का क्षेत्रमा महत्वपूर्ण रहन्छ र यस पद्धतिमा संलग्न भएका र हुने व्यवस्थापक तथा नीति निर्माताहरू समेतमा आवश्यक ज्ञान तथा सिप हुनु आवश्यक छ ।

५. विज्ञान र प्रविधिको क्षेत्रमा भएको विस्तारले विश्व समुदाय नजिक भएको विद्यमान अवस्था एकातिर छ भने अर्कोतिर खुला सिकाइको उपयोगका क्षेत्रमा सूचना तथा सञ्चारको महत्त्वपूर्ण भूमिका रहन्छ । यो शिक्षा पद्धति सञ्चारका साधनमा निर्भर हुने भएकाले रेडियो, टेलिभिजन, टेलिफोन, Online/offline Learning, Website, tele-educaion, e-learning जस्ता पक्षको पहुँच हुनु अनिवार्य हुन्छ । हाम्रा सामुदायिक विद्यालयहरूमा यी पक्षको विकास हुन अझै बाँकी रहेको अवस्था छ ।

६. खुला सिकाइका माध्यमबाट विभिन्न कारणले पछिपरेका समूह वा वर्गलाई समताका आधारमा समावेशी बनाउने नीति अवलम्बन हुनु पर्दछ । अझै पनि नेपाली समाजमा जातिपाती, धर्म, भाषा, संस्कृति आदि कारणले विविधता रहेको अवस्था छ भने आर्थिक तथा सामाजिक कारणले पछाडि परेका समूह शिक्षा पाउने अवसरबाट बञ्चित रहेका देखिन्छन् । निश्चय नै खुला सिकाइको उपयोगबाट त्यस्तो समूहलाई सहज रूपमा सम्बोधन गर्न सकिन्छ । तर खुला विद्यालयहरूको समान विकास, अवसरको समान वितरण, समताको कमजोर अवस्था, विश्व श्रम बजारमा परिवर्तन, बढ्दो बेरोजगार, उपभोक्ताको फरक क्षमता, भौगोलिक अवस्थिति आदि कारणले खुला सिकाइ चुनौतीका रूपमा खडा भएको छ ।

७. आफ्नै कार्यस्थलमा रहेर सिकाइलाई अघि बढाउन खुला तथा दूर शिक्षाको माध्यमबाट ज्ञान, सिप र क्षमताको वृद्धि गर्ने अवस्थालाई अवसर र चुनौतीका रूपमा लिनुपर्ने हुन्छ । खुला सिकाइका पाठ्यक्रम तथा पाठ्य पुस्तक एवम् स्वअध्ययन सामग्री सिकारुलाई केन्द्रित बनाएर तयार गरिएको हुन्छ । सिकारुको सहयोगका लागि बनाइएका शिक्षण विधि, शिक्षण सामग्री, सम्पर्क कक्षाहरू, अभ्यासहरू, वेभमा आधार सामग्री आदि तयार गरिने भए तापनि सिकारु केन्द्रित सिकाइ तथा उपयुक्त उपयोग अवसरलाई समेत मानिन्छ ।

८. मानिसले प्रभावकारी उपयोगिताका लागि वास्तविक जीवनमा प्रयोग हुने ज्ञान तथा सिपहरूको खोजी गरी सिकारुलाई अघि बढाउन चाहेको हुन्छ । त्यसैले जीवन सापेक्ष पाठ्यक्रम, पाठ्य सामग्री, सिकाइ पद्धति, सहायता प्रणाली, अभ्यास कार्य, परीक्षा प्रणाली, मूल्याङ्कन परिपाटी आदि अपनाएर व्यावहारिक एवम् जीवनोपयोगी रूपले छुट्टै रूपमा विकास गर्नु आवश्यक हुन्छ । तर यी कार्य पुरा नगरी केवल निर्देशित खुला शिक्षाका रूपमा विद्यालयहरूमा विस्तार गरिएको अवस्था रहेको छ ।

९. खुला सिकाइलाई परम्परागत शिक्षा पद्धतिको प्रतिस्पर्धीका रूपमा भन्दा पूरकका रूपमा हेरिनु पर्दछ। यस पद्धतिमा सञ्चालित कार्यक्रमहरूमा नीति निर्माता, कार्यक्रम विकासकर्ता, कार्यक्रम कार्यान्वयन कर्ता, उपभोग कर्तादेखि सरोकार वालाहरूसम्म गुणस्तरीयतामा कमी रहेको देखिन्छ। पर्याप्त पूर्वाधारको अभावमा सञ्चालित कार्यक्रमहरूको सञ्चालनको कमीका विषयमा आएका टिप्पणीमा केही हदसम्म सत्यता रहे पनि यसका लागि गुणस्तरीय कार्यक्रम र जनशक्ति उत्पादन गर्नु नितान्त आवश्यक हुन्छ। यसरी गुणस्तरीय एवम् उच्चस्तरको जनशक्तिको विकास गर्न सकियो भने योग्य र सक्षम जनशक्तिको आपूर्ति, गुणस्तरीय कार्यक्रमको विकास, स्तरीय सामग्री उत्पादन, समुचित प्रविधिको प्रयोग, सिकारुको आवश्यकतानुसारका कार्यक्रम, उपयुक्त कार्यान्वयन आदिको व्यवस्थापन गर्न सकिन्छ। यस्ता पक्षहरूको अभावले गर्दा समग्र कार्यक्रमको गुणस्तरमा समस्या देखिन्छ।

१०. खुला सिकाइ कार्यक्रम सञ्चालन भएका विद्यालयहरूले भौगोलिक कठिनाइ तथा उपर्युक्त कार्यक्रमको अभावले गर्दा नियमित अनुगमन, सुपरीवेक्षण, प्राविधिक सुविधा, पृष्ठपोषण आदि निरन्तर रूपमा पाउन नसकिरहेको अवस्था छ। कार्यक्रममा देखिएका राम्रा पक्षहरू, अनुशरण योग्य क्षेत्र, सुधार गर्नुपर्ने पक्ष, हटाउनु नै पर्ने वस्तु आदिका लागि कार्यक्रमको प्रभावकारिता हेरिनुपर्ने हुन्छ। तर त्यस प्रयोजनका लागि कार्यक्रमको विकास, विस्तार र निरन्तरता भइरहेको अवस्था देखिँदैन।

११. खुला विद्यालयहरू स्वभावैले अन्य नियमित विद्यालयहरू भन्दा फरक प्रकृतिका हुन्छन्। शिक्षामा प्रविधिको प्रयोग अनिवार्य भएकाले विज्ञान तथा प्रविधिको क्षेत्रमा विशेष व्यवस्था भएका त्यस्ता विद्यालयहरू मात्र खुला विद्यालयले चिनिन्छन्। तर भएका नियमित विद्यालयहरूबाट नै त्यस किसिमको शिक्षा प्रदान भइरहेको वर्तमान अवस्था छ।

१२. खुला विद्यालयका सहभागीहरू विद्यालय उमेर समूहभन्दा माथिल्ला उमेरका हुने हुनाले उनीहरूसँग कार्यक्षेत्रको बढी अनुभव रहन्छ। त्यसैले उनीहरूसँग गरिने क्रियाकलाप वा व्यवहार पक्कै पनि फरक हुनु स्वाभाविकै हो। तर खुला विद्यालय सञ्चालन भएका विद्यालयहरूका कार्यक्रम संयोजन तथा विषयगत सहजकर्ताहरूलाई त्यस प्रकृति/क्षेत्रसँग सम्बन्धित ज्ञान, सिप तथा व्यवहार प्रदान गर्ने खालका कार्यक्रमहरूको व्यवस्था हुन सकेको छैन। जसले नियमित विद्यालयका विद्यार्थीहरूसँग गरिने व्यवहार जस्तै गरेर पठनपाठन तथा सम्पर्क कक्षा सञ्चालन भइरहेको अवस्था छ।

१३. दूर तथा खुला सिकाइ पद्धतिमार्फत कक्षाहरू सञ्चालन गर्दा परम्परागत शिक्षाभन्दा नितान्त फरक ढङ्गले प्रयोगात्मक कार्यहरूमा जोड दिनु पर्ने हुन्छ। सिकारुको अभिलेख, परियोजना कार्य, खोज तथा सिर्जना, सक्रिय सहभागिता, सहज कर्तासँगको सम्पर्क, प्रविधिको प्रयोग, गृहकार्य, पुस्तकालय र सन्दर्भ सामग्रीको प्रयोग आदि सिकाइका महत्वपूर्ण क्षेत्रहरू हुन्। साथै सिकारुको उपलब्धि मूल्याङ्कन गर्दा पनि सोही कार्य क्षेत्रमा आधारित भई विशिष्ट तरिकाले गरिनुपर्ने

हुन्छ । तर अझै परम्परागत तरिकाबाट सिकारुको उपलब्धि मापन गरिने भएकाले शैक्षिक कार्यक्रमको प्रभावकारिता चाहेजस्तो देखिँदैन । त्यसैले खुला विद्यालयहरूका सहभागीहरूको शैक्षिक उपलब्धि मापन गर्न छुट्टै र विशेष किसिमको मूल्याङ्कन पद्धति अपनाउन नसक्नु महत्त्वपूर्ण चुनौती एवम् समस्याका रूपमा रहेको छ ।

निष्कर्ष

सबैका लागि शिक्षा एवम् विद्यालय क्षेत्र सुधार कार्यक्रमको कार्यान्वयनका सन्दर्भमा विभिन्न आवश्यकता र चाहना बोकेका, विविध अवस्थामा रहेका, विभिन्न कारणले विद्यालयीय शिक्षा पूरा गर्न नसकेका, शिक्षाको अवसरबाट बञ्चित रहेका, शिक्षा प्राप्त गर्ने चाहना बोकेका विद्यालयीय उमेर बाहिरका समूहलाई विद्यालय तहदेखि उच्च शिक्षासम्म दूर तथा खुला शिक्षामार्फत सिकारुको इच्छा, योग्यता, क्षमता र परिस्थिति अनुकूलको शिक्षा हासिल गर्ने अवसर प्रदान गरी सूचना तथा सञ्चारमा आधारित व्यावहारिक र स्तरीय शिक्षा प्रदान गर्नु आजको आवश्यकता हो । यसका लागि स्पष्ट नीति, उपयुक्त सङ्गठन व्यवस्थापन, आवश्यकतामा आधारित पाठ्यक्रम, प्रभावकारी नेतृत्व, समुचित प्रविधिको प्रयोग, सन्तुलित शिक्षण सिकाइ प्रक्रिया, उचित साधन स्रोतको व्यवस्थापन, व्यावसायिक सीप सिकाइ, विशिष्ट मूल्याङ्कन पद्धति, सिकाइ केन्द्रहरूको स्थापना, सूचना तथा सञ्चारको प्रयोग, उपयुक्त सहयोग प्रणाली, अनुगमन तथा सुपरीवेक्षण व्यवस्था, समकक्षताको व्यवस्था, स्थायी र दिगोपनको संयन्त्र, सामग्री प्रसारण एवम् सम्पर्क केन्द्र, आर्थिक दिगोपना र उत्प्रेरित सिकारु आदि खुला सिकाइ पद्धतिका पूर्वाधारका रूपमा रहेका छन् । त्यस कारण देशको भौगोलिक अवस्थिति, जनताको आर्थिक अवस्था, शैक्षिक संस्था र शिक्षक व्यवस्थापन, सिकारुको क्षमता, सिकाइमा प्रविधिको प्रयोग, अनुभव र कामको सम्मान, सिकाइ केन्द्रको स्थापना र कार्यक्रम सञ्चालन गर्न सकेको खण्डमा कार्यक्रमको लक्ष्य अनुसार स्वरोजगारमूलक, प्रभावकारी तथा बजारको माग बमोजिम प्रतिस्पर्धी जनशक्ति विकास भई खुला सिकाइ कार्यक्रम गुणस्तरीयता प्राप्त हुने विश्वास गरिन्छ ।

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लेखसार

अहिले विश्वमा सबैभन्दा बढी कार्बन डाइअक्साइडको उत्सर्जनले गर्दा वायु मण्डलको सतह बाक्लो भएको छ । पृथ्वीभर आएको सूर्यको तापक्रम परावर्तन भएर त्यो बाक्लो सतहलाई भेदन गर्न सक्दैन र यो पृथ्वी प्लास्टिकको हरित गृह (Green house) जस्तै बनेको छ । परिणामस्वरूप पृथ्वीको मौसम, बनस्पति, हुरी, हिमरेखा, वर्षा आदिको व्यवहारमा परिवर्तन आएको छ । पुसमाघमा लालीगुराँस फुल्नु र चैत्रमा काफल पाक्नु, अत्यधिक गर्मी, अत्यधिक जाडो, अति वृष्टि, अनावृष्टि, खण्डवृष्टि यसका उदाहरणहरू हुन् । यसको मुख्य कारण विकसित देशहरूका भीमकाय उद्योग, अत्यधिक विद्युतीय सामग्री र प्राकृतिक स्रोतको प्रयोग रहेको छ भने एक दशकभित्र करिब १३ मिलियन हेक्टर वन विकास भएको छ एवम् यो शताब्दीभित्र १७००० रुख विरुवा तथा पशुपक्षीको जातिप्रजाति विनास हुने त्रासमा छन् ।

नेपालको स्थिति हेर्ने हो भने २० वर्षको समयावधिमा प्रतिवर्ष १.२३ प्रतिशत वन जङ्गल विनास हुँदैछ, २० ओटा हिमतालहरू फुट्ने अवस्थामा छन् भने जल उत्पन्न प्रकोपको हिसाबले ३० औं र जलवायु परिवर्तनको दृष्टिकोणले नेपाल विश्वमा छैटौं स्थानमा पर्दछ । तापक्रमको औसत वृद्धि दर वर्सेनी ०.०६ डिग्री सेल्सियस रहेकोबाट सन् २१०० सम्ममा हिँउदमा चार तथा वर्षामा तिन डिग्री सेल्सियस बढ्ने देखिन्छ । शिक्षा प्रणालीले पाठ्यक्रम, पर्यावरणीय शिक्षण विधि (Ecopedagogy), शिक्षक-विद्यार्थी र शिक्षक-शिक्षकबिचको अन्तर्क्रिया तथा समुदायको चेतनावृद्धि प्रबोधीकरणले वातावरणीय समस्यालाई सम्बोधन गर्न सक्छ । संयुक्त राष्ट्र सङ्घको प्रयासमा कोपेनहेगन सम्मेलनलगायत माल्दिभ्सको समुद्रमुनि र नेपालको सगरमाथा आधार शिविर (कालापत्थर) को बैठक जस्ता विश्व प्रतिबद्धतालाई परिपूर्ति गर्न भावी सन्ततिलाई शिक्षाले नै तयार गर्न सक्छ ।

वैज्ञानिकहरूको अध्ययन र अनुसन्धान अनुसार जलवायु परिवर्तनको प्रमुख कारण विकसित देशहरूका भीमकाय उद्योगहरू, उनीहरूले उत्पादन गरेका विलासिताका सामग्रीहरू नै हुन् । उद्योगहरूमा प्रयोग हुने इन्धन, फ्रिज, एयरकन्डिसनजस्ता उपकरणहरू, यातायातका क्षेत्रमा प्रयोग हुने अटोमोवाइल्सहरूले कार्बन उत्सर्जन गर्दछन् । कल्पना गरौं हाम्रो यो पृथ्वी किसानहरूले निर्माण गरेको प्लास्टिकको छानो भएको हरित गृह (Green house) जस्तै छ । त्यस गृहमा सूर्यको ताप प्रवेश गर्दछ तर यसरी प्रवेश गरेको ताप त्यहाँबाट बाहिर निस्कन सक्दैन । यसबाट बाहिरको तापक्रमभन्दा हरित गृहभित्रको तापक्रम फरक हुन्छ । बेमौसमी खेतीका लागि विरुवाहरू तयार हुन्छन् । यसरी नै हरित गृहको रूपमा रहेको पृथ्वीको वायु मण्डलमा तयार भएका ग्यासहरू नै हरित गृह ग्यास हुन् । जहाँ हरित गृह ग्यास त बन्दछन् तर बाहिर जान सक्दैनन् । यसबाट वायु मण्डलको हरित गृह ग्यास बाक्लो भएको छ । पृथ्वीबाट

परावर्तित सूर्यको तापक्रमले यस बाक्लो सतहलाई पार गर्न सक्दैन । पुनः फर्केर पृथ्वीको सतहमा आउँछ र पृथ्वीको तापक्रमलाई बढाउने काम गर्दछ । ज्ञवाली, २०६७) ।

बढी मात्रामा कार्बन उत्सर्जन गरेर वायु मण्डलको हरित गृह ग्यासलाई बाक्लो बनाउने काम औद्योगिक तथा धनी देशहरूबाट भएको छ । २० प्रतिशत मात्र जनसङ्ख्या बसोबास गर्ने यस्ता देशहरूले विश्वकै ८० प्रतिशत प्राकृतिक स्रोतको उपभोग गर्छन् । जलवायु परिवर्तनको दुष्प्रभावलाई झेल्ने र अनुकूल गर्ने क्षमता पनि यी देशहरूसँग धेरै छ । त्यसैले ती देशमा यी दुष्प्रभावहरु कम मात्र देखिन्छन । स्पष्ट छ, प्राकृतिक वातावरणको सामञ्जस्यमा सञ्चालित पारिवारिक तथा निर्वाह मुखी अर्थतन्त्र र यसै किसिमको पेसा र व्यवसाय भएका गरिब देशहरूले कार्बन उत्सर्जन अत्यन्त कम अथवा नगन्य मात्रामा गर्दछन् । यिनीहरूबाट प्राकृतिक सन्तुलनमा कुनै दुष्प्रभाव पर्दैन । तर पनि कमजोर भूबनोट र परिस्थिति प्रणाली भएका नेपालजस्ता गरिब देशहरूले जलवायु परिवर्तनको सबैभन्दा ठूलो भार बोक्नु परेको छ ।

जलवायु परिवर्तनको कुरा नयाँ होइन तर यो कुरा जटिल भने अवश्य हो । मानिसको उत्पत्ति अफ्रिकामा भएको थियो । सो जानकारीबाट पनि प्रमाणित भइसकेको छ कि हाम्रा ती पूर्वजहरू जलवायु परिवर्तनका कारण आफ्नो उत्पत्तिको ठाउँ छोडी संसारभरि फैलिए । तर एउटा सत्य कुरा केहो भने मानव उत्पत्ति र विकास क्रममा अहिले जतिको कार्बन डाइअक्साइडको उत्सर्जन कहिले पनि भएको थिएन । वर्तमानको अवस्थामै यो ग्यास उत्सर्जन हुँदै गए भोलि पृथ्वीको भविष्य नै चिन्तामा पर्न जाने देखिन्छ । सामान्य भाषामा भन्ने हो भने जलवायु परिवर्तन भनेको ती कुरामा आउने परिवर्तन हो । प्रथम वायु मण्डलको तापक्रम बढ्छ, दोस्रो बर्सात्, तुसारो, हिउँ आदिको स्वरूपमा परिवर्तन आउँछ तथा तेस्रो हुरी, हुन्डरी, गड्याङगुडुङ, चट्याङ आदिको असरले मानव, पशु, पक्षी, वनस्पति, कृषि तथा ऊर्जाको उत्पादन र खपतमा बढी नकारात्मक प्रभाव पर्छ (अधिकारी, २०१०) ।

भूमण्डलीय अवस्था(Global condition)

सन् १९९० पछि विश्वव्यापी रूपमा नै वन विनास मन्द गतिमा भए पनि केही देशहरूमा यो गति तीव्र रूपमा नै रहेको छ । गत दशकमा विश्वका १३ मिलियन हेक्टर वन कृषिकार्य र प्राकृतिक प्रकोपका कारण विनास भएको छ । यो आकार सन् १९९० मा १६ मिलियन हेक्टर थियो । केही क्षेत्रहरूमा वार्षिक ७ मिलियन हेक्टरमा नयाँ वन लगाउने काम भएको छ । वन विनासको दृष्टिकोणले सन् २००० देखि २०१० को समयावधिमा खुद वन विनास ५.२ मिलियन हेक्टर प्रतिवर्ष भएको देखिन्छ । यसको सबैभन्दा बढी अंश दक्षिणी अमेरिका तथा अफ्रिकामा रहेको छ, जहाँ वन विनास निरन्तर रूपमा कायम नै छ । अस्ट्रेलियामा भयङ्कर सुख्खा र आगजनीले वन विनाश उच्च स्तरमा भएको छ ।

सन् २००७ मा कार्बन डाइअक्साइड (CO_2) फेरि बढ्यो र यसको मात्रा ३० billion metric tones मा पुग्यो । यो सन् १९९० को तुलनामा ३.२ प्रतिशतले बढी थियो । प्रतिव्यक्ति कार्बन डाइअक्साइडको प्रदूषणको उच्च मात्रा विकासशील देशहरूमा रहेको छ । यो मात्रा करिब १२ मेट्रिक टन CO_2 प्रतिव्यक्ति पर्न आउँछ । जलवायु परिवर्तन र भूमण्डलीय गर्मीकरण (Climate change and global warming) मुद्दाका सम्बन्धमा १६ सेप्टेम्बर २००९ मा १९६ पक्षले पर्वतीय दस्तावेज (Montreal protocal) मा हस्ताक्षर गरेका छन् । त्यस्तै कोपेनहेगन (डेनमार्क) का जलवायु सम्मेलन लगायत माल्दिभ्सका समुद्रमुनि

तथा नेपालको सगरमाथा आधार शिविर (कालापत्थर) वैठक लगायत संयुक्त राष्ट्रसङ्घीय महाधिवेशनमा यस सम्बन्धी मुद्दाका प्राथमिकताहरूलाई यस विषयको विश्व प्रयासका रूपमा लिन सकिन्छ (सिन्हा, २०६७)।

जैविक विविधता संरक्षणतर्फ सहस्राब्दी विकास लक्ष्य अनुसार केही सफलता हासिल भए पनि सन् २०१० सम्मको निर्धारित लक्ष्य बिना उपलब्धि खेर गएको अवस्था छ। अहिले पनि जैविक विविधताको विनाश निरन्तर रूपमा जारी रहेको छ र यही प्रवृत्ति कायम रहने हो भने यो शताब्दीभरि नै घट्ने सम्भावना देखिँदैन। विश्वका करिब १७००० रूख विरुवा तथा पशुपक्षीको जाति, प्रजाति, उपजाति विनासको त्रासमा छन्। यद्यपि १२ प्रतिशत भूभाग तथा १ प्रतिशत समुद्र क्षेत्र संरक्षणमा छ। आधारभूत सरसफाइको क्षेत्रमा सन् २००८ मा विश्वको करिब २ अर्व ६० करोड जनसङ्ख्या सुधारिएको सरसफाइ सेवाबाट बञ्चित थिए र यही प्रवृत्ति कायम रहेमा सन् २०१५ मा यो सङ्ख्या २ अर्व ७० करोड पुग्ने अनुमान गरिएको छ। त्यस्तै लाखौंको सङ्ख्यामा मानिसहरू सहरी क्षेत्रको फोहोर, अव्यवस्थित र अत्यन्तै चापग्रस्त जनघनत्वयुक्त वस्तीमा बस्दै आएका छन्। तिनीहरू अधिकाँशतः गरिबी, निरक्षरता तथा रोगबाट ग्रस्त रहेका छन् (U.N. 2010)।

सन्दर्भ नेपालको

विशाल हिमभण्डारले नेपाली हिम शृङ्खलाहरूबाट निस्किने कर्णाली, भेरी, गण्डकी, नारायणी र कोसीजस्ता नदीको प्रवाहलाई निरन्तर कायम राख्दै आएको छ। यस क्षेत्रको जलवायुलाई हाम्रो जीवन अनुकूल एवम् उपयोगी बनाउने काममा समेत हिमालको महत्वपूर्ण योगदान छ। हिमालय पर्वतमाला पाकिस्तान, भारत, बङ्गलादेश, भुटान र नेपालका लागि मात्र होइन, दक्षिण एसिया र दक्षिणपूर्व एसियाका निम्ति पनि गौरवका विषय हुन्। नेपालको जलस्रोत यहाँको कृषि, वन जङ्गल, वन्यजन्तु र प्राकृतिक अवस्थासित मात्र होइन मानव संस्कृतिसँग पनि अभिन्न रूपमा गाँसिएको छ। नेपालमा करिब ८३ हजार मेगावाट जलविद्युत् उत्पादन हुन सक्ने क्षमता छ। त्यसैले भन्ने गरिन्छ ब्राजिलपछिको दोस्रो जलविद्युत्को धनी देश नेपाल हो (ज्ञवाली, २०६७)।

केही समय यता आएर जलस्रोतको धनी देश नेपालका जलवायुको सन्दर्भमा बेग्लै किसिमको परिवर्तन देखा पर्दैछ। विश्व तापमानमा हुँदै गएको वृद्धि, सहरी प्रदूषण, वन जङ्गलको विनास, वातावरणीय क्षेत्रमा प्रतिकूल प्रभाव पार्ने विकास संरचनाहरूले गर्दा हाम्रो जलवायुमा दिनानुदिन परिवर्तन हुँदैछ। नेपालको सबै भूभागमा वार्षिक तापक्रमको औसत वृद्धि दर ०.०६ डिग्री सेल्सियस रहेको छ। विशेषज्ञहरूका प्रक्षेपण अनुसार सन् २१०० सम्ममा यो वृद्धि दर हिँउदमा चार डिग्री तथा वर्षामा तिन डिग्री सेल्सियस बढ्ने देखिन्छ। यस परिवर्तनको सबैभन्दा ठूलो प्रभाव अहिले हिमाली भूभागमा पर्दैछ। नेपालका २० ओटा जति हिमतालहरू कुनै पनि बेला फुट्ने अवस्थामा छन् र हिमरेखाहरू अधिक उचाइतिर सर्दैछन्। हिमनदीहरू खुम्चिँदै छन्। अधिक समयसम्म हिँउ सञ्चित गर्ने क्षमतामा ह्रास देखिँदैछ। अप्रत्याशित ठूलो वर्षा, वेमौसमी वर्षा, खण्डवृष्टि तथा खडेरी बढ्दै गएको पाइन्छ। गर्मी महिनाहरूमा देखापर्ने सरुवा रोगहरूको क्षेत्र बढ्दैछ। उच्च पहाडी क्षेत्रका वनस्पति रेखाहरू थप उचाइतिर सर्दैछन्। लामखुट्टेको प्रकोप क्षेत्र थप उचाइतिर फैलिँदैछ। साराशंमा के भन्न सकिन्छ भने पृथ्वीका दुई ध्रुवपछिको धेरै हिँउ हुने क्षेत्र हिमाली भूभाग हो। त्यसैले यस भूभागलाई तेस्रो ध्रुव पनि भनिन्छ। सगरमाथाजस्ता संसारकै उच्च शिखर हिमालपारिको उच्च पठारका कारण

यस क्षेत्रलाई संसारको छानौं पनि भन्ने गरिएको छ। यदि संसाररूपी घरको छानो नै सङ्कटग्रस्त अवस्थामा पुग्यो भने त्यसले घरलाई कसरी सुरक्षित राख्न सक्दछ ? यो प्रश्न अत्यन्त बलियो बन्न गएको छ। ज्ञवाली, २०६७)।

नेपालको अवस्था हेर्दा वातावरणीय दिगोपनका लक्ष्यहरू आवश्यक रूपमा सम्बोधन हुन सकेका छैनन् र यसका लागि ठोस पहल र साधनको आवश्यकता छ। वातावरणीय दिगोपन प्रत्यक्ष रूपमा जनताको जीवनस्तर र आर्थिक वृद्धिसँग सम्बन्धित छ। नेपाल पर्यावरणीय परिवर्तनको जोखिम क्षेत्रमा नै पर्दछ।

आधिकारिक तथ्याङ्क अनुसार २९ प्रतिशत राष्ट्रको भूभाग वनजङ्गलले ढाकेको देखाए पनि सन् २०१० मा AFO अनुसार २५.४ प्रतिशत भूभाग वनजङ्गलले ढाकेको देखाएको छ। अर्थात् ३.६३ (Million) हेक्टर मात्र वनजङ्गल छन्। साथै सन् १९९० देखि २०१० सम्मको बिचमा नेपालको ५९,०५० हेक्टर वन विनास भयो अर्थात् प्रतिवर्ष १.२३ प्रतिशत वन जङ्गल विनास हुँदै आएको छ। प्रतिवर्ष सरकारले हजारौंको सङ्ख्यामा रूख बेचिरहेको छ भने सामुदायिक वन उपभोक्ता समूहले झन् बढी रूखहरू बेच्दैछन् (The Himalayan, 2067)।

सन् १९९५-१९९६ को तथ्याङ्कअनुसार कुल जनसङ्ख्याको ९२ प्रतिशत जनता वन पैदावर तथा पशुजन्य उत्पादन जस्ता परम्परागत स्रोतहरूमा निर्भर रहने गरेको देखियो (सिन्हा, २०६३)। शत प्रतिशत सफा र स्वच्छ पानी उपलब्धताको हकमा सन् २००९ मा ८० प्रतिशत उपलब्धि हासिल भएको छ। तर सरसफाइको दृष्टिकोणले चर्पी प्रयोगको ठूलो महत्व भए पनि हाल ४३ प्रतिशत जनताले मात्र प्रयोग गर्दैछन्। त्यसमा पनि सहर र ग्रामीण क्षेत्रमा ठूलो असमानता छ (रा.यो.आ., २०६७)।

जलवायु परिवर्तन अन्तर्राष्ट्रिय मुद्दाको रूपमा आएको कारणले वातावरणीय संरक्षण र प्रवर्द्धनले बढी महत्त्व पाएको छ। तत्सम्बन्धी सम्पूर्ण अन्तर्राष्ट्रिय सन्धि, सम्झौता, दस्तावेजहरूमा नेपाल हस्ताक्षरी रहेको छ र यस सम्बन्धमा दृढ प्रतिवद्धता पनि जाहेर गरेको छ। नेपाल गरिब भए पनि विश्व समुदायको एक सदस्य राष्ट्र हो। यस हैसियतलाई प्रयोग गरेर नेपाल जलवायु परिवर्तनका प्रतिकूल प्रभावका साथै स्वयम् जलवायु परिवर्तनलाई नियन्त्रण गर्न समेत महत्वपूर्ण भूमिका खेल्नुपर्दछ। साथै आफूजस्ता देशहरूको सहकार्यलाई बढाउनुपर्दछ।

शिक्षाको भूमिका (Role of education)

सन् २००१ को जुनमा स्विडेनको राजधानी स्टकहोममा सम्पन्न वातावरणीय सम्मेलनले विद्यमान शिक्षा प्रणालीमा वातावरणीय विषयवस्तुको समावेशीकरण, सूचनाहरूको आदानप्रदान, शिक्षण अभ्यासमा हुने पक्षपातपूर्ण व्यवहारमा परिमार्जन गर्ने, शिक्षकहरूको पेसागत विकासका लागि तालिमको व्यवस्था, समूह निर्माण गरेर शिक्षण गर्ने, वातावरण विज्ञहरूको विशेषज्ञताको प्रयोग, शिक्षण क्षमता अभिवृद्धिमा गर्ने वातावरणका विषयवस्तुहरूलाई पाठ्यक्रममा समावेश गर्दा आर्थिक, सामाजिक र पर्यटकीय क्षेत्रका विषय र पर्यावरणीय अवस्थाका अनुभवहरूलाई आधार बनाएर अघि बढ्ने, उपयुक्त सामग्री निर्माण तथा व्यवस्थापन गर्ने कुरालाई सिफारिस गरेको थियो (शिक्षा विभाग, २०६७)।

आज विश्वभरि नै आपत्कालीन शिक्षा (Emergency education) को कुरा हुन थालेको छ। आपतकालीन शिक्षाले आपत्कालबाट प्रभावित बालबालिका, युवा तथा प्रौढहरूको शारीरिक सुरक्षा, संज्ञान, मनोवैज्ञानिक

र विकास सम्बन्धी आवश्यकता पूरा गर्न सक्ने गुणात्मक शैक्षिक अवसरहरूको व्यवस्था हो, जो जीवन निर्वाह गर्ने र जीवन बचाउने दुवै उपागम हुन सक्छ। जलवायु परिवर्तनले आपतकालीन शिक्षाको आवश्यकतालाई टड्कारो रूपमा प्रस्तुत गरेको छ। जति ढिलो गर्छौं त्यति धेरै आपत्काल हामीले व्यहोर्नु पर्ने हुन्छ। जलवायु परिवर्तन र आपत्कालीन घटनाबीच प्रत्यक्ष सम्बन्ध करिब तिन वर्ष अघि कोसीमा आएको बाढीले सुनसरी र सप्तरी जिल्लाका ४० हजार मानिसहरू विस्थापित र ७,५६३ परिवारलाई पीडित बनायो। त्यसबाट १ देखि १८ वर्षका करिब १६ हजार बालबालिकाहरूको शिक्षा प्रभावित भएको थियो। तसर्थ यसबाट पाठ सिकेर हाम्रो शिक्षा प्रणालीले व्यापक रूपमा आपत्कालीन शिक्षा कार्यक्रमको तयारी पनि गर्नुपर्ने देखिन्छ।

शिक्षा उपक्षेत्र भनेको विषयवस्तुको चयन तथा शिक्षण क्रियाकलाप (Pedagogy) लाई मात्र प्रतिविम्ब गर्ने होइन। यसले त दिगो विकासका लागि शिक्षा दशक (Decade of education for sustainble development), साक्षरता दशक (Decade of literacy), सबैका लागि शिक्षा (Education for all), तथा सहस्राब्दी विकास लक्ष्य (The millennium development goals) जस्ता अभियानहरू बिच शिक्षा प्रणालीले समन्वय एवम् सहकार्य गर्न सक्नुपर्दछ। शिक्षा प्रणालीले शिक्षाको औपचारिक, अनौपचारिक क्षेत्रसँग मात्र होइन, अन्तरविषयक मन्त्रालय, विभाग तथा गैर सरकारी सङ्घसंस्थाहरूसँग पनि सहकार्य गर्नुपर्दछ। उदाहरणका लागि HIV/AIDS को अतिक्रमणको प्रभाव सिकारु, अभिभावक, शिक्षक, परिवार तथा समुदायलाई मात्र होइन सम्पूर्ण राष्ट्रलाई समेत पारेको हुन्छ। अतः शिक्षा प्रणाली भनेको समाजका अरु क्षेत्रहरू जस्तै- अर्थ, स्वास्थ्य सेवा, उद्योग र कृषि, रोजगारी तथा सामाजिक विकासवाट अलग एकाङ्गी (Isolated) रूपमा रहन सक्दैन किनकि अव्यवस्थित स्थिति भनेको अहिलेको सम्पूर्ण समस्याहरूका जिम्मेवार हुन् जो सवै अन्तरसम्बन्धित (Interlinked) छन्, जस्तै-

- विश्व सामाजिक समस्या (World social crisis)
- खानेपानी समस्या (Drinking water crisis)
- विश्व खाद्य समस्या (World food crisis)
- ऊर्जा समस्या (Energy crisis)

जलवायु परिवर्तन विषयक सिकाइले सामाजिक र आर्थिक समुन्नति, सांस्कृतिक विविधता, भूमण्डलीय तथा स्थानीय आवश्यकताहरू तथा पर्यावरणीय मूल्यहरूलाई समेत सम्बोधन गर्दछ। प्रभावकारी सिकाइ (Effective learning) ट्रेडमार्क (Branded) वा नियमित वैदिक विधि अनुसारको हुनु हुँदैन। यो त देश-देश तथा समाज समाज बिच फरक हुनुपर्दछ (Dhungel, 2010)। युनेस्कोले शिक्षा विषय क्षेत्र (Theme) को बारेमा सिफारिस गरेको छ, जसले विश्व पर्यावरण अथवा जलवायु परिवर्तनसँग अन्तर सम्बन्धित मुद्दाहरूलाई सम्बोधन गर्न सक्छ। ती हुन् :

- गरिबी (Poverty)
- ग्रामीण विकास (Rural development)
- स्वास्थ्य उपभोग (Health consumption)
- वातावरणीय संरक्षण (Environmental conservation)
- लैङ्गिक समानताका संरक्षण (Protection of gender equality)
- मानव अधिकार (Human rights)
- सांस्कृतिक विविधता (Cultural diversities)

जलवायु परिवर्तनले ग्रामीण नेपालीको आदि (पुरातन)/मौलिक तथा स्वदेशी ज्ञान पद्धति (Indigenous knowledge system) मा सबैभन्दा बढी प्रभाव पारेको छ। तराई, पहाड र हिमालमा बस्ने समुदायले सयौँ वर्षदेखि निर्माण गरेको ज्ञान पद्धतिलाई जलवायु परिवर्तनले ठूलो चुनौती दिएको छ। जलवायु र वनस्पति अन्तर्गतका धेरै घटनाहरू साविकको समयभन्दा कि त एक महिनाअघि कि एक महिनापछि घट्न थालेको देखिन्छ। पुस महिनामा १० डिग्रीभन्दा माथि नजाने तापक्रम २७ डिग्रीसम्म पुगी सक्यो। मुस्ताङ पनि तातिसक्यो। त्यहाँ हिँउ कम र हिँउको सट्टा पानी धेरै पर्न थालेको छ। कर्णाली अञ्चलमा पनि लामखुट्टे पुग्यो, हुम्लामा कोदो फल्न थालेको छ र सिमी आलुको उत्पादन घट्दै छ। कैलालीमा विगत सात वर्षदेखि न्यून वर्षा भइरहेको छ भने वैशाखमा चल्ने हुरीको व्यवहार र समयमा अप्रत्यासित परिवर्तन आएको छ। यी सबै कुराहरूताई कसरी बुझ्ने र कसले बुझाउने ? शिक्षा नै सशक्त माध्यम हुन सक्ने कुरामा कुनै शङ्का छैन तर हाम्रो परिप्रेक्ष्यमा यसलाई अहिलेसम्म प्रयोग गरिएको छैन (अधिकारी, २०१०)।

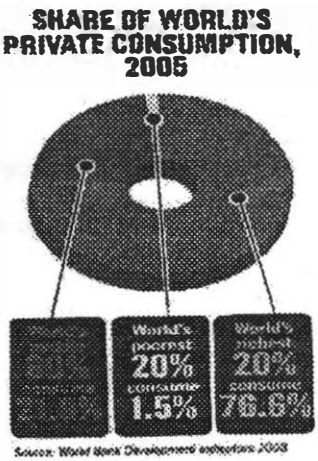
शिक्षाको राष्ट्रिय उद्देश्यमा नै प्राकृतिक वातावरणको सदुपयोगको कुरा गरिएको छ। त्यसको आधारमा कक्षा तिनदेखि नै विज्ञान, स्वास्थ्य र शारीरिक शिक्षाको सिकाइ उपलब्धि/ विशिष्ट उद्देश्य अन्तर्गत बाल बालिकाहरूताई सूर्यको ताप र प्रकारको उपयोगिताको अवलोकन र विभिन्न किसिमका मौसम तथा वातावरणको अवलोकन र पहिचान बताउने काम गरिन्छ। के बाल बालिकाहरूले विद्यालयभित्र र बाहिर पढ्ने मौसम/जलवायु र वातावरणका कुरामा तादाम्यता पाउँछन् होला ? फागुन, चैत्रमा फुल्ने राष्ट्रिय फुल लालीगुराँस पुस माघमा नै फुल्न थालेको छ। त्यसै गरी वैशाख जेठमा पाक्ने काफल चैत्रमा नै पाक्न थालेको छ। जलवायु परिवर्तनले बाली उत्पादन तथा अन्य जलवायु सम्बन्धी कुराहरूको चक्र उथलपुथल भएको छ। यस्तो अवस्थामा बाल बालिकाहरूले शिक्षक, पाठ्यक्रम (स्थानीय र राष्ट्रिय) एवम् शैक्षिक सामग्रीबाट के कस्तो जानकारी पाउँदैछन् त ? के वातावरणमा आएको यो परिवर्तनलाई हाम्रो शिक्षा (औपचारिक र अनौपचारिक) ले सम्बोधन गरिरहेको छ ? शिक्षा मन्त्रालयले यस बारेमा के धारणा बनाएको छ ? के पाठ्यक्रम विकास केन्द्र तथा शैक्षिक जनशक्ति विकास केन्द्रले जलवायु परिवर्तनले विद्यार्थी र शिक्षकको स्तरमा ल्याएको अलमल्याइलाई निर्क्यौल गर्न खोजेको छ ? जलवायु परिवर्तनले नेपाली शिक्षा प्रणाली सामु यस्ता अनेकौँ प्रश्नहरू जन्माई दिएका छन्, जसको उत्तर खोज्न ढिलो हुँदैछ। यी प्रश्नहरूलाई पाठ्यक्रम, पाठ्य पुस्तक तथा शिक्षक तालिमले सम्बोधन गर्न आवश्यक भइ सकेको छ (अधिकारी, २०१०)।

अतः आजको शिक्षाशास्त्रले दिगो विकासका साथै पर्यावरणीय शिक्षण (Ecopedagogy) क्षेत्रसँग व्यापक सन्दर्भ राख्नुपर्दछ। जसले सिकारुको दैनिक जीवनसँग गहिरो सम्बन्ध राख्न सकोस्। जो विधि (Methodology) कक्षा शिक्षण र विषय शिक्षण विधि (Subject teaching Methodology) भन्दा फरक हुन्छ (Gadotti, 2009)।

शिक्षा र जलवायु परिवर्तनसँग सम्बन्धित केही मुद्दाहरू (Some issues related to education and climate change)

आज पृथ्वीले पुनर्नवीकरण (Renewal) गर्न नसक्ने क्षमताभन्दा पनि बढी प्राकृतिक स्रोतहरूको उपभोग मानिसले गरिरहेका छन्। विश्वका सबै जनसङ्ख्यालाई

सम्मानपूर्वक तथा पूर्ण आवश्यकतानुसार र उपभोगस्तर (Capitalism consumption standards) मा खुवाउँदा यस्ता अरु तिनओटा भूउपग्रह चाहिन्छ । आजकालका मानिसहरू जो उच्च स्तरीय शिक्षा हासिल गर्ने अवसर पाएका छन्, तिनीहरूको बानी र मूल्यले गहिरो रूपमा भूमण्डलको जीवनलाई जोखिम पुऱ्याइरहेको छ । विकसित देशहरूका मानिसहरूले बढी आम्दानी, लामो र उच्च शिक्षा एवम् आफ्नो जीवनशैलीका कारणले विश्वका सीमित स्रोतहरूको बढी उपभोग गरिरहेका छन् । यति भएर पनि ती देशहरूले तेस्रो विश्वका देशहरूलाई वातावरणीय विनासका लागि दोषी ठहऱ्याइएका छन् । तेस्रो विश्वका देशहरूको गैरजिम्मेवारी, अज्ञानता, गरिबी, अशिक्षा, सक्षमताको कमीले गर्दा स्रोतहरूको विनास गरिरहेका छन् भन्नु गलत हो । इतिहास साक्षी छ विश्वका पुँजीवादी देशहरूले गरेका करतुत कहीँ उल्लेख गरिँदैन (Lindberg, 2007) किनभने गरिबहरूले यो विश्वको स्रोतको धेरै उपभोग गर्न सक्दैनन्, जति धनीहरूले गर्दछन् । सन् २००५ को अवस्थालाई चित्रण गर्ने हो भने २० प्रतिशत धनीहरूले ७६.६ प्रतिशत, २० प्रतिशत अति गरिबले सिर्फ १.५ प्रतिशत तथा ६० प्रतिशत मध्यमवर्गले २१.९ प्रतिशत स्रोत उपभोग



गरिरहेका छन् । तलको चित्रले यस कुराको पुष्टि गर्दछ ।

आज विश्वभरि जुन शिक्षा प्रणाली विकसित भइरहेको छ त्यो प्रणाली 'पर्यावरणीय विकास' को समस्या तथा त्यसको समाधानका लागि अधिक मात्रामा जिम्मेवार छ । शिक्षाबाट प्रतिपादित सिद्धान्त र मूल्य (Principles and values) हरू पनि यस समस्याका लागि त्यत्तिकै सहभागी छन् । हाम्रो विकास नमुना एउटा यान्त्रिक औचित्य (Instrumental rationality) बाट निर्देशित छ र त्यही नै हाम्रो शिक्षा प्रणालीले पनि नक्कल गरिरहेको छ । अतः शिक्षा प्रणालीले विना पुर्नविचार तर्कहरूका आधारमा मात्र विद्यालयका विषयवस्तुहरू छनोट गर्ने र शिक्षण प्रक्रिया (Pedagogical process) अपनाइरहेको छ जो कदाचित उचित छैन (Gradotti, 2009) ।

मौसम परिवर्तनको दृष्टिकोणले शिक्षाको सन्दर्भ हेर्दा शैक्षिक कार्यक्रमहरू स्थानीय सान्दर्भिक र साँस्कृतिक उपयुक्तताका आधारमा विकसित भएका हुँदैनन् । आम नागरिकलाई सशक्त, सुदृढ र शक्तिशाली (Empowerd, strong and powerful) बनाउने र भविष्यका लागि जिम्मेवारी दिने किसिमका नागरिक तयार गर्ने शिक्षा प्रणालीको विकास हुन सकिरहेको छैन । साथै विद्यमान पाठ्यवस्तुले वातावरणीय मुद्दाहरूलाई सम्बोधन गरेको देखिँदैन ।

विकास, प्रगति र परिवर्तनका दृष्टिकोणले पनि एउटै समयमा नेपाली समाजका जनजातिहरू विभिन्न कालमा बाँचिरहेका छन् । राउटेहरू अहिले पनि आदिम/सिकारी युगमा बाँचिरहेका छन् भने चेपाङ र कुसुन्डा आदि जनजाति कविला युगमा नै छन् । दलितहरू अझै पनि प्राचीन पछौटे युगमा नै छन् । काठमाडौँले विकसित समाजको समकक्षमा अत्याधुनिक समय व्यतीत गरिरहेको छ । तर पनि

ग्रामीण भेगका ठूलो जनसङ्ख्या अझै पनि बन्द समाजको रूपमा नै छ। गरिबी, निरक्षरता, अशिक्षा र रोगजस्ता समस्याहरूले ग्रसित अझ पनि २५.४ प्रतिशत जनसङ्ख्या निरपेक्ष गरिबीका रेखामुनि जीवन यापन गरिरहेका छन्। शिक्षा प्रणालीले यी विविधताहरूका बिचमा कसरी संज्ञानात्मक एकरूपता कायम गर्ने ? कसले कसका लागि लेख्ने वा बोल्ने ? कुन लिखित र मौखिक भाषा सशक्त छ ? कुन भाषा कुन भाषाभाषी केन्द्रित छ ? कुन पाखा लागेको छ ? त्यसले धेरै महत्त्व राख्दछ। जनजातिले लामो ऐतिहासिक समयदेखि प्रकृतिसँग अन्तर्क्रिया गरेर प्राप्त प्रविधि, अभ्यास आदि हाम्रो धरोहरभित्र पर्न आउँछ। जीवन जीविकाका ती बुझाइ, त्यसको व्याख्या, अर्थ आदि एउटा पूर्ण संस्कृतिका पक्षहरू हुन् जसले भाषा, नामकरण तथा वर्गीकरण, स्रोत परिचालन, परम्परागत अभ्यास, आध्यात्मिकता र विश्वव्यापीकरणलाई पनि समेटेको हुन्छ। तसर्थ, जनजातीय शिक्षाका पाँच धरोहर जल, जङ्गल, जन, जमिन र जडिबुटी नै हुन्। यी नै जनजातीय शिक्षाका विषयवस्तु पनि हुन्। तर अहिलेसम्म निर्माण भएका पाठ्यवस्तुहरूले यी पाँचओटा क्षेत्रलाई समेटेको देखिँदैन, जुन जलवायु परिवर्तनसँग प्रत्यक्ष सम्बन्ध राख्दछ।

अब के गर्ने (What to Do?)

"शिक्षा" भनेको क्षमता हो, जसले पर्यावरणीय विकासको कार्यमा महत्त्वपूर्ण योगदान प्रदान गर्न सक्छ। सबैजसो सरकारहरूले यही अवधारणाका आधारमा आफ्नो शिक्षा प्रणालीको सुधार गर्ने प्रतिबद्धता जनाइ सकेका छन्। पर्यावरणीय विकासका लागि दूरदृष्टि भनेको राष्ट्रिय शिक्षा नीतिबारे दीर्घकालीन सोचको निर्माण गर्नु हो। जसले आर्थिक दिगोपना, देशको सामाजिक र साँस्कृतिक विविधताको सम्मान तथा सम्बोधन गर्ने जस्ता अवधारणाहरूलाई अघि सारेको देखिन्छ। पर्यावरणीय विकासका लागि शिक्षाका निम्न सन्दर्भहरूलाई आधारस्तम्भको रूपमा लिन सकिन्छ :

- गुणस्तरीय आधारभूत शिक्षामा सबैको पहुँच बढाउने,
- शिक्षा प्रणालीको वर्तमान कार्यक्रमहरूमा पुनरावलोकन गरी पुनः अभिमुखीकरण गर्ने,
- पर्यावरणीय विकासका लागि सार्वजनिक रूपमा सचेतना तथा साझेदारीको विकास गर्ने,
- वातावरणीय विकासका लागि मानवीय संसाधनको विकास गरी दक्षता अभिवृद्धि गर्ने।

विभिन्न सिद्धान्तहरूका आधारमा शिक्षाका विशेषताहरूलाई मूल्यमा आधारित वातावरणीय, सामाजिक, साँस्कृतिक तथा आर्थिक पक्षमा सन्तुलन, जीवनपर्यन्त, स्थानीय आवश्यकता, अनुभव, ज्ञान र सिपलाई अन्तर्राष्ट्रिय प्रयत्नको आधारमा प्रयत्नमुखी बनाउँदै जानु पर्ने हुन्छ। पर्यावरणीय विकासका लागि शिक्षालाई चालकको पनि चालक (Driver of the drivers) को रूपमा स्थापित गर्नु पर्दछ। नेपालको शिक्षा व्यवस्थामा विद्यालय शिक्षा अन्तर्गत स्थानीय पाठ्यक्रमको व्यवस्था हुनु ज्यादै राम्रो पक्ष हो किनभने नेपाल सानो भए तापनि यो बुहजातीय, बहु सामाजिक, बहु साँस्कृतिक, बहुभाषिक र विविध भौगोलिक परिवेश भएको देश हो। यस अर्थमा पनि स्थानीय पाठ्यक्रमको महत्व त छँदैछ भने अहिले विश्वमा नै शिक्षा क्षेत्रमा नयाँ र जल्दोबल्दो विषयवस्तुको रूपमा "जलवायु परिवर्तन" देखा परेको छ। स्थानीय पाठ्यक्रम र शैक्षिक सामग्री निर्माणको महत्व झनै बढेको छ। स्थानीय पाठ्यक्रम निर्माण

र विकासको कुरा नेपाल सङ्घीय लोकतान्त्रिक गणराज्यको अवस्थामा अझ उजागर भएर आउनुपर्दछ। तर स्थानीय पाठ्यक्रम तथा सामग्री निर्माणले नीतिगत रूपमा जति महत्त्व पाएको छ कार्यान्वयन स्तरमा कमजोर नै रहेको छ।

तसर्थ, नयाँ ज्ञान पद्धति अन्तर्गत तिन स्तरमा काम गर्नु पर्ने देखिन्छ। पहिलो अनुकूलनका उपायहरू अवलम्बन गर्ने, दोस्रो सकेसम्म कार्बन उत्सर्जन कम गर्ने र तेस्रो वायु मण्डलमा रहेको कार्बन सोस्ने क्रियाकलापहरूको विकास गर्ने। यी तिनओटामध्ये पहिलो र तेस्रो कामको सुरुआत त नेपालीहरूले गरेका छन्। जहाँसम्म कार्बन उत्सर्जनको कुरा छ नेपालको योगदान शून्य नै छ। यसमा बरू नेपालका दुई विशाल छिमेकीहरूको योगदान दिनानुदिन बढ्दो छ। यी दुईले गर्ने कार्बन उत्सर्जनबाट नेपाल प्रभावित भइरहेको छ। यो कुराहरूको जानकारी शैक्षिक गतिविधिमा संलग्न विभिन्न किसिमका सहभागीहरूलाई दिनु पर्दछ।

निष्कर्ष (Conclusion)

नेपाल जल उत्पन्न प्रकोप र बाढी आदिको हिसाबले ३० औं र जलवायु परिवर्तनको दृष्टिकोणले विश्वमा छैटौं स्थानमा पर्छ। त्यस्तै मानवीय क्षति र बाढी, पहिरो, खडेरी, आगजनी, डडेलो, हिमताल विष्फोट, महामारी आदिको दृष्टिकोणले नेपाल विश्वमा नै दोस्रो स्थानमा पर्छ। विभिन्न प्रकोपका कारण प्रत्येक वर्ष करिब ११ सय मानिसको मृत्यु हुन्छ भने १ अरब २० करोड रूपियाँभन्दा बढी गुमाउनु परेको छ। यी सबै क्षति जलवायु परिवर्तनको कारणबाट हुँदैछ (अधिकारी, २०१०)। जलवायु परिवर्तनको मूल कारणको रूपमा रहेको कार्बन उत्सर्जनको विषयमा भने विश्व अझै पनि त्यति संवेदनशील देखिँदैन। यो समस्याप्रति सबै देश तर विशेष गरी विकसित देशहरू संवेदनशील हुन जरूरी छ। त्यसैगरी हाम्रो शिक्षा प्रणालीले पनि औपचारिक, अनौपचारिक शिक्षाका दुवै माध्यमहरूद्वारा जलवायु परिवर्तनलाई शिक्षण सिकाइको एउटा महत्वपूर्ण विषयवस्तु, त्यसले निम्त्याउने समस्याहरूबारे सबै नेपालीहरूलाई सचेत गराउनु आवश्यक देखिन्छ।

शिक्षाका आयामहरूले पर्यावरणीय विकास र जलवायु परिवर्तन सम्बन्धी विषयमा महत्वपूर्ण योगदान पुऱ्याउन सक्छ। शिक्षा विकास र उन्नयनमा मदत गर्ने, जनचेतनामा अभिवृद्धि गर्ने, शिक्षक सक्षमताको विकास गर्ने, अर्थ क्षेत्रमा बहुविविधता समेट्ने अभ्यास, दिगो विकास, दिगो भविष्य, गरिबी निवारण, वातावरण संरक्षण, सरकार तथा स्थानीय निकायलाई परिचालन गर्ने, प्रजातन्त्र, मानव अधिकार, शान्ति र विकासलाई आधार बनाएर शैक्षिक कार्यक्रमहरू निर्धारण गर्नु पर्ने हुन्छ। शिक्षाले शिक्षक र सिकारु बिच दिगो सचेतनाको विकास गर्ने छ भने अन्य शिक्षा संस्थापक र सहकर्मीहरू बिच राम्रा अभ्यासहरूको प्रवोधीकरण (Dissemination) पनि व्यापक रूपमा गर्नुपर्ने हुन्छ। तसर्थ, शिक्षा प्रणालीको सक्षमता र प्रभावकारिता (Efficiency and effectiveness) मौसम परिवर्तनका मुद्दासँग अन्तर सम्बन्धित हुनुपर्दछ।

नेपालको सन्दर्भमा हेर्ने हो भने नेपाली राजनीतिक दलहरू, सरकार, नागरिक समाज तथा गैरसरकारी सङ्घसंस्थाहरू समेत नेपाललाई वातावरण एवम् प्रकृतिप्रेमी देशको रूपमा स्थापित गर्नुपर्दछ भन्ने सैद्धान्तिक सहमतिमा पुगेका छन्। यसैकारण नेपालको ४० प्रतिशत भूभाग वन जङ्गलका लागि सुरक्षित राख्ने प्रतिबद्धता सबैबाट जाहेर भएको छ। यसलाई व्यवहारमा चरित्रार्थ गर्न बेरोजगारी हटाउनु सबभन्दा पहिलो काम हो। रोजगारीको कुनै वैकल्पिक उपाय नभएको कारणले नै वन जङ्गल अतिक्रमण भएको

र मुख्य उर्जाको स्रोतको रूपमा वन पैदावर नै विद्यमान रहेको स्थिति राजनीतिक पक्षबाट पनि बुझ्नुपर्ने हुन्छ। यसैको आडमा वन तस्करहरूले अवैध काठ तस्करी गरी रहेका छन्। जबसम्म कृषि बाहेक अन्य रोजगारका अवसरहरूको सिर्जना हुने छैन, तबसम्म वनविनास र वनअतिक्रमण रोकिने सम्भावना देखिँदैन (ज्ञवाली, २०६७)।

वनविनास र वनअतिक्रमणले वर्षाको पानी सोसेर आफूभित्र सञ्चित गर्ने जमिनको क्षमतामा ह्रास आएको छ। बर्सेनी हाम्रो मूलहरू सुक्दैछन्। जमिनको पानी भूसतहभित्र सञ्चित नभएर भूसतहको माटो बगाउने र पहिरोसँगै बगेर जाने गरेको छ। जलस्रोतको संरक्षण तथा जलवायु परिवर्तनका नकारात्मक प्रभावहरूलाई कम गर्न पनि हाम्रो ध्यान यस दिशातर्फ जानु जरूरी छ।

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दूर तथा खुला शिक्षाले छुनु पर्ने सामाजिक क्षेत्रहरू

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पृष्ठभूमि

नेपालको हालको कामकाजी जनशक्तिको ठूलो हिस्सा विदेशमा छ। सो जनशक्तिमध्ये अधिकांशले निम्न र मध्यम स्तरको श्रममा आफ्नो आफ्नो जीवनको महत्वपूर्ण समय बिताइरहेका छन्। राज्यको करिब २५% आय यिनै वैदेशिक रोजगारीको निप्रवेश(Remittance) ले धानेको छ। यसले नेपालको भावी आर्थिक, सामाजिक, राजनैतिक तथा सांस्कृतिक एवं नेपाली जीवनशैली र रहन सहनमा के कस्तो दूरगामी असर र प्रभाव पार्छ भन्ने कुरा वृहत् अध्ययनको विषय भएको छ। एउटा के कुरा सत्य हो भने यसरी विदेशमा आफ्नो क्रियाशील जीवन अर्पण गरी योगदान गरिरहेका केही अपवाद वाहेक सबै नेपालमा फर्किन्छन् र उनीहरूको बाँकी जीवन नेपालमा नै बित्ने छ।

संसारमा विकासको गति निकै अगाडि बढिसकेको छ। हरेक क्षेत्रमा नयाँ नयाँ सम्भावनाका क्षेत्रहरू पहिचान भैरहेका छन्। एकै ठाउँ र परिवेशमा भएका राम्रा काम र प्रयासहरू अर्को ठाउँमा उपयोग र प्रयोग गरिदै छ। हामीले विदेशमा रहँदा बस्दा सिक्ने र बुझ्ने धेरै कुराहरू हुन सक्छन्। त्यहाँ बस्दा, कामगर्दा, साथीभाइसँग सङ्गत गर्दा सिकेका कुराहरू भावी जीवनका लागि र मुलुकका लागि उपयोगी हुन सक्छन्। समयमा नै त्यस सम्बन्धमा ध्यान पुऱ्याउँदै गयौं भने हाम्रो भावी जीवन पनि सरल, सुखी र तनाव रहित हुन सक्छ। त्यसैले भविष्यका बारेमा पहिला नै सोच्दै गर्नु जीवनलाई सुमार्गमा डोऱ्याउनु हो। दुई तीन वर्षअघि म करिब एक वर्षको अध्ययनका लागि इजरायल जाँदा औपचारिक तथा अनौपचारिक अध्ययनको क्रममा सिकेका कुराहरूलाई शिक्षाका वैकल्पिक रूपको सोच्न पर्ने हो कि जस्तो मानेर यो लेख तयार भएको छ। साथै अन्य धेरै कुराहरू सिक्ने अवसर यहाँ मिलिरहेको छ। यहाँ काम गर्ने विशेष गरी सुसारे (Care giver) नेपालीहरूसँगको सङ्गतले धेरै कुरा सिकाएको छ। इजरायलको ठूला ठूला एउटै अपार्टमेन्टहरूमा मेलमिलापका साथ बसिरहेका धेरै सङ्ख्याका नेपालीहरूको व्यवस्थापन कार्यशैलीले नेपालीहरूमा अझै एकल जीवनशैली (Individualist) को प्रभाव घनिभूतरूपमा परेको छैन। हामीमा अपसी सहयोग, मेलमिलाप, लेनदेन र सामूहिक भावनाको मर्म बाँकी नै छ भन्ने विश्वास झन् बढेको छ।

विदेसिएका नेपालीसँगको गन्थन मन्थन

आफ्नो सक्षमता विकास गर्दै जाँदा अवश्य पनि भविष्यका क्रियाशील सम्भावनाहरू फराकिलो हुँदै जाने हुन्छन्। आफ्नो विशिष्टताको क्षेत्रलाई अझ निखार ल्याउने एउटा उपाय खुला शिक्षा मार्फत आफ्नो सिकाइलाई निरन्तरता दिने हुन सक्छ। नेपालमा खुला विश्व विद्यालय खुल्ने क्रममा रहेको सन्दर्भमा एक शिक्षाकर्मीको हैसियतले मैले सानो प्रश्नावली तयार गरी यहाँ भएका नेपालीहरूसँग अन्तरक्रिया गर्ने प्रयास गरें। औपचारिक र अनौपचारिक प्रत्यक्ष वा अप्रत्यक्षरूपमा भावनाहरू बुझ्ने प्रयासका क्रममा व्यक्त भएका विचारहरू तल

प्रस्तुत गरेको छु । म शिक्षाशास्त्रको विद्यार्थी भएकोले फरक विचार प्रस्तुत गर्ने मेरो उत्तर दाताहरूका विचार र भावनालाई सकभर शिक्षा क्षेत्रका सिद्धान्त र व्यवहारसँग सम्बन्ध स्थापित गर्ने प्रयत्न गरेको छ (प्रस्तुत नामहरू काल्पनिक हुन्)

सरिता - बच्चाबच्ची हुन नसकेकोले म विदेश आउनु परेको हो । मलाई नेपाल फर्कन पटक्कै मन छैन । गए पनि अरु उपाय केही नभएपछि बुढेसकालमा जाने हो । मेरो पहिलो प्राथमिकता यहाँको कुनै इजरायली मानिससँग विवाह गर्नु हुनेछ । यदि त्यसो हुन नसकेमा अमेरिका, क्यानडा पोर्चुगल आदि देशमा जाने प्रयास गर्ने छु । यी कुनै उपाय नलागेमा नेपाल फर्कन नै पऱ्यो ।

टेन्बा - मेरो बाबाले मलाई पढाउन निकै जोड गर्नु भएको थियो । म पढ्न निकै राम्रो विद्यार्थी थिएँ । एस.एल.सी. पनि प्रथम श्रेणीमा उत्तीर्ण गरेको हुँ । क्याम्पसतिर गएपछि म मोजमस्तीमा लागें । साथीहरू पनि त्यस्तैसँग सङ्गत भयो । मेरो कुलतले मलाई पढाइमा अगाडि बढ्न नदिएकोले बुवाको सल्लाहमा यहाँ आएको हुँ । यहाँको वसाइ सकिएपछि अमेरिका, क्यानडा वा युरोपतिर लाग्छु होला । मेरो मात्रै प्रयासले नभए ड्याडीसँग भन्छु र त्यतै जान्छु ।

सविना शर्मा - म बच्चा नभएको कारणले परिवार र श्रीमान्बाट हेलाँ भएर माइतीको सहयोगले यहाँ काम गर्न आएकी हुँ । मैले १४/१५ लाख रुपियाँ जम्मा गरिसकेकी छु । अब मैले केही महिनामा नेपाल फर्कनु पर्छ । मैले अस्तिको हप्ता मात्र नेपाली बी.बी.सी. रेडियोमा कृषि सम्बन्धी छलफल कार्यक्रम सुनेकी थिएँ । त्यो कार्यक्रमले मलाई झन् नेपाल जाऊँ जाऊँ बनाएको छ । मेरा धेरै साथीहरूको विचार र मेरो विचार फरक छ । मलाई अब विदेशमा बस्न मन पटक्कै छैन । मेरो निरन्तर प्रयास, इमानदारिता र मिहिनेतले सबै जनालाई प्रभाव पार्ने छ । मलाई लाग्छ मैले पाँच वर्ष मात्र धैर्यताका साथ मिहिनेत गरें भने मेरो जीवनमा सामाजिक प्रतिष्ठा प्राप्त हुँदै जाने छ । अठोट, समर्पण, लगनशीलता, संवेदनशीलता र प्रतिवद्धता नै ठूलो कुरा हो भन्ने लागेको छ । म यसै आधारमा अगाडि बढ्ने छु । १४/१५ लाखलाई जाबो भन्नु हुँदैन । हाम्रो नेपाली गाउँले जीवनमा यो करोड, अरब हो । नेपालीहरू अज्ञानताले कमजोर भएका हौं । परम्परागत अन्धविश्वास र सामाजिक मान्यताले हामीलाई पछाडि धकेलेको छ ।

शिक्षा र यातायात व्यवस्थापन

आधुनिक सार्वजनिक यातायातको प्रक्रियामा मलाई पटक्कै मन नपरेको (सायद अरूहरूलाई पनि यस्तै हुनु पर्छ) यातायातको साधनका कर्मचारी र यात्रुहरू बिचको व्यवहार हो । यातायातको भाडामा विवाद, यात्रुलाई चढाउने र उतार्ने ठाउँमा विवाद, टिकट दोहोरो परेकोमा विवाद, पाकेटमारको बिगबिगी, चाहिने भन्दा बढी यात्रु चढाउने, पैसा नतिरी यात्रा गर्ने प्रयास गर्ने, कुन समयमा कहाँ पुगिन्छ निश्चित नहुने अदि समस्या तथा विकृतिले सार्वजनिक यातायात लोकप्रिय हुन सकेको छैन ।

तर उक्त भोगाइ इजरायलमा नितान्त नौलो रहयो । यातायातका साधनका कर्मचारीको व्यवहारले मलाई फुर्सदको समयमा यात्रा गर्न निस्की हालौं जस्तो बनाउँथ्यो । त्यो विशिष्ट व्यवहारले प्रत्येक यात्रुलाई त्यसरी नै आकर्षण गर्दो हो जस्तो लाग्छ । सामान्यतया बस चढ्न जानु भन्दा केही समय पहिले मैले इन्टरनेटमा बस नम्बर, चढ्ने ठाउँ, लाग्ने भाडा र समय हेरेर एउटा कागजको टुक्रामा टिपेर जाने गर्थें । त्यो ठ्याम्मै मिल्यो कहिल्यै फरक परेन ।

खुला तथा दूर शिक्षाले खोज्नु पर्ने क्षेत्र

माथिका घटनाले दिएका सन्देशले शिक्षाको क्षेत्रलाई अझ व्यापक र विस्तार तथा विविधीकरण गरेर लैजान आवश्यक छ भन्दछ। वैकल्पिक उपायबाट शिक्षालाई हरेक व्यक्ति र संस्थासम्म पुऱ्याउन सकियो भने यसले उत्पादकत्व बढाउने मात्र होइन, नागरिकको देशप्रतिको भक्तिभाव र आशक्ति बढाउने व्यवहार निर्माण गर्न सकिन्छ। मेरो अन्तरक्रियामा भेटिएकी सरितालई देशप्रतिको प्रेम सिर्जना गर्ने कार्यक्रम इन्टरनेट, छापा माध्यम, रेडियो प्रसारण, क्यासेट, सिडी आदि ICT का विविध साधनबाट समेत गर्न सकिन्छ। त्यसरी नै सविना जस्ती देशप्रति आशक्ति भएकी सिर्जनशील महिलालाई व्यवसायिक शिक्षा दिएर सहयोग गर्न सकिन्छ। टेन्वा जस्ता भौतारिएका युवालाई उनको भविष्य आफ्नै देशमा खोज्न सकिन्छ भन्ने सन्देशमूलक जानकारी दिन खुला शिक्षाको उपयोग गर्न सकिन्छ। सार्वजनिक यातायतका साधनका कर्मचारीलाई कर्मशील बनाउन शैक्षिक कार्यक्रम निर्माण गरी ICT का विविध साधनहरू उत्पादन गरी वितरण गर्न सकिन्छ। सूचना क्रान्तिले ल्याएको आमूल परिवर्तनबाट लाभान्वित हुन चाहने विशेष गरी प्रौढहरूलाई ती साधनको उपयोग गर्ने शिक्षा दिलाउन टेलिभिजन, एफ.एम. रेडियो, पत्र पत्रिका जस्ता साधनको उपयोग गरी सिप सिकाउन सकिन्छ।

शिक्षण संस्थाहरूले दुई किसिमले सहयोग र समन्वय गर्न सक्छन्। बस सेवाका चालकहरूलाई तालिम दिने काम शिक्षण संस्थाहरूबाट हुन सक्छ। तालिम भन्नाले प्रशिक्षक र प्राविधिक तालिम होइन। उनीहरूलाई आफूहरू बिच अन्तरक्रिया र छलफल गर्ने अवसर उपलब्ध गराउने। परका समस्या समाधान गर्ने, यात्रुहरूसँग नम्र व्यवहार गर्ने, आदर गर्ने, धैर्य गर्ने जस्ता व्यवहारहरूलाई प्रबर्द्धन गर्ने खालका उदाहरणहरू प्रस्तुत गर्ने अवसरहरू जुटाउने। जसले गर्दा उनीहरूमा मानवीय क्षमता र सस्कारमा सक्षमता आउँदै जान्छ। मानवीय क्षमतामा बढोत्तरी आउनाले स्पर्श गरेको हरेक प्रक्रियामा मूल्य अभिवृद्धि हुन्छ।

विश्व विद्यालय तथा उच्च शिक्षण संस्थासँग हुन सक्ने अर्को कार्य साझदारिता हो। कर्मचारीको आपूर्ति - विश्व विद्यालय तहहरूको पठन पाठनमा संसारभरि नै परियोजना कार्य वा सामुदायिक कार्य वा विकास सम्बन्धी गतिविधिमा आधारित कार्यका आधारमा शोध कार्यलाई अनिवार्य गरिएको हुन्छ। नेपालमा पनि यस कार्यको थालनी गर्नु अनिवार्य छ। शिक्षा सम्बन्धी विभिन्न प्रतिवेदनहरू तथा आवधिक प्रयोजनहरूमा समेत यो कुरा उल्लेख गरिएको छ। व्यवहारमा यो कुरा आउन भने बाँकी नै छ। २०२८ सालको राष्ट्रिय शिक्षा पद्धति योजना लागु हुँदा प्रारम्भ गरिएको राष्ट्रय विकास सेवा कार्यक्रम नेपाली परिवेशमा निकै अपलब्धिमूलक भएको कुरा विभिन्न अध्ययन प्रतिवेदनहरूले औल्याएको छ यद्यपि सो कार्यक्रमले राजनीतिक कारणले निरन्तरता पाउन सकेन। यसका सकारात्मक पक्षलाई पुनः एकपटक विश्लेषण गरी कुनै पनि विकास सम्बन्धी अनुसन्धानात्मक, सिर्जनात्मक, रचनात्मक वा प्रबर्द्धनात्मक काममा स्वंयम् विद्यार्थी संलग्न भै कार्य अनुभवको आधारमा शोधपत्र (Thesis) लेख्ने अभ्यासको थालनीले एक आपसमा सिक्ने अवसरको विकास हुन्छ। विश्व विद्यालय तहका अनुभवी प्राध्यापकहरूका विचार र भावना ती विद्यार्थीहरू मार्फत सर्वसाधारणमा पुग्छ। विद्यार्थीहरूले आफ्नो क्षमताले भ्याएसम्म सैद्धान्तिक सोच र विचारलाई व्यवहारमा उतार गर्न प्रयास हुने छ। एकै वर्षमा त्यस कार्यमा दर्जनौं अनुसन्धान हुन्छ। पृष्ठपोषण र

सुझाव प्राप्त भई कार्यले गुणात्मकता प्राप्त गर्दै जाने छ । यो क्षेत्रमा खुला सिकाइ सहयोग कार्यक्रम प्रवर्द्धन गर्न विश्व विद्यालय वा अन्य स्वायत्त निकायले पहल गरि दिने हो भने सिकाइको क्षेत्रमा, अनुसन्धानको क्षेत्रमा शिक्षा क्षेत्रले ठूलो फड्को मार्न सक्दछ भन्ने विश्वास गर्न सकिने ठाउँ छ ।

शिक्षामा दुर्गमको पिरतोः डोल्पा एउटा प्रतिनिधि पात्र

म जेरुसेलम हुँदा डोल्पा जिल्लाका तत्कालीन जिल्ला शिक्षा अधिकारी रमाकान्त शर्माले त्यहाँको वस्तुस्थिति बताउँदै अब के गर्ने भनी मेरो अनुभव समेतको आधारमा सुझाव माग्नु भएको थियो । उहाँले विदाका दिन गाउँलेहरूसँग गरेको कुराकानी र आफ्नो अवलोकनका आधारमा सङ्कलन गरेको प्रतिनिधि सूचना तथा तथ्याङ्कलाई यसरी प्रस्तुत गर्नु भएको थियो ।

हाम्रो विद्यालयका अवस्थाहरू निम्नअनुसार रहेका छन् :

- गाउँमा जम्मा जनसङ्ख्या करिब २४० र घरधुरी ३४
- विद्यालयमा बालबालिका झण्डै ३५जना, शिक्षक दरबन्दी दुई र सञ्चालित कक्षा ५
- चार कोठाको एउटा भवन, भवन चुहिने, भवनमा झ्याल ढोका छैन ।
- यस वर्ष विद्यालय चलेको जम्मा दिन १५ (वैशाखदेखि कर्तिकसम्म विद्यालय सञ्चालन गर्न सजिलै सकिने) वैशाखमा म भोटतर्फ जाँदा दुवैजना शिक्षक दौडेर गएका तर दुई दिन बसी फर्केका । श्रावण महिनामा विद्यालयमा पुगेर २० दिन गाउँमा बसेका १५ दिन विद्यालयमा पढाइ भएको ।
- श्रावणमा गएको बेलामा शिक्षकहरू भवन चुहिएर पालमा बसेका । पालको महिनाको पाँच सय भाडा । पाँच सय गाउलेहरूले उठाएर तिरेका ।
- जिल्ला शिक्षा कार्यलयबाट वितरण हुने छात्रवृत्ति विद्यार्थीले नपाएको तर कार्यालयबाट विद्यालयमा धेरै पहिला पठाइएको ।
- विद्यालयमा प्रति विद्यार्थी तिन तिन सेट सिसा कलम र लेख्ने कपी साथै पुस्तक सबैलाई वितरण भएको ।
- विद्यालयमा शिक्षकहरूले विद्यालयमा गएको रकमबाट अन्य खर्च केही गरेको देखिएको छैन ।
- वि.व्य.स.अध्यक्षले उनी अध्यक्ष भएको तिन वर्ष भयो तर कुनै चेकमा सही गरेका छैनन् ।
- मुकोट गाउँमा २ वडाहरू पर्ने । अनौपचारिक साक्षरता अभियानका वार्षिक २ कोटा गएका । त्यस गाउँका व्यक्तिले बढीमा २ कक्षा पढेका र अन्य गाउँबाट त्यस गाउँमा पुग्न दिनभरिको बाटो ।
- उनीहरूका पालामा बाहिर जिल्लाका एक जना शिक्षक विद्यालयमा बसेर राम्रो पढाएको हुनाले दुई कक्षा पढ्न पाएका ।
- उनीहरूको भनाइ स्थानीय र त्यसै जिल्लामा घर भएका होइन बाहिर जिल्लाका शिक्षकलाई विद्यालयमा पठाइदिनु पर्ने ।

माथिका अवस्थाले लरतरो प्रयासले सुधार सम्भव नभएको जस्तो देखाउँछ । यी कुराहरू मनमा खेलाइ रहँदा यसै प्रकृतिका विद्यालयहरूमा दुई वर्ष पहिला पाँचथर जिल्लामा जिल्ला शिक्षा अधिकारी हुँदा अवलोकन गरेका विद्यालयहरूको अभ्यासहरूको बारेमा याद आयो । गाउँका साना विद्यालयमा पुग्दाका

दिन र गाउँलेले मसँग गरेका कुराकानीको बारेमा याद आयो । त्यतिबेला मैले लेखेको किताब "शिक्षाको व्यावहारिक पक्ष :कार्य क्षेत्रबाट नियाल्दा" मा यसै प्रकृतिका विद्यालयहरूको बारेमा निम्नानुसार लेखेको रहेछु ।

विगतको १०/१२ वर्षको द्वन्द्वकालमा गाउँमा पुरुष विशेष गरी युवाहरू बसेनन् । परिणामस्वरूप जनसङ्ख्या उत्पादनमा न्यूनता आयो । हाल केही विद्यालयहरूमा कक्षा १ र कक्षा २ मा थोरै मात्र बच्चा भर्ना भएका छन् । एउटा गाउँको विद्यालयमा त कक्षा एकमा भर्ने भएन छन् । Boarding लगेकि भनेर बुझ्दा त्यो पनि होइन । प्राय: सबै गाउँमा विद्यालय छ । जनताहरू सूचना तथा सञ्चारको प्रभावले निकै सचेत भएका छन् । अब पनि जनसङ्ख्या वृद्धिदर कमै हुन्छ भन्नाले गाउँमा बच्चा कम जन्मिन्छन् । अबका हाम्रा गाउँका विद्यालय धेरै कम बाल बालिका पढ्ने विद्यालय हुनेछन् । अझ हालको यस जिल्लाको १८० कोरा भर्ना दरलाई विचार गर्दा, ठिक्क उमेर समूहका मात्र बाल बालिका पढ्दा विद्यार्थीहरूको आकार सानो हुन्छ । सानो विद्यालय, साना कक्षाकोठा, थोरै विद्यार्थी, गुणस्तरीय शिक्षा हाम्रा विद्यालयहरूको भविष्यपरक दृष्टिकोण हुन जान्छ । अब हामी भावुक भएर सोचौं त्यस्ता विद्यालयमा पाँचवटै शिक्षक अर्थात् कक्षा अनुसार शिक्षकको मागमा केन्द्रित हुने कि पठन पाठनको नयाँ उपायको खोजी गर्ने । शिक्षणमा Horizontal र Vertical Padagogy दुवैलाई हाम्रै स्थान विशेषको बुद्धिले विश्लेषण गर्नुपर्ने हो कि ? एकजना शिक्षक/शिक्षिकाले जतिसुकै कक्षाका भए पनि ३० जना बाल बालिकालाई कसरी सहज तरिकाले पठन पाठन गर्ने भन्ने विधिको खोज गर्ने हो कि ? किनकि यो हाम्रो वास्तविकता हो । बाध्यता पनि यही हो । यस मर्मलाई विश्लेषण गर्न उपयुक्त होला । कार्यक्षेत्र भ्रमणको अनुभवले सानो र थोरैको नयाँ स्वरूपको चित्र दिमागमा ल्याइदियो । थोरै विद्यार्थी । भविष्यमा अझ थोरै हुने । भौगोलिक रूपमा विकट ठाउँमा अवस्थित विद्यालय । थोरै शिक्षक दरबन्दी । धेरैको अपेक्षा बेकार हो भनिदियो । सबै थोरैबाटै गुणात्मक शिक्षाको खोजी गर्नुपर्छ भन्ने पाठ यसले सिकायो ।

यस्ता साना विद्यालयको वास्तविक यथार्थ र संवेदनशीलताका बारेमा एक दुई पटक रामै सहभागिता (राजनीतिक व्यक्तित्वहरू समेत) भएको भेलामा उठाएँ पनि । मेरा कुराको निचोड ती सबै राजनीतिक व्यक्तिहरू र स्थानीय सरोकारवालाले दरबन्दी कक्षा अनुसार चाहिन्छ भन्ने कुराप्रति थियो । एकदिनको कुरा हो पाँचथरमा राजनीतिक दलका केन्द्रसम्पर्क प्रतिनिधि भएको भेलामा दरबन्दीकै कुरा उठेको बेलामा त्यस प्रकारका विद्यालयहरूको उदाहरण प्रस्तुत गर्दै -"मेरो विचारमा २० जना विद्यार्थी भएको ठाउँमा जहाँ भोलिका दिनमा पनि विद्यार्थी सङ्ख्या बढ्दैन, दरबन्दी पाँचै पुऱ्याउन सम्भव छैन । हाम्रो भौगोलिक तथा सामाजिक र साँस्कृतिक वास्तविकताले विद्यालय गाभ्न पनि व्यावहारिक देखिँदैन । त्यसैले विशेष प्रकारले सोच्नु पर्दछ भनें ।" तर यो विषयले जुनरूपमा प्राथमिकता पाउला जस्तो लागेको थियो सो अनुसार पाएन । आफूलाई मनमा असाध्य नै लागेको हुँदा अन्य एक दुई शैक्षिक भेलामा पनि उठाउने प्रयत्न गरें भनेर सन्तुष्टि लिने काम सम्म भयो ।

भएकै अवस्थालाई व्यवस्थापनको थोरै प्रयासले स्रोत अधिकतम उपयोग (Mini-max theory), सूचनाको आदानप्रदान (Information sharing), सहकार्य (Partnership) बाट विकास, क्रमश: र निरन्तर प्रयास (Incremental approach), एकोहोरो रोटी पाक्दैन

भनेजस्तै घचेट्ने र तान्ने (Push and pool) दुवै प्रयास, समन्वयात्मक विकेन्द्रीकरण (Coordinated decentralization), कर्मचारीमा संवेदनशीलता (Bureaucratic sensitivity), सिकारुको सिक्न पाउने अधिकार र सिकाइ विज्ञान वा कला (Pedagogical aspects) अलि टाढा छ र विकेन्द्रीकरणको नयाँ ढाँचा (New model of decentralization) जस्ता सोचहरू र सिद्धान्तहरू लाई व्यवहारमा उतार्न सक्दा पनि धेरै सुधार गर्न सकिने सम्भावना पर्याप्त रहेछन् ।

दैनिक पठनपाठनका लागि आधारभूत पक्ष शिक्षक नै व्यवस्थापन गर्न नसकेको अवस्था हामीसंग छ । नभै नहुने कुरा पुरा भएपछि मात्र गर्नै पर्ने कुरा (First necessary condition only than sufficient condition) भन्ने सिद्धान्त अबलम्बन गर्नु पर्ने अवस्थामा हामी छौं । मेरो विचारमा नेपालका डोल्पा जस्ता जिल्ला र तराईका ८ जिल्लाको लागि छुट्टै मोडेल, योजना र सोच चाहिन्छ । मेरो अनुभव र यो टिपोटलाई सँगै मिलाएर हेर्दा स्थानीय प्रधानता मात्र पनि खोजेको छैन, स्थानीय स्रोत र सोचलाई व्यवस्थापन गर्ने प्राज्ञिक र प्राविधिक संवेदनशीलता पनि उत्तिकै आवश्यक छ भन्ने देखाउँछ । ठूलो, भिड र सामाजिक निष्क्रियता र अस्वाभाविक सक्रियताको चाजोपाँजो ती तराईका ८ जिल्लाले खोजेको छन् भने सानोको संवेदनशीलता डोल्पाले खोजेको छ । सानो गाउँ, दुर्गमका स्कुल, सानो शिक्षक सङ्ख्या, सानै विद्यार्थी सङ्ख्या, कहिले पनि ठूलो नहुने अवस्था, तर माग ठूलो गरिरहने हाम्रो परम्परा र संस्कार । भिडवालाले विद्यार्थीको भिडले मुक्ति पाइएन भन्छन् । थोरै र सानो वालाले थोरै भएर जाँगर लागेन, शिक्षक भएको अनुभूति नै भएन भन्छन् । यही अप्ठ्रो कोप्चेरोबाट सफल बनाउने उपाय टिप्न परेको छ हामीले । नीतिदेखि कार्यान्वयनसम्म जोडगाँठ आवश्यक देखिन्छ । सबै तह र तप्कामा केही गरौं भन्ने अठोट, समर्पण, लगनशीलता, संवेदनशीलता र प्रतिबद्धता आवश्यक देखिन्छ । राज्यले सिर्जनशील, सक्रिय र प्रतिबद्ध जनता, राजनीतिज्ञ तथा कुनै पनि तहमा बसेका तलबधारी कर्मचारीलाई हौस्याउने उपाय निकाल्नु पर्छ । सिर्जनशीलताका लागि अध्ययनशील हुनु पर्छ, खुला सिकाइले निरन्तर अध्ययनशील बनाउने बानीको विकास गर्न सक्दछ ।

डोल्पा जस्तो माथिको वास्तविकतामा शिक्षालाई जीवन केन्द्रित, पहुँच योग्य, ग्रहण योग्य र स्वागत योग्य बनाउन अनौपचारिक शैक्षिक मोडेल के हुन सक्लान् भन्ने बारेमा हामीले पहलकदमी लिनै पर्दछ । के हामीले भन्ने र प्रयोगमा ल्याएको सीमित मोडेलको खुला तथा दूर शिक्षा प्रणालीले यी कुराहरूको सम्बोधन गर्न सकेका छन् त ? त्यसतर्फको सोच र चिन्तन विकास गरेका छौं त ? धेरै योजनामा बोलिदै आएको खुला विश्व विद्यालयले यस्ता समस्या र क्षमता विकासको मुद्दाको सम्बोधनका लागि हामीले स्पष्ट खाका कोरिदिनै पर्छ, स्रोतको जोहो गर्न तयार हुनु पर्छ । यस्ता समस्या समाधान गर्न दूर तथा खुला शिक्षा पद्धतिको विकास गर्नु अन्तिम र एउटै मात्र अस्त्र हुन सक्छ भन्ने मलाई लाग्छ । एक पटक गरेको ठूलो लगानीले धेरै लामो समयसम्म शिक्षामा सामाजिक न्याय र समावेशी पहुँच पुर्‍याउन मद्दत गर्छ नै ।

हाम्रो जस्ता समस्या अन्यत्र पनि नभएका होइनन् । अरू विश्वको अभ्यास के रहेछ भनी जान्न दुर्गम र साना विद्यालय (Remote and Small school) भनेर टाइप गर्दै मैले गुगल स्कलर चाहर्न सुरु गरें । केही

हप्ता प्रत्येक दिन केही घण्टा यसैमा विताएँ । पहिलो दिन, त्यसपछि दोस्रो दिन हुँदै झन् झन् चाखपूर्ण अनुसन्धान प्रतिवेदन प्राप्त हुन थाले । त्यसमध्ये सन् १९५० को दशकको मध्यतिर संयुक्त राज्य अमेरिकाको पूर्वी केन्टुकी (Kentuky) प्रदेशमा पर्ने एउटा दुर्गमको विद्यालयको बारेमा यसरी उल्लेख गरिएको रहेछ (Ankrah_dove, 1982, page-4)

- शिक्षकहरू विना तयारी जथाभावी नियुक्त गरिन्थ्यो । कस्तो शिक्षण प्रतिभा अपनाउने भन्ने ती नियुक्ति भएका शिक्षकहरूलाई कुनै जानकारी हुँदैनथ्यो । शैक्षिक सामग्री केही पनि हुँदैनथ्यो । कसैलाई त्यस बारेमा वास्ता पनि थिएन ।
- पढ्न चाहने र सक्ने पाठकहरू, वृद्धा तथा युवाहरूलाई किताव देख्न मुस्किल हुन्थ्यो मानौं पढ्नको लागि साह्रै भोकाएका छन् तर पढ्ने चिज केही पाईदैन ।
- बच्चाहरूको तौल अनुसार र उपस्थितिबाट नै थाहा हुन्थ्यो उनीहरूको सुत्न र खानेकुरा व्यवस्थित छैन ।
- एउटै भाँडोमा सबै विद्यार्थीहरूले जुठो हालेर पानी खाने गर्थे र रोगहरू एकअर्कामा सार्थे ।
- शौचालय माटैमाटो र फोहर अनि झिँगाले भरिएको हुन्थ्यो । शौचालय हेर्नासाथ रोगहरू कसरी फैलिन्छन् भन्नेकुरा पूर्व अनुमान गर्न सकिन्थ्यो ।
- विद्यालयको अवस्थिति समुदायको बस्तीभन्दा टाढा थियो । त्यसैले समुदाय क्रियाकलापमा त्यो भन्दा उपयोग गर्ने गुन्जायसै थिएन । त्यसैले पनि समुदाय विद्यालयप्रति वास्ता गर्दैनथ्यो ।
- कक्षाकोठाको भित्ता लिपेको वा प्लास्टर गरेको केही पनि थिएन । खेल मैदान सबै भत्केको हुन्थ्यो ।
- छाना चुहुने थियो । समग्रमा त्यो ठाउँ शिक्षण सिकाइ क्रियाकलाप गर्ने हो भन्न लायक पनि थिएन ।

दुर्गम क्षेत्रका साना विद्यालय सम्बन्धी सूचना पाउन मलाई साँच्चै नै निकै मुस्किल पऱ्यो । सहर र गाउँ सम्बन्धी लेख रचना जति पनि पाइन्छन् । दुर्गम क्षेत्रको विकास र सरकारी प्रयासको बारेमा पनि जति पनि पाइन्छन् तर साना विद्यालय सम्बन्धी सामग्री पाउन साह्रै गाह्रो हुँदो रहेछ । केही मात्रामा पाइए पनि खासै गुदी कुरा केही नहुने । यसो हुनाको कारण सायद हाम्रो जस्तो अनौठो भौगोलिक परिवेशमा विद्यालयहरूको विकास र सञ्चालन अन्य ठाउँमा कमै भएको हुनु पर्दछ । अर्को कुरा अध्ययन, अनुसन्धान गर्ने, लेख्ने मानिसका लागि पनि ती साना र दुर्गमका सूचनाहरू दुर्लभ भए, उनीहरूको पहुँचभन्दा टाढै भए । तथापि मैले साह्रै मिहेनत गरेर केही सामग्री जम्मा गरें । पढें । ती सामग्रीमा उल्लिखित प्रमुख तत्त्व वा कारण वा पक्षहरू निम्नानुसार छन्

- व्यक्तिगत र पारिवारिक कारण : घरदेखि टाढा, परिवारबाट बिछोड, छोराछारीको पढाइको व्यवस्थापन गर्न गाह्रो ।
- सामाजिक कारण : साथी भाइ, सामदायिक क्लब, मनोरञ्जन, सामाजिक, धार्मिक र साँस्कृतिक कार्यक्रमबाट मानिसलाई अलग बस्न गाह्रो हुन्छ । जन्मँदा हुकँदादेखिका सङ्गत र मनोरञ्जन तथा रहनसहन छाडेर दुर्गमको अपरिचित विरानो ठाउँमा बस्न स्वभावैले गाह्रो हुन्छ ।

- आर्थिक कारण : खाने चिज महङ्गो र बस्ने राम्रो व्यवस्था नहुनु । थप आर्थिक उपार्जनका व्यवस्था नहुनु । दुर्गमका विद्यातयमा ट्युसन पढाउने कुरा पनि हुँदैन ।
- व्यवसायीकरण : दुर्गममा राष्ट्रिय स्तरमा लेखिएका पाठ्यक्रममका विषयवस्तुहरू
- शिक्षकको नियुक्ति र शिक्षकलाई निरन्तरता (Recruitment and retention) प्रमुख समस्या देखिन्छ ।
- कस्तो शिक्षकलाई दुर्गम क्षेत्रमा नियुक्ति गर्ने पूर्ण योजना र अभ्यास, संसारका धेरै मुलुकहरूमा गाउँ र दुर्गमका विद्यालयको लागि पूर्व शिक्षक तयारी गर्ने शिक्षण संस्थाहरू नै हुँदा रहेछन् ।
- प्राय: योग्य होइन कमजोर शिक्षक ती क्षेत्रमा नियुक्त हुँदा रहेछन् ।
- हाम्रा दुर्गमका साना विद्यालय अहिलेका भन्दा राम्रा हुने छैनन् (जबसम्म ती विद्यालयहरूमा राम्रा शिक्षकको व्यवस्था हुँदैन (We cannot have better rural /remote school until they are staffed with better teacher)
- पदस्थापन र सरुवा ।
- अव्यावहारिक हुन्छन् अथवा दुर्गमका बाल बालिका देखे जानेका भन्दा धेरै फरक कुराहरू पढाउनु पर्ने हुन्छ । सहपाठीसँग सिक्ने अवसर कम मात्र मिल्छ । स्रोत व्यक्ति र विद्यालय निरीक्षकहरूबाट व्यावसायिक पृष्ठपोषण पाउने सम्भावना पनि निकै कम हुन्छ । समुदायसँग मिलेर कसरी काम गर्ने भन्ने अकिल उनीहरूमा कम हुन्छ ।
- छुट्टै जात र समुदायका मानिसको बसोवास भएको ।
- योग्यता धेरै भएकोले माथिल्लो तहमा पढाउने इच्छा ।

त्यस्ता दुर्गम र साना विद्यालयमा पढाउने शिक्षकहरूको प्रवृत्ति र व्यवहार विश्लेषण गर्दा तल उल्लेख भए अनुसारका तिन अवस्था भेटिँदो रहेछ :

- फाइदामूखी (Benefit Oriented) Teacher : उनीहरू प्रमोसन, बढी आर्थिक लाभ, बढी विदा, तालिम गोष्ठीमा बढी भाग लिन चाहन्छन् । बच्चाको पठन पाठनलाई त्यति प्राथमिकतामा राख्दैनन् ।
- बालबालिका केन्द्रित शिक्षण : यस प्रकारका शिक्षक बढी मात्रामा स्थानीय महिला हुने गर्दछन् । उनीहरू विद्यालयमा बढीभन्दा बढी शैक्षिक सामग्री, राम्रो कक्षा कोठा, विद्यार्थी नियमितता जस्ता पक्षमा बढी चासो देखाउँछन् ।
- विषयमा आधारित शिक्षक : यस प्रकारका शिक्षकहरू आफूलाई निश्चित विषयमा राम्रो भएको, योग्य भएको कुराको दावी गर्दछन् । उनीहरू माथिल्लो कक्षामा पढाउन, क्याम्पसतर्फ जान मन पराउँछन् ।

उल्लिखित अवस्थाले मानिसको व्यक्तिगत विशेषता र हाम्रो वास्तविक परिवेश बिच तालमेल मिलाउन कति गाह्रो हुन्छ भन्ने कुराको अनुमान गर्न सकिन्छ । शिक्षकसँग उल्लिखित अवस्था विश्लेषणबाट योग्य शिक्षक हुनु मात्र पनि पर्याप्त रहेनछ भन्ने भन्ने कुराको सहजै अनुमान गर्न सकिन्छ । अर्थात संसारमै स्थापित मान्यता र सिद्धान्त - शिक्षकको योग्यता र विद्यार्थीको उपलब्धि स्तरमा अत्यन्त राम्रो सह-सम्बन्ध हुन्छ भन्ने कुरा हाम्रो सन्दर्भमा मान्य नहुन पनि

सक्छ । नेपालको वास्तविक परिवेशमा देहायका नमुना तथा सिद्धान्तहरू छलफलका आधार हुन सक्छन् ।

अभावको सिद्धान्त (The Rural Remote Deficit Model) :

- पहिलो नियुक्ति दुर्गममा गर्ने ।
- अनुभवी शिक्षकलाई जबरजस्ती भए पनि दुर्गममा पठाउँने ।
- धेरै तलब दिने ।

दुर्गमको चुनौतिको सिद्धान्त (The Remote Challenge Model) :

तालिम सम्बद्ध Pedagogy, community relationship. Interstructure maintenance, classroom, instructional materials जस्ता पक्षमा विशेष ध्यान दिने । मुख्य गरी तलका पक्षमा ध्यान दिने ।

- कमजोर परिवारका बालबालिकालाई गर्ने व्यवहार ।
- राम्रो तलबमान ।
- श्रीमान् श्रीमतीसँग बस्ने व्यवस्था बालबालिकाको पढाइको व्यवस्था
- उचित पुरस्कार
- पदोन्नतिको व्यवस्था
- शिक्षक र विद्यालय विचको मनोविज्ञान मिलाउने ।
- स्थानीय शिक्षक नै नियुक्ति गर्ने
- सम्भव हुने जति सबै शैक्षिक कार्यक्रमको जिम्मेवारी शिक्षकलाई नै दिने । अनौपचारिक शिक्षा, अन्य सामुदायिक विकासका काम भए सो समेतको जिम्मेवारी उनीहरूलाई नै दिने ।
- प्रधानाध्यापक छनौट गर्दा साह्रै होस पुर्‍याउने ।
- सञ्चार तथा सूचना प्रविधि (ICT) मा जोड दिने ।
- विद्यालय र समुदाय, यो विद्यालय र अर्को विद्यालय, विद्यालय र समाजका शिक्षित मानिस अदि बिचको सम्बन्ध प्रगाढ बनाउने ।

सन्दर्भ सापेक्षताको सिद्धान्त :

हाम्रो वास्तविकता अर्कै छ । सामग्री अध्ययनबाट अरु देशमा दुर्गमका साना विद्यालयमा स्थानीय कुरा पढाउनु पर्छ । स्थानीय भाषामा पढाउनु पर्दछ । स्थानीय तहको लागि पूर्ण तयारीकोरूपमा शिक्षण गरिनु पर्छ भन्ने मान्यता रहेको पाइन्छ । तर हाम्रो परिवेशमा अभिभावकहरूको चाहना छुट्टै छ । बच्चाले राम्रो पढ्न लेख्न सक्नु पर्छ, अङ्ग्रेजी जान्नु पर्छ जस्ता पक्षले सिपयुक्त सिकाइ भन्दा बढी प्राथमिकतामा पर्न सक्छन् । यसका लागि निम्न पक्षहरू महत्वपूर्ण हुन सक्छन् :

- अभिभावक र बच्चालाई सँगै राखेर विद्यालय समयभन्दा पछि पढाउने (Bridging the gap program)
- अनुशासन, जीवनोपयोगी सिप, आत्मविकास र आत्मसम्मान जस्ता पक्षमा विद्यालय छाडेका मानिसलाई सहयोग गर्ने ।
- कुन विद्यार्थीको के क्षमता छ भन्ने कुरा पहिचान गरी त्यही क्षमताको प्रवर्द्धन गर्ने ।
- विहानीको खाना (Breakfast) विद्यालयमा दिने जसले गर्दा विद्यालयमा उपस्थित र ढिलो आउने समस्या कम हुन्छ ।
- समुदायका मानिसलाई सशक्तीकरण गर्ने (Bound for success)
- लेखाई, पढाइ र साधारण गणितीय समस्या समाधान गर्ने (The three test)

साझेदारिता, सहकार्य र सञ्जाल निर्माण : सम्भाव्य सबै तह, क्षेत्र र विषयमा । शिक्षक -विद्यार्थी, विद्यार्थी -विद्यार्थी, शिक्षक-अभिभावक, समुदाय-अभिभावक, गैर सरकारी क्षेत्र-विद्यालय, सरकारी निकायहरू विचमा, जिल्ला स्तरमा, स्रोतकेन्द्रहरूमा आदिमा सहकार्यमा काम गर्ने बानीको विकास गर्ने ।

गुणात्मक प्रधानाध्यापक र शिक्षक : दुर्गमको दुर्विनले हेरेर मात्र नियुक्त गर्ने ।

- प्रत्येक नयाँ नियुक्त प्रधानाध्यापक वा शिक्षक समुदायका प्रत्येक घरमा गएर घरको अवस्था जानकारी लिने र समुदायको विस्तृत प्रोफाइल तयारी र दृष्टिकोण विकासपछि शिक्षक छनौट गर्ने कार्यक्रम
- दुर्गम क्षेत्रको लागि विकास गरिएको विशिष्टीकृत तालिम लिएकाहरू मध्येबाट मात्रै प्रतिस्पर्धा गराउने
- नियुक्ति सिफारिस भएपछि एक महिना समुदायसँग काम गरेर मात्र शिक्षण गर्ने

अन्य उपायहरू : देहायका उपायहरू नेपालको मौलिक विशेषता अनुसार उपयुक्त हुन सक्छन् ।

- जिल्ला शिक्षा अधिकारीलाई विशेष जिम्मेवारी दिने । जिल्ला शिक्षा अधिकारीले क्षमता अनुसार स्रोत व्यक्ति र विद्यालय निरीक्षकलाई पूर्ण जिम्मेवार बनाउने ।
- प्रक्रियामा मात्र होइन-उपलब्धिलाई पनि मूल्याङ्कनको अभिन्न अङ्ग बनाउँदै लग्ने ।
- बच्चा विद्यालय जानु पहिला बालविकास केन्द्रमा उसको सर्वपक्षीय विकासमा जोड दिने ।
- विभिन्न जात जाति र भाषा भाषी (Ethnic and Language) का ६-७ वर्ष समूहकालाई सँगै राखेर भावना आदान प्रदान गर्न लगाउने कार्यक्रम
- साह्रै पिछडिएको ठाउँमा रहेका वस्तीमा कार्यक्रमको सान्दर्भीकरण परियोजना र कार्यान्ययन
- विद्यालया तहको परीक्षा (नेपालको सन्दर्भमा एस.एल.सी.) दिएर बसेका बालबालिकालाई छोटो तालिम र साना बालिका प्रबर्द्धन कार्यक्रममा उपयोग गर्ने
- विद्यालयका रामा विद्यार्थीलाई अरूलाई घरघरमा सिकाउने कार्यक्रम
- विद्यालयमा आधारित शिक्षक, तालिमविज्ञ, अनुभवी शिक्षक र सहभागी शिक्षक भएर विद्यालय वातावरण अनुसारको तालिम नमुना विकास र कार्यान्वयन ।
- जुन विषयमा बालबालिका कमजोर छन् त्यही विषयमा सहयोग गर्ने कार्यक्रम
- आमालाई आफूले जाने बुझेका र नैतिक कुराहरू बालबालिकासँग गर्ने सिप विकास कार्यक्रम
- दुर्गमका विद्यार्थीलाई दुर्गम क्षेत्र सम्बन्धी विशेष पूर्व सेवाकालीन तालिम ।
- विश्व विद्यालयको कार्यक्षेत्र इन्ट्रार्नासिप (Intranship) कार्यक्रम ।

भौगोलिक, सामाजिक, सँस्कृतिक आर्थिकरूपमा जेलिएका समस्याहरूको सम्बोधन गर्ने काम सहज अवश्य नै छैन । दुर्गमका साना विद्यालयले सामना गरिरहेका समस्याहरू कम गर्दै लग्न सकिन्छ । तर हामीसँग ठ्याक्क भन्न सकिने उत्तर हुँदैन । स्थान अनुसार अपनाउन पर्ने उपाय पहिचान र सो अनुसारको कार्यान्ययन प्रक्रिया कम जटिल छैन । ठाउँ र परिवेश अनुसार उल्लिखित तत्त्व, पक्ष र परिवेशअनुसार कुन तत्त्व बढी जिम्मेवार छ भन्ने कुरा पहिचान गर्नु पर्ने हुन्छ । स्थानीय विशेषता नै हाम्रा मौलिक सम्पति हुन । साना र दुर्गमका

विद्यालयलाई सम्बोधन नगरी मुलुकको शैक्षिक सूचाङ्क माथि उठ्दैन । समता मूलक विकास हुन सक्दैन । समस्यालाई सम्बोधन गर्न बहुपक्षीय प्रायासको आवश्यकता पर्छ । सवै पक्षको सहकार्यबाट सवै थोक गर्न सकिन्छ । सरकार, स्थानीय सरकार, समुदाय र गैरसरकारी निकाय सवैको सामूहिक प्रयास आजको आवश्यकता हो । नेपालमा शैक्षिक क्षेत्रमा काम गर्ने गैर सरकारी क्षेत्रका संस्थाहरू धेरै छन् । उनीहरूले आ-आफ्नो क्षेत्रमा निकै घनिभूत रूपमा मसिनोसँग काम गरिरहेका पनि छन् । ती सवैको अनुभव एकीकृत गरेर पनि एउटा हाम्रो नमूनाको आधार बनाउन सकिन्छ । नमुनाकोरूपमा काम एक ठाउँबाट सुरु गरौं त्यसैले थप पाठ सिकाउँछ । यसका लागि एकपटक कुनै निश्चित निकायबाट हुनसक्छ, हाल खुला शिक्षामा कार्य गरिरहेका शैक्षिक जनशक्ति विकास केन्द्र, अनौपचारिक शिक्षा केन्द्रको संरचना हेरफेर गरेर खडा गरिने कुनै निकाय, अथवा खुला तथा दूर शिक्षा विश्वविद्यातय स्थापना गरेर) दूर तथा खुला शिक्षाको अभियानी जागरण थालौं । सफलतापछि हाम्रा हरेक गाउँ कन्दरा तथा सहरका कुना कुनामा शिक्षाको पहुँच, ग्रहणशीलता तथा गुणस्तरीयता प्रबर्द्धन गर्न अवश्य सकिनेछ ।

नेपालमा खुला शिक्षाको विकास

हर्कप्रसाद श्रेष्ठ
पूर्व कार्यकारी निर्देशक, शैजविके

विषय प्रवेश

सिकाइमा सीमा नभएको, कुनै औपचारिक घेरा नभएको, जसले पनि लिन सकिने, सिकारुको इच्छा अनुसार सिक्न प्रेरित हुने लचिलो प्रकृतिको शिक्षालाई खुला सिकाइ भनिन्छ। सिकाइ खुला भए तापनि यसको लक्ष्य, उद्देश्य, पाठ्यक्रम, सिकाइ रणनीति, तरिका र प्रविधि, सिकाइ स्रोत सामग्री, सूचना, सञ्चार र संवाद, सहयोग पद्धति, सिकारु, सहजकर्ता, सिकाइ व्यवस्थापन र मूल्याङ्कन प्रणाली अवलम्वन गरी स्तरीकरण गर्ने प्रावधान रहेको हुन्छ। विश्वमा शिक्षा र सिकाइको क्षेत्रमा भएका खोज अनुसन्धान र सञ्चार प्रविधिले नयाँ आयाम थपेको छ। शिक्षण सिकाइ कक्षा कोठा, पुस्तक र शिक्षकमा मात्र सीमित रहेको छैन। शिक्षण सिकाइका विभिन्न माध्यम उपयोगमा आइरहेका छन् र सिक्ने क्षेत्र असीमित बनाई दिएको छ। औपचारिक शिक्षाका अलावा अनौपचारिक शिक्षा प्राप्त गर्ने अनगिन्ती माध्यम रहेका छन्। खुला सिकाइलाई सञ्चार प्रविधिले सिक्न चाहने सिकारुका लागि हरप्रकारको शिक्षा लिन सकिने भएको छ। खुला सिकाइलाई विद्यालय शिक्षा तथा अनौपचारिक शिक्षा विकास गर्न सकिने भएको छ। नेपालमा यसको प्रयोग अझै व्यापक र सर्वसाधारणको पहुँचमा पुऱ्याउन सकिएको छैन। दूर शिक्षाको केही उपयोग शिक्षक तालिम तथा शैक्षिक जानकारी प्रसार गर्ने कार्यमा प्रयोग गरिएको छ। खुला सिकाइको पूर्वाधार विकास गर्ने योजना तथा कार्यक्रम अगाडि बढ्न सकेको छैन। शैक्षिक नीतिमा खुला सिकाइको विकास गर्ने रणनीति अनुसारको कार्य हुन सकेको छैन। शैक्षिक विकास प्रयोजनका लागि शिक्षा मन्त्रालय अन्तर्गत स्थापित दूर तथा खुला सिकाइ शिक्षा केन्द्र एक महाशाखाको रूपमा शैक्षिक जनशक्ति विकास केन्द्रमा सीमित बजेट र शिक्षक तालिमको कार्यक्रम गर्दै आएको छ। बढ्दो शिक्षा प्राप्त गर्ने माग र आवश्यकतालाई मौजुदा दूर शिक्षा र खुला शिक्षाको पहुँच तथा सुविधा पर्याप्त रहेको छैन। बदलिँदो विश्व सन्दर्भमा सिकाइको क्षेत्र व्यापक बनाउन औपचारिक शिक्षाका अलावा खुला सिकाइको विकास अपरिहार्य छ। विद्यालयदेखि उच्च शिक्षासम्म विभिन्न कारणले समेटिन नसकेका व्यक्तिहरूका लागि खुला सिकाइको पहुँच आवश्यक छ।

खुला सिकाइको आधार तथा सान्दर्भिकता

खुला सिकाइ प्रणाली विश्व प्रचलित माध्यम सामाजिक न्याय (Social Justice) लिङ्ग, मानव अधिकार तथा शान्ति आदि जस्ता मान्यता र मानवीय मूल्यलाई आत्मसात् गरी प्रदान गरिन्छ। सिकाइमा सिकारुको मानसिक तथा बौद्धिक क्षमताको लेखाजोखा गरी सिक्ने र सिकाउने र सिर्जनात्मक ज्ञान र सिप हासिल गर्ने (Reflective learning) मा जोड दिइएको हुन्छ। व्यक्तिको व्यक्तित्व विकास गरी सशक्तीकरण गर्न उत्प्रेरित गर्ने (Critical literacy) मा जोड दिन्छ। त्यस्तै गरी मानव संसाधनको विकासको आधार भएकाले व्यक्तिलाई जीवनोपयोगी सिप र दक्षता हासिल गराउन अग्रसर बनाउँछ। अर्कोतर्फ परम्परागत शिक्षालाई छेड हान्ने Deschooling Society, the school is dead, Pedagogy of Oppressed जस्ता सिकाइको खुला सोच राख्नेको मर्मलाई यसले पुरा गर्ने देखिन्छ। शिक्षाको आधारभूत आवश्यकता पुरा गर्ने र पहुँच विस्तार गर्ने विश्वव्यापी

अभियानमा खुला सिकाइ र शिक्षाले विकासोन्मख देशलाई सघाउ पुऱ्याउन मद्दत गर्न सक्छ ।

खुला सिकाइ मैत्री प्रविधि (Open learning technologies)

खुला सिकाइको क्षेत्र व्यापक र असीमित भएकोले शिक्षामा यसको प्रयोग र उपयोग अधिकतम रूपमा गर्न सकेमा नै विश्व व्यापीकरणले शिक्षा क्षेत्रमा ल्याएका चुनौतीसँग सामना गर्न सक्ने ज्ञान, दक्षता र सिप प्राप्त गर्न सकिन्छ । हाम्रो सन्दर्भमा शिक्षा क्षेत्रमा दूर तथा खुला सिकाइको प्रयोग के, ? कसरी ? कहिले ? गर्न सकिन्छ र सरकारको नीतिले कार्यरूप पाउने केही प्रावधान उठाइने जमर्को गरिएको छ । शिक्षा क्षेत्रमा सूचना तथा सञ्चार प्रविधिको विकासले सिक्ने सिकाउने ज्ञानको भण्डार असीमित बनाएकोले यसको उपयोग गर्न नसक्ने आजका युवा पिँढीलाई विश्वव्यापीकरणबाट विमुख बनाउनु हो । नयाँ प्रविधि र ज्ञान नहुनु भनेको आफ्ने घर, गाउँ, समुदायमा सीमित हुनु हो भने शैक्षिक बेरोजगारको भारी बोक्नु हो । एक साधारण किसानले पनि नयाँ प्रविधिको ज्ञान नभई खेतीपाती गर्न सक्दैन, बजार व्यवस्थापन गर्न सक्दैन भने देशको विकास गर्ने भावी सन्तति विकास गर्ने शिक्षा क्षेत्र त्यसबाट अछुतो रहन सक्दैन । शिक्षा क्षेत्रले अग्र नेतृत्व र नमुना देखाउन सक्नु पर्छ । शिक्षामा खुला सिकाइले समेट्न सक्ने साधन, माध्यम र प्रविधि देहाय बमोजिम रहेको छ ।

खुला सिकाइका लागि सामान्यतया उपयोग गरिने प्रविधिलाई २ भागमा राखेर अध्ययन र प्रयोग गर्न सकिन्छ । पहिलो प्रत्यक्ष श्रव्य तथा दृश्य (Synchronous) प्रणाली हो । यस माध्यम वा प्रविधिमा सिकारु वा सहभागी एकै समयमा भेला भई सिक्ने सिकाउने प्रणाली हो । यसका लागि भेला हुने वा कार्यक्रमको समयतालिका पूर्व निर्धारित हुन आवश्यक छ । उदाहरणका लागि Web Conferencing and Video conferencing लाई लिन सकिन्छ जसमा सोझै सेटेलाइटबाट प्रसारण, इन्टरनेट रेडियो, प्रत्यक्ष कुराकानी (Live streaming, टेलिफोन र web-based VoIP आदिको प्रयोग गरिन्छ । दोस्रो प्रविधि अप्रत्यक्ष (Asynchronous) प्रणाली हो । यसमा सिकारु वा सहभागी आफ्नो समयतालिकाई लचकताका साथ अनुशरण गरी पहुँच प्राप्त गर्दछन् । सहभागी एकै पटक एकै समयमा उपस्थित हुन जरुरी हुँदैन यो पुरानो पत्राचार प्रणालीको विकसित स्वरूप हो । यसमा जानकारी बोर्ड फोरम (Message board forums), इमेल, भिडियो, श्रव्य रेकर्डिङ्ग, छपाइ सामग्रीहरू, भ्वाइस मेल र फ्याक्स आदि खुला सिकाइका लागि प्रयोग हुने प्रविधिको प्रयोग गरिन्छ यी प्रविधिहरूलाई विश्व विद्यालयको उच्च शिक्षासम्म पनि उपयोगमा ल्याउने गरिएको छ । यस बाहेक सिकाइको माध्यमका रूपमा प्रयोग हुने Online three dimensional 3D virtual worlds हो । यो एक प्रसिद्ध 3D virtual world, Active Worlds दुवै प्रत्यक्ष तथा अप्रत्यक्ष प्रविधि सिकाइमा उपलब्ध गराएर विद्यार्थीलाई समूह कार्य गरी सिक्ने अवसर प्रदान गरिन्छ । संस्थागत फाइदाको दृष्टिले Diana G. Oblinger ले संयुक्त अधिराज्यको सन्दर्भमा तलका ४ वटा खुला सिकाइले प्रसिद्धि पाउने उपाय वा कारण हुने दावी पेस गरेका छन् । पहिलो कारण पहुँचमा बृद्धि (Expanding access) गर्न सकिने छ । यसले गर्दा छोटो समयमा संस्थागत स्टाफका लागि तालिम तथा पेसागत विकास पुरा गर्न सम्भव हुने छ । दोस्रो तालिम तथा पेसागत क्षमता विकासका लागि फराकिलो भौतिक संरचनाको व्यवस्था, लामो समयसम्म उपयोगी, स्रोत साधन, सामग्री र जनशक्तिको उपयोगमा कम लागत र मितव्ययी (Alleviate capacity constraints) हुने छ । तेस्रो कारण बदलिदो बजारबाट स्रोत सङ्कलन (Marketing money emerging markets) जीवनपर्यन्त सिकाइका लागि ठूलो जमात सिक्न आतुर अवस्थामा रहेकाले यस प्रकारको प्रविधिले

माग पुरा गर्न सकिने सम्भावना छ । यस कार्यक्रममा लागतपुरण हुन सक्ने देखिन्छ । चौथो कारण संस्थाको बदलिँदो परिवेश अनुसार शिक्षा क्षेत्रमा देखिने नयाँ माग र खोजबाट परिचित भई आधुनिकतामा रूपान्तरण हुने माध्यम वा कोसे ढुङ्गा (Catalyst for institutional transformations) हुन सक्ने अपेक्षा गर्न सकिन्छ । त्यस्तै गरी Casey and Lorenzen मतानुसार अर्को नयाँ प्रशिक्षित व्यक्तिले विद्यालयमा खुला शिक्षाको पहुँच नभएको विद्यालयमा पहुँच पुऱ्याउन आर्थिक योगदान दिई सहयोग गर्ने वातावरण बन्न सक्छ भन्ने विचार व्यक्त गरेका छन् ।

खुला सिकाइको विकासशील प्रवृति (Emerging trends)

२१ औं शताब्दीको सुरुवातसँगै सूचना तथा सञ्चार क्षेत्रमा भएको विकास र विश्वमा छाएको शान्ति र प्राविधिक क्रान्तिले विकाशोन्मुख देशलाई जनताको बोद्धिक विकास तथा समाजको गुणस्तरमा अपेक्षित सुधार गर्ने मौका प्राप्त भएको छ । यी र यस्तै विश्वव्यापी उभारबाट भएको विकासले विश्वलाई एक गाउँको रूपमा परिणत गरेको छ । सञ्चार प्रविधिको उपयोग सबै क्षेत्रमा अधिकतम मात्रामा भएको छ । शिक्षा क्षेत्रमा सिक्ने र सिकाउने प्रक्रियामा परम्परागत विद्यालय, कक्षाकोठा, पुस्तक, शिक्षकबाट इलर्निङ् तथा खुला सिकाइमा नयाँ प्रविधिको विकास भएको छ। समयको माग र आवश्यकता अनुसार शिक्षाको दायरा असीमित हुन पुगेको छ । शिक्षा, रोजगारी, व्यापार, व्यवसाय लगायतका विश्व बढी नै प्रतिस्पर्धी भएको छ । यसले गर्दा औपचारिक शिक्षाले विद्यालय तथा उच्चशिक्षाको माग र आवश्यकता पुरा गर्न सकेको छैन । नेपालको सन्दर्भमा १० वर्षे माध्यमिक शिक्षाको अन्तिम तहमा एक चौथाइ विद्यालय जाने उमेरका विद्यार्थी पुग्छन् भने त्यसमा एक तिहाइ अनुत्तीर्ण हुन्छन्, त्यस्तै कक्षा १२ सम्मको शिक्षामा करिब ३० प्रतिशत विद्यार्थी जान्छन् भने तह पुरा गर्ने ५० प्रतिशतको हाराहारीमा छन् । उच्चशिक्षामा जाने २५ प्रतिशत रहेका छन् । बिचमा विद्यालय छाड्ने, कक्षा दोहोऱ्याउने र तह पुरा भएपछि माथिल्लो तहमा विभिन्न कारणले भर्ना नहुने विद्यार्थीको जनसङ्ख्या ठूलो छ । यिनलाई खुला सिकाइको अवसर दिन सकेमा योग्यता बढाउन, सिप तथा दक्षता वृद्धि गर्न आउने निश्चित छ । अर्कोतर्फ औपचारिक शिक्षामा समेट्न नसकिएका विद्यालय जाने उमेरका करिब ११ प्रतिशत बाल बालिका, प्रौढ, वैकल्पिक शिक्षा मार्फत विद्यालयमा भर्ना हुनुपर्ने अवस्था छ । कुल जनसङ्ख्यामा ७० लाख निरक्षर पनि शिक्षाको अवसरका लागि पर्खि वसेको अवस्था छ । कृषि तथा पशु पालन व्यवसायमा लागेका अधिकांश निरक्षर र केही साक्षर मात्रका लागि उत्पादकत्व बढाउन वा आधुनिक प्रविधिबाट पेसा व्यवसाय गर्न पेसा सम्बन्धी प्राविधिक तथा व्यावसायिक शिक्षा अनिवार्य छ । यसका लागि खुला शिक्षा एक भरपर्दो माध्यम हुन सक्छ। औद्योगिक कल कारखानाका मजदुर वर्ग सेना, प्रहरी, पेसाकर्मी निजामती कर्मचारी, शिक्षक वा त्यसमा कार्यरत प्रशासनिक कर्मचारी तथा राजनीतिककर्मी समेत लचिलो समयमा र शिक्षा हासिल गर्ने अवसरको खोजीमा रहेका छन् । अवसर पाएमा योग्यता, पेसागत सिप, दक्षता बढाउन सक्ने अवस्थामा खुला शिक्षा दरिलो माध्यम बन्न सक्ने देखिन्छ । औपचारिक, अनौपचारिक तथा वैकल्पिक शिक्षाबाट उच्च शिक्षासम्म जानका लागि खुला शिक्षाका कलेज तथा विश्व विद्यालय हुन नितान्त जरुरी भइ सकेको छ । सर्वसाधारणका लागि निरन्तर सिकाइ र जीवन पर्यन्त सिकाइका लागि एक मात्र उपाय खुला सिकाइको अवसर हो । बढ्दो जनसङ्ख्याको शिक्षाप्रतिको माग र आश्यकता पुरा गर्न सीमित स्रोत तथा भौतिक साधन भएको विकासोन्मुख देशका लागि खुला सिकाइ लागत पूरणका दृष्टिकोणले उपयुक्त रहेको छ । नेपालमा सञ्चार प्रविधिमा आधारित रेडियो, टेलिभिजन

र वेभमा आधारित अत्याधुनिक साधन तथा माध्यम उपयोगमा आइरहेकोले शिक्षामा यसको प्रयोग गर्न सकिएमा शिक्षाको विकासमा प्रत्यक्ष योगदान हुने छ। देशका कुनाकाप्चासम्म पहुँच पुग्ने गरी सञ्चातनमा आएका एफ.एम. तथा टेलिभिजन शैक्षिक कार्यक्रमका लागि सजिलो तथा लोकप्रिय माध्यम बन्ने निश्चित छ।

शिक्षाका लागि विश्वव्यापी दवाब

सयुक्त राष्ट्रसङ्घको सन् १९४८ को मानव अधिकारको विश्वव्यापी घोषणा अनुसार प्रत्येक नागरिकलाई प्रारम्भिक शिक्षा पाउने हक सुनिश्चितता गरेको छ। थाइलैन्डको जेमटेन(सन् १९९०) मा विश्व शिक्षा मञ्चको सम्मेलनले शिक्षामा सर्वव्यापी पहुँच, समता, आधारभूत शिक्षा र सिकाइ उपलब्धि सन् २००० सम्म प्राप्ति गर्ने लक्ष्य लिइएको थियो। शताब्दीको अन्त्यमा सबैका लागि शिक्षाको लक्ष्यको पुनरावलोकन गर्न उद्देश्यले विश्व शिक्षा मञ्चको (सेनेगलको डकार सम्मेलन, २०००) आयोजना गरियो। लक्ष्य प्राप्तिको समीक्षा गर्दा अधिकांश विकासोन्मुख राष्ट्रको प्रगति गरेको अवस्था नभएकाले सन् २०१५ सम्म आधारभूत शिक्षा निःशुल्क र अनिवार्य गर्ने, प्राविधिक तथा व्यावसायिक शिक्षाको पहुँच बढाउने जस्ता लक्ष्य लिई सबैका लागि शिक्षालाई निरन्तरता दिने प्रतिबद्धता जाहेर गरियो। सोही वर्ष राष्ट्रसङ्घबाट बाल अधिकारका रूपमा शिक्षा प्राप्त गर्ने अधिकार सम्मेत र अपाङ्गका लागि शिक्षाको समान अवसर दिने धोषणा गरियो। राष्टसङ्घीय विश्व सम्मेलन विकास सम्बन्धी मुख्य सूचीलाई सहस्राब्दी विकासको लक्ष्य (सन् २०००) निर्धारण गरी दोस्रो लक्ष्यमा विश्वव्यापीरूपमा प्राथमिक शिक्षा प्राप्ति गर्ने प्रतिबद्धता जाहेर गरिएकोले विकासोन्मुख देशले द्रुत मार्गका रूपमा शिक्षाको आधारभूत तथा अन्य माग पूरा गर्न खुला शिक्षाको पहुँच बढाउन अनिवार्य भएको छ। विकसित देशले खुला शिक्षालाई शिक्षा प्रणालीको अभिन्न अङ्गका रूपमा आत्मसात् गरी बहु आयामिक प्रयोजनमा उपयोग गरिएको छ। उदाहरणका लागि युरोपियन युनियनले उच्च शिक्षा लगायत प्रजातान्त्रिक समाजको रूपान्तरण, खुला बजार र अर्थतन्त्रलाई बढवा दिइएको र निरन्तर तथा जीवन पर्यन्त सिकाइमा जोड दिइएको अवस्था छ। नेपालमा शिक्षा क्षेत्र जस्तो महत्वपूर्ण क्षेत्र अझै औपचारिक शिक्षा सबैको पहुँचमा पुऱ्याउन नसकिएको अवस्थामा खुला सिकाइको विस्तार र समुचित व्यवस्थापन गरी पहुँच बढाउन जरुरी भैसकेको छ।

खुला सिकाइको लागि न्यूनतम पूर्वाधार, विकास तथा व्यवस्थापन

देहायको पूर्वाधार विकास र व्यवस्थापन नहुँदासम्म खुला शिक्षा तथा सिकाइको कल्पना गर्न सकिदैन। त्यसैले देहायको पूर्वाधार विकासमा ध्यान दिनु आवश्यक छ।

- खुला शिक्षा विकास नीति तर्जुमा गर्दा सरकार, सार्वजनिक सरोकार निकाय र निजी क्षेत्रलाई समेत सहभागी, सहयोगी र साझेदारी समेत हुने व्यवस्था।
- कार्यक्रमलाई एकरूपता र व्यवस्थित गर्न एकीकृत अन्तर्राष्ट्रिय स्तर लचिलो पाठ्यक्रम निर्माण तथा कार्यान्वयन व्यवस्था।
- न्यूनतम भौतिक पूर्वाधार तयारी पश्चात् कार्यक्रमको सञ्चालन
- सञ्चार प्रविधि तथा अन्य स्रोत साधनको सञ्जाल निर्माण
- दक्ष र सिपयुक्त जनशक्तिको विकास
- आवश्यक शैक्षिक सामग्रीको व्यवस्था
- कार्यक्रमको प्रचार प्रसार तथा पहुँचको विस्तार
- दरिलो अनुगमन तथा मूल्याङ्कनको व्यवस्था

खुला शिक्षाको सम्भावना र चुनौती

- कार्यक्रमको दिगोपन ल्याउन सरकार, सार्वजनिक सरोकारका निकाय र निजी क्षेत्रलाई समेत सहभागी गराई खुला शिक्षा विकास नीति तर्जुमा गर्न सकिने अवस्था छ। राष्ट्रिय शिक्षा आयोग (२०४९ र २०५५) को प्रतिवेदनमा खुला शिक्षाको विकास गर्न विश्व विद्यालय स्थापना गर्ने सुझाव, नवौं र दशौं पञ्चवर्षीय योजनामा दूर तथा खुला शिक्षाको माध्यम अपनाउने नीति रहेको, शिक्षा मन्त्रालयले २०६३ सालमा खुला तथा दूर सिकाइ नीति पारित गरेको, त्यस्तै अनौपचारिक शिक्षा नीति २०६३ मा खुला शिक्षाको प्रयोग नीति पारित भएको तथा त्यस्तै गरी शिक्षासम्बन्धी सबै योजना तथा कार्यक्रममा खुला शिक्षाको प्रावधान राखिएको छ। लामो समयको अन्तरालमा नीतिगत प्रावधान, जनदबाव, आवश्यकता, केही पूर्वाधार हुँदाहुँदै पनि राजनीतिक इच्छा शक्ति र दूरदृष्टिको कमीले गर्दा खुला शिक्षाको ढोका खुल्न सकेको छैन।
- शिक्षाका सबै प्रकारको अवसरबाट वञ्चित समूहलाई खुला शिक्षाले समेट्ने गरी शिक्षा मन्त्रालय अन्तर्गत रहने गरी एक अर्धस्वायत्त खुला सिकाइ परिषद् (Semi-Autonomous Council) गठन गर्ने सकिने सम्भावनाबारे प्रतिवेदन प्राप्त भएको अवस्था छ।
- हाल शैक्षिक जनशक्ति विकास केन्द्र अन्तर्गत रहेको दूर शिक्षा तथा खुला सिकाइ महाशाखा र अनौपचारिक शिक्षा केन्द्रलाई एकीकृत गरी नपुग भौतिक तथा जनशक्ति थप गर्न सकिने।
- शैक्षिक जनशक्ति विकास केन्द्रमा मौजुदा रेकर्डिङ् स्टोडियो तथा सामग्रीको स्तरोन्नति गर्ने, शैक्षिक प्रयोजनका लागि एक रेडियो तथा टेलिभिजन स्थापना वा निजी क्षेत्र वा सार्वजनिक संस्थासँग साझेदारी गर्ने विकल्प रहेको।
- शैक्षिक जनशक्ति विकास केन्द्रले शिक्षक तालिमका लागि ३ दशकदेखि दूर शिक्षाको माध्यम अपनाई शिक्षक तालिम तथा शैक्षिक कार्यक्रम चलाएको अनुभव र अन्य विकासशील देशहरू जस्तै भारत, बङ्गलादेश, श्रीलङ्का, भुटान, पाकिस्तान, चीन, तथा केही अफ्रिकी मुलुकहरू आदिले दूर तथा खुला शिक्षा तथा सिकाइबाट शिक्षामा ठुलो फड्को मारेकोले नेपालमा शिक्षक तालिम तथा पेसागत विकासको लागि खुला शिक्षाको विकास खड्कँदो अवस्था रहेको।
- आवश्यकता अनुसार प्रिन्ट प्रयोजनका लागि प्रेस वा मौजुदा सार्वजनिक वा निजी प्रिन्ट मिडिया प्रयोग गर्ने अवस्था रहेको।
- खुला शिक्षाको एकद्वार नीति लिई योजना निर्माण, व्यवस्थापन, सञ्चालन, नियन्त्रण र नियमन गर्ने व्यवस्था गर्ने र शिक्षामा निजी क्षेत्रको फस्टाउँदो व्यापारीकरण र नाफामुखी प्रवृत्ति कम हुने।
- जिल्लास्तरसम्म खुला सिकाइको हालको पहुँचलाई संस्थागत गरी व्यवस्थित गराउन सकिने।
- आधारभूत साक्षरता कार्यक्रम स्थानीय निकायलाई जिम्मेवार बनाई सञ्चालन गर्ने व्यवस्था गर्दा कार्यक्रमको अपनत्व बढ्ने।
- हाल विदेशी विश्व विद्यालयको सम्बन्धन लिई खुला सिकाइबाट उच्च शिक्षाको केही अवसर दिइएको छ तापनि सबैको पहुँच नभएकोले देशभित्र नै उच्च शिक्षाका लागि कलेज तथा विश्व विद्यालय स्थापना गर्न सार्वजनिक तथा निजी साझेदारी तथा सरकारको अनुदान वा

संस्थागत रूपमा सञ्चालन गर्न प्रोत्साहित गर्न सकिने अवस्था रहेको ।

- देशमा मौजुदा सञ्चार प्रविधि, साधन, जनशक्ति तथा स्रोतको अधिकतम उपयोग गर्न सकिने नयाँ पूर्वाधार खडा गर्ने जरुरत नपर्ने ।
- शिक्षा प्रदाय सार्वजनिक विद्यालय, कलेज, विश्व विद्यालयका केन्द्रदेखि स्थानीय तह तथा अन्य सार्वजनिक सेवा प्रदाय स्थानीय निकाय समेतमा सूचना तथा सञ्चार प्रविधिको पहुँच विस्तारबाट सञ्चार प्रविधिप्रति सर्वसाधारणको सीप र दक्षता बढी उपयोग गर्न अग्रसर हुने ।
- खुला शिक्षा र सिकाइलाइ बहुप्रयोजनका लागि उपयोग गर्ने व्यवस्थाबाट लागतपुरण भई यो बहुलाभकारी हुने ।
- खुला शिक्षाका लागि पहुँच बढाउन मौजुदा सार्वजनिक शैक्षिक संस्था विद्यालय, कलेज र विश्व विद्यालयको क्षमता बृद्धि तथा स्थानीय निकायमा कार्यरत जनशक्तिको क्षमता, सिप र दक्षता विकास गरी पेसागत सक्षमता बढाई कार्यक्रममा प्रभावकारिता ल्याउन सकिने ।
- राजनीतिक प्रतिबद्धता, प्राथमिकता साथ खुला शिक्षाको दीर्घकालीन स्पष्ट नीति र कार्यक्रम बनाई दातृ निकायलाई प्राविधिक तथा आर्थिक सहयोग गर्ने वातावरण सिर्जना हुने ।
- कार्यक्रमको निरन्तर अनुगमन, मुल्याङ्कन, नियन्त्रण र नियमन गर्ने स्थायी संयन्त्र खडा भएमा कार्यक्रमको विश्वसनीयता र स्तरीयता बढ्ने ।

निष्कर्ष

विश्व परिवेशमा दिनानुदिन नवीनतम ज्ञान, पेसागत सिप, दक्षता, प्रविधि, जानकारी तथा सूचना प्राप्त गर्न खुला शिक्षा दरिलो माध्यम हो । खुला शिक्षाले सबै वर्ग, उमेर, अवस्थालाई समेटने भएकोले यसको पहुँच सर्वव्यापी हुनु आवश्यक छ । शिक्षाको सबै प्रकारको पहुँच विस्तार गर्न सहज हुने भएकोले विकासोन्मुख देश तथा विकसित देशले खुला शिक्षाको अधिकतम उपयोग गरिरहेको अवस्था छ । नेपालमा सञ्चार प्रविधिको पूर्वाधार विकास भइसकेको अवस्था छ । आधारभूत शिक्षाको विस्तार गर्न र पहुँच पुऱ्याउन विश्व प्रतिबद्धताको दबाव छ । नीतिगत पहलको प्रयास भएको पनि छ । खुला सिकाइको विद्यालय शिक्षा र उच्च शिक्षामा केही पहल भएता पनि यो पर्याप्त छैन । संस्थागत संयन्त्र स्थापना र विश्व विद्यालय स्थापना गर्ने पहल राजनीतिक अनौल इच्छाशक्तिले वर्षौं अलपत्र अवस्था छ । सरकारले खुला शिक्षाको नीति तथा कार्यक्रम ल्याउन विलम्ब भए पनि अब चाहिँ यसको लागि आवश्यक तयारी गर्नु जरुरी भैसकेको छ ।

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नेपालमा वैकल्पिक शिक्षा : विद्यमान अवस्था र भावि दिशा

खुबिराम अधिकारी
जिशिअ, डोल्पा

पृष्ठभूमि

शिक्षा व्यक्तिको विकास तथा आर्थिक र सामाजिक रूपान्तरणको प्रमुख माध्यम हो । आधारभूत तहको शिक्षा हासिल गर्न पाउनु कुनै पनि व्यक्तिको अधिकार हो । आधारभूत तहको शिक्षालाई मानव अधिकारको रूपमा स्वीकार गरिएको छ भने त्यसभन्दा माथिको शिक्षा हासिल गर्न पाउनु प्रत्येक व्यक्तिको अधिकार हो । राज्यबाट उपलब्ध सेवा र सुविधाको अभावमा इच्छा र आवश्यकता भएका व्यक्तिहरू शिक्षाबाट बञ्चित हुनु अहितेको चुनौती हो । शिक्षा हासिल गर्न माध्यमहरूमध्ये सबैले चाहेर पनि औपचारिक शिक्षा हासिल गर्ने अवस्था हुँदैन । तसर्थ विविध कारणले औपचारिक शिक्षा हासिल गर्न नसक्ने समूहका लागि लक्षित गरी दूर, खुला, घुम्ती तथा लचिला पद्धति मार्फत् शिक्षा प्रदान गर्ने कार्य सुरु गरिएको हो ।

विविध आवश्यकता र चाहना बोकेका व्यक्तिहरूको सम्बोधनका लागि वैकल्पिक शिक्षाको विकास गरिएको हो । यस कार्यक्रमभित्र खुला, घुम्ती पद्धतिसहितको लचिलो विद्यालय शिक्षा र अनौपचारिक शिक्षा पर्दछन् । यस शिक्षाको विकास खुला शिक्षा तथा अनौपचारिक शिक्षाको सुरुआतसँगै भएको मानिन्छ । यस शिक्षाले अनौपचारिक शिक्षाको विशिष्ट गुण तथा स्वभावहरू अङ्गीकार गरेको हुनुपर्दछ । वैकल्पिक शिक्षा औपचारिक शिक्षाको स प्रतिस्पर्धी प्रवृत्ति भन्दा पनि एक पूरक विकल्पको रूपमा स्थापित गरिनुपर्दछ ।

वैकल्पिक शिक्षा मूल प्रवाहको शिक्षा पद्धतिभन्दा फरक दर्शनमा आधारित एउटा विधि (Approach) हो । खास गरेर १९६० को दशक पछि यसको विकास र विस्तार भएको हो । यो शिक्षा प्रणाली विभिन्न देशमा फरकफरक तरिकाबाट सञ्चालन भएको छ । यसलाई "Nontraditional education" भनेर पनि भन्ने गर्दछन् । यस शिक्षामा परम्परागत विद्यालय पद्धतिको अभ्यासहरूको प्रयोग गरिदैन । वैकल्पिक शिक्षाका Focal point भनेको नै विद्यालय पद्धतिमा छनौट गर्न पाउनु हो । Home based learning, apprenticeshis and independent study वैकल्पिक शिक्षाको स्वरूप (Forms) हुन् ।

Alternative education is an approach to education with a philosophy and style which differs from that of mainstream education. There are a number of types of alternative education, geared at a wide variety of students, and many nations have some form of alternative educational option available for people who want it, especially in urban areas. Some people refer to alternative education as "nontraditional education," to emphasize the fact that it does not use traditional practices, and to avoid bringing up the stigma which some people associate with "alternative."

The focal point of alternative education is school choice. In communities without alternative education options, students generally only have one school which they can

attend. in contrast with communities in which students can explore multiple schools and educational paths. This type of education also does not have to occur in the classroom. Home-based learning, apprenticeships, and independent study are all forms of alternative learning.

In many cases, alternative educational principles are aimed at particular types of students. Some focus on at-risk youth, while others provide college-track programs, or schools with a heavy focus on environmental ethics. social responsibility, or other philosophical approaches. Many religious schools are also a form of alternative education, especially in secular countries. The practice of alternative education is certainly not a new thing, and some very venerable academic institutions were actually originally founded as alternative education resources for people who disliked the conventional school system.(Source: wisegeek.com)

नेपालमा वैकल्पिक शिक्षाको सुरुआत दूर/खुला सिकाइ तथा अनौपचारिक शिक्षाको सुरुआतसँगै भएको हो । कलेज अफ एजुकेसनको प्रौढ शिक्षा शाखाबाट सन् १९५७ मा रेडियोबाट युवाहरूका लागि प्रसारण गरिएको कार्यक्रम नेपालमा दूर शिक्षा पद्धतिको अवधारणा सुरु भएको मानिन्छ तर विधिवत रूपमा भने रेडियो शिक्षा शिक्षक तालिम आयोजनाको वि.सं. २०३५ मा स्थापना भएपछि सुरु भएको मानिन्छ ।

विद्यमान नीतिगत तथा कार्यक्रमको अवस्था

नेपालमा वैकल्पिक शिक्षा सम्बन्धी नीति तथा कार्यक्रमको अवस्था निम्नानुसार रहेको देखिन्छ ।

क) नीतिगत अवस्था

१. नेपालको अन्तरिम संविधान, २०६३

आधारभूत तहको शिक्षा मातृभाषामा प्राप्त गर्ने हक सबै नागरिकलाई हुनेछ । त्यसै गरी माध्यमिक तहको शिक्षा कानुनमा व्यवस्था भए बमोजिम निःशुल्क हुनेछ ।

२. तिनबर्से अन्तरिम योजना

खुला शिक्षाको समेत प्रयोग गरी शिक्षाको अवस्था सबै नेपाली नागरिकको पहुँचभित्र सुसूचित गर्ने, खुला विश्वविद्यालयको स्थापना गरी उच्च शिक्षामा सर्वसाधारणको पहुँच सुनिश्चित गर्ने, देश सुहाउँदो खुला र दूर शिक्षाको उपयुक्त पद्धतिको अनुसन्धान र विकासमा जोड दिने ।

३. त्रिवर्षीय योजनाको आधारपत्र (२०६७/०६८-२०६९/०७०)

- सबैलाई शिक्षामा पहुँच सुनिश्चित गर्न खुला विद्यालय, निरक्षर र विद्यालय छोडेको गृहिणी, किसान, मजदुरका साथै विपन्न समुदायका लागि लक्षित शैक्षिक कार्यक्रमहरू सञ्चालन गरिनेछ । यसका लागि स्थानीय निकायको तहमा शैक्षिक विकास कोष खडा गरिनेछ ।
- उच्च शिक्षामा पहुँच सुनिश्चित गर्न खुला विश्वविद्यालय स्थापना गरिनेछ ।

४. शिक्षा नियमावली, २०५९

विद्यालयमा भर्ना भई शिक्षा हासिल गर्न नसक्ने व्यक्तिलाई अनौपचारिक शिक्षा दिन सकिने व्यवस्था गरेको छ । विद्यालयमा अध्ययन नगरेका

वा अध्ययन गरी विचमा नै छाडेका बाल बालिकाका लागि विद्यालय पाठ्यक्रमको आधारमा तयार गरिएको पाठ्य सामग्री प्रयोग गरी वैकल्पिक शैक्षिक कार्यक्रम सञ्चालन गर्न सकिनेछ। यसै गरी शिक्षक शिक्षा र शिक्षक तालिम र खुला शिक्षा सम्बन्धी अन्य कार्यक्रमका सम्बन्धमा दूर शिक्षा प्रदान गर्न सक्ने व्यवस्था नियमावलीले गरेको छ।

५. खुला शिक्षा तथा दूर सिकाइ नीति, २०६३
विभिन्न चाहना भएका सिकारुहरूका लागि शिक्षामा पहुँचको विस्तार गर्ने, पराम्परागत शिक्षाको गुणस्तर वृद्धि गर्ने, जीवन पर्यन्त शिक्षा र पेसागत विकासको अभिवृद्धि गर्ने र ज्ञान र सीपको प्रमाणीकरण गर्ने पद्धतिको स्थापना गर्ने।

६. अनौपचारिक शिक्षा नीति, २०६३
खुला विद्यालय मार्फत विद्यालय तहको समकक्षी शिक्षा उपलब्ध गराउने, खुला विश्व विद्यालय मार्फत उच्चतहको समकक्षी शिक्षा उपलब्ध गराउने।

७. राष्ट्रिय पाठ्यक्रम प्रारूप, २०६३
सबैका लागि शिक्षाको अवसर प्रदान गर्न खुला शिक्षा नीतिलाई कार्यान्वयनमा ल्याइनेछ यस प्रकारको शिक्षालाई दुईप्रकारले व्यवस्थित गरिनेछ :

- अनौपचारिक रूपबाट शिक्षा हासिल गरेका तर प्रामाणिक हुन नसकेका र औपचारिक शिक्षा (विद्यालय शिक्षा) मा समावेश हुन इच्छुक व्यक्तिलाई उनीहरूको शैक्षिक अवस्थाको प्रमाणीकरण गरी निर्दिष्ट औपचारिक शिक्षाभित्रको कक्षामा प्रवेश गर्न पाउने अवसर खुला गरिनेछ।
- विविध कारणबाट शैक्षिक अवसर प्राप्त गर्न नसकेका विद्यालय उमेर समूहका बालबालिकाहरूलाई खुला शिक्षाको व्यवस्था गरी औपचारिक शिक्षा सरहकै विद्यालय शिक्षा लिन पाउने संस्थागत विकास गरी कार्यक्रमलई योजनाबद्ध ढङ्गबाट सञ्चालन गरिनेछ।

८. विद्यालय क्षेत्र सुधार योजना (२०६६-२०७२)

- विविध आवश्यकता पूरा गर्न लागत साझेदारीका आधारमा खुला र दूर शिक्षा तथा लक्षित विद्यालयको विस्तार, पिछडिएका बाल बालिकाका लागि निःशुल्क वैकल्पिक शिक्षाको प्रावधान, वैकल्पिक बन्दोबस्त गरी व्यावसायिक सिपमा जोड दिने गरी प्राविधिक शिक्षाको व्यवस्था।
- वैकल्पिक शिक्षा कार्यक्रम कार्यान्वयनको जिम्मेवारी गाउँ विकास समिति र नगर पालिका जस्ता स्थानीय निकाय/सरकारको हुनेछ। यस कार्यक्रमका लागि उनीहरूले कार्यान्वयन निर्देशिका र अनुगमन तथा सुपरीवेक्षणको ढाँचाको विकास गर्नेछन्। वैकल्पिक शिक्षा कार्यक्रमको गुणस्तर सुनिश्चितताका लागि जिल्ला शिक्षा कार्यालयले अनुगमन र सुपरीवेक्षणका लागि आवश्यक प्राविधिक स्रोत र आर्थिक सहयोग उपलब्ध गराउने छ।

ख) विद्यमान अवस्थामा सञ्चालन भएका कार्यक्रमहरू

- अनौपचारिक शिक्षा केन्द्रबाट सञ्चालित वैकल्पिक प्राथकि शिक्षा प्राथमिक तहको शिक्षाबाट बञ्चित ८-१४ वर्ष उमेर समूहका बाल बालिकाका लागि लक्षित गरी सञ्चालित

तिन वर्षे शैक्षिक कार्यक्रम यसमा दैनिक २ घण्टा अध्ययन गर्नुपर्ने व्यवस्था रहेको छ।

- नि.मा.वि. तहको खुला शिक्षा

  अनौपचारिक शिक्षा केन्द्रले विद्यालय तहको कक्षा ६ देखि ८ सम्मका लागि २ वर्षे पाठ्यक्रम तयार गरी शैक्षिक सत्र २०६४ देखि यस तहको शैक्षिक कार्यक्रम सञ्चालन गर्दै आएको छ। हाल २५ जिल्लामा ३७ ओटा विद्यालयमार्फत यो कार्यक्रम सञ्चालन हुँदै आएको छ। विद्यालय खुलेको दिन २ घण्टाका दरले (उपयुक्त समय/लचकता) शिक्षण सिकाइ गर्ने परिपाटी रहेको छ।

- माध्यमिक तहको खुला शिक्षा

  शैक्षिक जनशक्ति विकास केन्द्रबाट माध्यमिक तहको १ वर्षे शैक्षिक कार्यक्रम खुला पद्धतिबाट शैक्षिक सत्र २०६४ देखि सञ्चालन गरिएको हो। हाल ७५ जिल्लाका ८५ ओटा सामुदायिक विद्यालय मार्फत सञ्चालन गरिएको यस कार्यक्रममा करिब ८००० विद्यार्थी अध्ययनरत रहेको देखिन्छ। १ वर्षमा सात पटकमा ३५ दिन आमने सामने (Face to face) सम्पर्क कक्षा, स्वअध्ययन सामग्री, गृहकार्य तथा परियोजना कार्य मार्फत यो कार्यक्रम सञ्चालन गरिएको हो।

- प्रौढहरूका लागि सञ्चालित अनौपचारिक विद्यालय सञ्चालन निर्देशिका, २०६५ अनुसार सञ्चालित विद्यालय कार्यक्रम

  - यस निर्देशिका अनुसार प्रौढहरूका लागि सञ्चालन हुने अनौपचारिक विद्यालय भन्नाले शिक्षा नियमावलीको नियम ५२ बमोजिम वैकल्पिक शैक्षिक कार्यक्रम सञ्चालन गर्ने अनौपचारिक प्राथमिक विद्यालय, अनौपचारिक निम्न माध्यमिक विद्यालय र अनौपचारिक माध्यमिक विद्यालय भन्ने सम्झनु पर्दछ।
  - प्रौढ भन्नाले १५ वर्षदेखि माथिका सबै महिला तथा पुरुषलाई सम्झनु पर्दछ।
  - यस्ता अनौपचारिक विद्यालय सामुदायिक विद्यालय वा सामुदायिक अध्ययन केन्द्रले अनुमति लिई सञ्चालन गर्न सक्दछन् तर ती विद्यालयहरूको अनुमति जुन तहको अनुमतिसम्म गरिएको हो सोही तहको शिक्षा नियमावली, २०५९ (संशोधनसहित) को नियम ५२ बमोजिम शैक्षिक सत्र सुरु हुनुभन्दा अगावै सो तहको कक्षा सञ्चालन गर्न अनुमति दिन सक्नेछ।
  - विद्यालय सञ्चालन गर्ने समय र अवधि विद्यालय व्यवस्थापन समितिले किटान गर्न सक्ने व्यवस्था गरिएको छ। यसैगरी सोको जानकारी जिल्ला शिक्षा कार्यालयलाई दिनुपर्ने छ। समय निर्धारण गरी सम्पर्क सत्र निर्धारण गर्दा बिदाको दिन बाहेक कर्स्तीमा २ घण्टाभन्दा कम हुने गरी निर्धारण गर्न नपाइने व्यवस्था निर्देशिकाले गरेको छ।

यसरी उपर्युक्त निर्देशिका अनुसार हाल देशभरमा ११८४ ओटा अनौपचारिक प्राथमिक विद्यालय ८४ ओटा अनौपचारिक निमावि र ५०ओटा अनौपचारिक माध्यमिक विद्यालय स्थापना भएको देखिन्छ (स्रोत : शिक्षा विभाग)।

- वैकल्पिक शिक्षा अन्तर्गत नै हाल केही शैक्षिक संस्थाहरूले National Institution of Open School (NIOS) India बाट सम्बन्धन लिइ

विद्यालय तहको शैक्षिक कार्यक्रमहरू सञ्चालन गरिरहेका छन् ।

- यसै गरी इन्दिरा गान्धी खुला विश्व विद्यालय लगायतका अन्य केही विदेशी विश्व विद्यालयसँग सम्बन्धन लिई उच्च शिक्षाका विभिन्न शैक्षिक कार्यक्रमहरू सञ्चालन भइरहेका छन् ।
- पूर्वाञ्चल विश्व विद्यालयले २०५८ देखि सम्बन्धन क्याम्पस मार्फत एक वर्षे बी.एड कार्यक्रम सञ्चालन गरिरहेको छ ।

समस्या तथा चुनौतीहरू

वैकल्पिक शिक्षा अन्तर्गत खुला विद्यालय, वैकल्पिक विद्यालय र अनौपचारिक विद्यालय सञ्चालन भइरहेको भए तापनि यस कार्यक्रममा निम्नानुसार समस्या र चुनौती देखा परेकाछन् :

क) नीतिगत

वैकल्पिक शिक्षा औपचारिक शिक्षाको पूरक तथा विकल्पको रूपमा नभई प्रणालीको रूपमा देखिनुले पनि यसको अवधारणात्मक अस्पष्टता रहेको देखिन्छ । यसै गरी लक्षित वर्गको पहिचान नहुनु विद्यमान शिक्षा ऐन, २०५९ र नियमावली, २०५९ खुला शिक्षा तथा दूर सिकाइ नीति, २०६३, अनौपचारिक शिक्षा नीति, २०६३, प्रौढहरूका लागि सञ्चालित अनौपचारिक विद्यालय सञ्चालन निर्देशिका, २०६५ एक आपसमा बाझिनुले यस वैकल्पिक शिक्षाको विकासमा बाधा पुगेको छ ।

ख) सङ्गठनात्मक तथा व्यवस्थापकीय

प्राथमिक तहको ३ वर्षे वैकल्पिक शिक्षा र निम्न माध्यमिक तहको २ वर्षे शैक्षिक कार्यक्रम अनौपचारिक शिक्षा केन्द्र, माध्यमिक तहको १ वर्षे शैक्षिक कार्यक्रम शैक्षिक जनशक्ति विकास केन्द्र र अनौपचारिक विद्यालय शिक्षा विभाग (क्षे.शि.नि. र जि.शि.का.) मार्फत कार्यक्रम सञ्चालन गर्न अनुमति दिने व्यवस्था हुनु र सोही अनुसार कार्यक्रम सञ्चालन गरिने हुँदा कार्यक्रममा दोहोरोपन आउनु । स्रोत साधनको उचित रूपमा उपयोग हुन नसक्नु र कार्यक्रम सञ्चालनमा एकरूपता नहुनु, एउटै प्रकृतिका कार्यक्रममा पनि फरकफरक किसिमका मापदण्ड लागु हुनुले पनि कार्यक्रमको विकासमा अवरोध रहेको देखिन्छ । यसैगरी परम्परागत शिक्षा, गुरुकुल,मदरसा तथा गुम्बा शिक्षा पनि अझै मूल प्रवाहमा आउन सकेका छैनन् ।

ग) पाठ्यक्रम वा पाठ्य सामग्री

विद्यालय तहको पाठ्यक्रम तथा पाठ्य सामग्री विकास गर्ने प्रमुख जिम्मेवारी पाठ्यक्रम विकास केन्द्रको भए पनि वैकल्पिक शिक्षाका लागि केकस्तो पाठ्यक्रम आवश्यक पर्दछ, सो बारेमा पाठ्यक्रम विकास केन्द्रले अग्रसरता लिएको देखिदैन । हाल सञ्चालित प्राथमिक तहको र नि.मा.वि. तहको खुला विद्यालय वैकल्पिक शिक्षाको पाठ्यक्रम तथा पाठ्य सामग्री अनौपचारिक शिक्षा केन्द्रले विकास गर्दै आएको छ भने माध्यमिक तहको पाठ्यक्रम तथा पाठ्य सामग्री शैक्षिक जनशक्ति विकास केन्द्रमार्फत विकास गरिँदै आएको छ । उक्त पाठ्यक्रम तथा पाठ्य सामग्री विद्यमान विद्यालय स्तरीय पाठ्यक्रमको आधारमा नै रहेकोले वैकल्पिक शिक्षाको विशिष्ट गुण र विशेषता बमोजिम पाठ्यक्रम तथा पाठ्य सामग्री विकास हुन सकेको देखिदैन ।

घ) मूल्याङ्कन पद्धति

वैकल्पिक शिक्षा पद्धति भए पनि परम्परागत शिक्षा पद्धतिले अवलम्बन गर्ने मूल्याङ्कन प्रक्रियालाई नै अवलम्बन गर्नाले मूल्याङ्कन प्रणाली प्रभावकारी हुन नसकेको देखिन्छ । परियोजना कार्य र Assignment मा आधारित पक्षलाई बढी जोड

दिनुपर्नेमा Paper and pencil test लाई नै जोड दिनुले पनि यस पद्धतिको विकास हुन सकेको देखिँदैन ।

ङ) शिक्षण सिकाइ प्रक्रिया

हाल सञ्चालित वैकल्पिक शिक्षाका कार्यक्रमहरूको शिक्षण सिकाइ क्रियाकलापहरूका लागि फरकफरक ढङ्गले समयको व्यवस्था गरिएको छ । अनौपचारिक विद्यालयमा दैनिक २ घण्टा, अनौपचारिक शिक्षा केन्द्रले सञ्चालन गरेको निम्न माध्यमिक विद्यालयमा दिनको २ घण्टा तथा शैक्षिक जनशक्ति विकास केन्द्रले सञ्चातन गरेको माध्यमिक तहमा वर्षभरिमा सात पटक गरी ३५ दिन मात्र सञ्चालन हुने व्यवस्था छ । जसले गर्दा कार्यान्वयन तहमा अस्पष्टता देखिन्छ ।

च) अन्य

उपर्युक्त प्रमुख समस्या एवम् चुनौतीहरू बाहेक नीतिगत तहमा नै कार्यक्रमको अवधारणात्मक अस्पष्टता यस क्षेत्रमा पर्याप्त मात्रामा योग्य र दक्ष जनशक्तिको अभाव, आधुनिक सञ्चार प्रविधिको प्रर्याप्त मात्रामा विकास र विस्तार हुन नसक्नु, स्थानीय निकाय र गैरसरकारी सङ्घसंस्थाहरूसँगको समन्वय तथा साझेदारी प्रभावकारी हुन नसक्नु आदि पनि यस वैकल्पिक शिक्षाको क्षेत्रमा देखिएका समस्याहरू हुन् ।

वैकल्पिक शिक्षालाई प्रभावकारी बनाउने उपायहरू

वैकल्पिक शिक्षाको क्षेत्रमा देखिएका समस्याहरूको समाधान गरी वैकल्पिक शिक्षालाई प्रभावकारी बनाउन निम्नानुसार गर्नुपर्ने देखिन्छ :

क) नीतिगत

हाल विद्यमान खुला शिक्षा तथा दूर सिकाइ नीति, २०६३, अनौपचारिक शिक्षा नीति, २०६३ को सट्टामा एउटा छुट्टै वैकल्पिक शिक्षा नीति ल्याउने। यसैगरी अनौपचारिक विद्यालय सम्बन्धी निर्देशिका, २०६५, खुला विद्यालय सञ्चालन सम्बन्धी निर्देशिका तथा कार्यान्वयन पुस्तिकाको सट्टा नयाँ निर्देशिका विकास गरी प्रभावकारी कार्यान्वयन गर्ने व्यवस्था गर्ने । उच्च शिक्षाको सम्बन्धमा खुला विश्व विद्यालय ऐन तर्जुमा गरी कार्यक्रम सञ्चालन गर्ने व्यवस्था गर्ने । गुरुकुल, मदरसा तथा गुम्बा शिक्षा लाई मूल प्रवाहमा तत्काल ल्याउनु पर्ने ।

ख) सङ्गठनात्मक संरचना

विद्यालय तहको वैकल्पिक शिक्षासँग सम्बन्धित शैक्षिक कार्यक्रमहरू तिनओटा निकायबाट सञ्चालन भइरहेकाले कार्यक्रम सञ्चालनमा एकरूपता हुन नसकेको अवस्था रहेको छ । तसर्थ यी कार्यक्रमहरूलाई एउटै निकायबाट सञ्चालन गर्न विद्यमान अनौपचारिक शिक्षा केन्द्र र शैक्षिक जनशक्ति विकास केन्द्रको दूर शिक्षा/खुला सिकाइ महाशाखालाई Merge गरी एउटा वैकल्पिक शिक्षा केन्द्र (Alternative Education Centre) को रूपमा स्थापना गरी वैकल्पिक शिक्षासँग सम्बन्धित शैक्षिक कार्यक्रमहरू सञ्चालन गर्ने निकायको रूपमा अगाडि बढाउनु पर्दछ ।

उपर्युक्त विकल्प हुन नसकेमा वैकल्पिक शिक्षालाई प्रभावकारी रूपमा सञ्चालन गर्न शिक्षा मन्त्रालय, शिक्षा विभाग, पाठ्यक्रम विकास केन्द्र, शैक्षिक जनशक्ति विकास केन्द्र र जिल्ला शिक्षा कार्यालयमा वैकल्पिक शिक्षा शाखा स्थापना गरी सोहीअनुसार कार्यक्रमहरू सञ्चालन गर्ने व्यवस्था गरिनुपर्दछ । यसैगरी उच्च शिक्षाको सञ्चालन खुला विश्व विद्यालय स्थापना गरी कार्यक्रमहरू सञ्चातन गरिनु पर्दछ ।

ग) पाठ्यक्रम तथा मूल्याङ्कन

वैकल्पिक शिक्षासँग सम्बन्धित कार्यक्रमहरू केवल परम्परागत पाठ्यक्रमको आधारमा मात्र सञ्चालन

नगरी वैकल्पिक शिक्षाको उद्देश्य, सिद्धान्त र अवधारणामा आधारित पाठ्यक्रम र सो पाठ्यक्रमको आधारमा पाठ्य सामग्रीहरूको विकास गरिनु पर्दछ। यसै गरी मूल्याङ्कन प्रणाली पनि पेपर र पेन्सिल टेस्टमा भन्दा परियोजना कार्य, Assignment तथा Reflection based activities मा आधारित हुने गरी व्यवस्था गरिनु पर्दछ।

घ) शिक्षण सिकाइ क्रियाकलाप/माध्यम

वैकल्पिक शिक्षाको शैक्षिक कार्यक्रमहरू दैनिक रूपमा सञ्चालन गरेर, समय समयमा सम्पर्क कक्षा सञ्चालन गरेर, स्वअध्ययन, परियोजना कार्य, श्रव्य तथा दृश्यहरू, Online, आदि जेजस्ता माध्यमबाट गरे पनि कार्यक्रमहरू सञ्चालनमा एकरूपता हुने गरी व्यवस्था गरिनु पर्दछ। सिकारुको आवश्यकता र क्षमताका आधारमा शिक्षण सिकाइ क्रियाकलाप सञ्चालन गरिनुपर्दछ। त्यसै गरी सिकारुको पहुँच र क्षमताका आधारमा media हरूको उपयोग गरिनुपर्दछ।

ङ) अन्य

वैकल्पिक शिक्षाको प्रभावकारी कार्यान्वयनका लागि यस क्षेत्रमा कार्यरत जनशक्तिको क्षमता विकास गरिनुपर्दछ। यस क्षेत्रमा पर्याप्त र योग्य जनशक्तिका लागि वैकल्पिक शिक्षासँग सम्बन्धित विषयहरू उच्च शिक्षामा अध्यापन गराउने व्यवस्था गरिनुपर्दछ। यसै गरी पर्याप्त मात्रामा सूचना तथा प्रविधिको विकास र विस्तार गरिनुपर्दछ। आधुनिक प्रविधिको पहुँचमा वृद्धि गर्न सकेमा यो कार्यक्रमको विकास र विस्तार गर्न सहज हुन्छ। देशको पुनर्संरचनाको संभारमा रहेकोले सङ्घीय स्वरूपलाई ध्यान दिई सबै सङ्घीय राज्यहरूमा यस पद्धतिको प्रभावकारी कार्यान्वयन गरिने व्यवस्था गरिनु पर्दछ।

निष्कर्ष

वैकल्पिक शिक्षा आजको सन्दर्भमा अनिवार्य भइसकेको छ। बरू यसलाई कसरी प्रभावकारी रूपमा सञ्चालन गर्ने भन्ने कुरा प्रमुख मुद्दाको रूपमा रहेको छ। खुला तथा दूर शिक्षा, अनौपचारिक शिक्षा र लचिला विद्यालयलाई एउटै नीति कार्यक्रममा सङ्गठन र व्यवस्थापनबाट सञ्चालन गर्न सके यस शिक्षाको विकास र विस्तार गरी सबैका लागि शिक्षाको प्रतिबद्धता प्राप्तिमा सहयोग पुग्दछ। यसै गरी विविध कारणले औपचारिक शिक्षामा पहुँच नपुगेका समूहलाई शिक्षामा सहज रूपमा पुऱ्याउने सशक्त माध्यमको रूपमा वैकल्पिक शिक्षालाई स्वीकृत रूपमा अगाडि बढाउनु आजको अपरिहार्य विषय हुन पुगेको छ।

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विद्यालय सुधार योजना, शिक्षा मन्त्रालय

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बाबुकाजी कार्की
जिशिअ, जिशिका, काठमाण्डौं

सारांश

शिक्षाले मानवको अन्तरनिहित प्रतिभाको प्रष्फुटन गरी सशक्तीकरण एवं दक्षता हासिल गर्दै सफल र प्रतिस्पर्धी जीवन जिउन मद्दत गर्दछ ।साक्षर र शिक्षित प्रतिशत र देश विकासको गति समानुपातिक हुन्छ । खुला शिक्षा समावेशीकरणको दैलो हो । त्यस कारण विविध कारणबाट शिक्षा हासिल गर्न विमुख भएका नागरिकलाई पुनः शिक्षामा मूल प्रवाहीकरण गरी पौरखी बनाउन खुला शिक्षा नीति सशक्त विकल्प हो। खुला शिक्षालाई प्रभावकारी रूपमा व्यवहारमा उतारी दिगोपन ल्याउन कम्तीमा पनि सरकार,समुदाय,सङ्घ संस्था तथा सरोकारवाला बिचमा सहयोग, सहकार्य, समन्वय, सञ्चार र समीक्षा(नौ स) अपरिहार्य हुन्छ ।

विषय प्रवेश

सफल जीवनका लागि आवश्यक ज्ञान र सिप आर्जन गर्न शिक्षाको अहम् भूमिका हुन्छ । सिकाइ जीवन पर्यन्त चलिरहने प्रक्रिया हो । शिक्षाको प्रारम्भिक खुड्किलो साक्षर हुनु हो । साक्षर हुनका लागि पनि मुख्यतः औपचारिक र अनौपचारिकको पद्धतिहरू उपयोग गरिन्छन् । स्थायी प्रकृतिका साङ्गठनिक संरचना भएका विद्यालय, महा विद्यालयहरूबाट सीमित उमेर अवधिका लागि दिइने शिक्षालाई औपचारिक भनिन्छ भने गर्भावस्थादेखि जीवनको अन्तसम्म अथवा कोकोदेखि काब्रोसम्मको सिकाइ अनौपचारिक शिक्षाको परिभाषामित्र पर्दछ । प्राथमिक तहमा भर्ना भएका विद्यार्थीमध्ये करिब ३३ प्रतिशतमात्र निम्न माध्यमिक तहमा पुग्ने र त्यसमध्ये ५० प्रतिशत माध्यमिक तहमा पुग्छन् । जसमध्ये ५० प्रतिशतको हाराहारीमा मात्र एसएलसी उत्तीर्ण भएको पाइन्छ*(MOE,2010)* । ठूलो सङ्ख्याको जनशक्तिले विद्यालय तहको शिक्षा पुरा नगरेको वर्तमान अवस्था एकातिर छ भने अर्कोतर्फ उत्तीर्ण हुनेहरूको प्राप्ताङ्क सरदर ५० प्रतिशत छ । कतिपय विषयहरूमा पूर्णाङ्क प्राप्त गर्नु भनेको आठौं आश्चर्य जस्तो भएको छ । कमजोर उपलब्धिस्तर भएका जनशक्ति बेरोजगार रहनु स्वाभाविकै हो । वर्तमानको ३७ प्रतिशतभन्दा धेरै जनता निरक्षर रहेको परिस्थिति एकातिर छ, भने अर्कातर्फ अनौपचारिक शिक्षा केन्द्रबाट सञ्चालित राष्ट्रिय साक्षरता अभियान, महिला शिक्षा आदि कार्यक्रमबाट आधारभूत साक्षरता हासिल गरेका लाखौं नव साक्षरलाई निरन्तर शिक्षाको मूल प्रवाहमा समेट्न पर्याप्त कार्यक्रमहरू छैनन् । जसले गर्दा साक्षर पुनः निरक्षर बन्ने जोखिम अधिक छ । तसर्थ उनीहरूको योग्यता दक्षता समायनुकूल परिमार्जन र परिष्कृत गर्दै पूर्णता दिन खुला शिक्षा अपरिहार्य हुन्छ ।

विभिन्न कारणले विद्यालयबाट बाहिरिएका जनसमुदायलाई पुनः निरन्तर शिक्षाको मूल प्रवाहमा ल्याउन खुला सिकाइ एक सशक्त विकल्प हो । परम्परागत ज्ञान र सिप अद्यावधिक गरी गुणस्तर वृद्धि गर्दै पेसागत दक्षता अभिवृद्धिका साथै विभिन्न चाहना भएका सिकारूहरूका लागि शिक्षामा पहुँचको विस्तार गर्न यसको उल्लेख्य योगदान रहन्छ ।

वास्तवमा सिक्ने क्रमको कुनै सीमा हुँदैन । पारिवारिक, आर्थिक, सामाजिक, धार्मिक, सांस्कृतिक भौगोलिक

आदि विविध कारणबाट औपचारिक शिक्षा आर्जन गर्न विमुख भएका व्यक्तिहरूका निमित्त खुला सिकाइको व्यवस्था वरदान साबित हुने तथ्यलाई नकार्न सकिन्न। दूर तथा खुला सिकाइको विकास पछिल्लो समयमा महत्वका साथ भएको छ।

दूर तथा खुला सिकाइको विकासक्रम

क) विश्व सन्दर्भ

- क्राइस्टले आफ्ना अनुयायीहरूलाई प्रशिक्षित गर्न विभिन्न स्थानमा हुने सम्मेलनमा पत्र पठाएर प्रार्थना समयमा प्रशिक्षित गर्ने गरेका थिए। *(Daniel, 1998)*
- सन् १८४० मा बेलायतको बाथमा चिट्ठीपत्रको माध्यमबाट दूर तथा खुला शिक्षाको प्रारम्भ भएको थियो।
- सन् १८७३ मा अमेरिकामा घरघरमा अध्ययन गर्ने समाजको स्थापना भएको थियो।
- सन् ९१४ मा खुला विद्यालयको सुरूआत अष्ट्रेलियाको जङ्गलमा काम गर्ने कामदारहरूका छोराछोरीलाई पढाउने व्यवस्थाबाट भएको पाइन्छ।
- सन् १९१९ मा क्यानेडाले छरिएर रहेका वस्तीका बालबालिकालाई समेट्ने उद्देश्यले खुला विद्यालय सञ्चालन गरेको थियो।
- सन् १९२६ मा तत्कालीन सोभियत सङ्घमा चिट्ठीपत्रबाट अध्ययन गर्ने समाजको स्थापना गरिएको थियो।
- सन् १९३० मा जिम्बाबेले देशमा छरिएर बसेका गोरा जातिका बाल बालिकाहरूको लागि खुला विद्यालय सञ्चालन गरेको थियो।
- सन् १९७० मा बेलायतमा खुला विश्व विद्यालय स्थापना गर्ने ऐन निर्माण भई सन् १९७१ देखि पाठ्यक्रम निर्माण गरी सञ्चालन गरिएको थियो।
- सन् १९७९ मा भारतमा नेसनल ओपन स्कुलको स्थापना भएको र हाल १३ लाख भन्दा बढी विद्यार्थीहरू अध्ययनरत छन् *(Goel.2000)*।
- सन् १९८५ मा भारतमा इन्दिरा गान्धी खुला विश्व विद्यालयको स्थापना भयो।
- सार्क मुलुक श्रीलङ्का, बङ्गलादेश र पाकिस्तानमा खुला विश्वविद्यालय स्थापना भई सञ्चालन भइ रहेको छन् भने नेपाल, भुटान, माल्दिभ्स र अफगानिस्तानमा स्थापना हुने क्रममा रहेका छन्।

ख) नेपाल सन्दर्भ

- वि.स.२०१४ मा कलेज अफ एजुकेसनको प्रौढ शिक्षा शाखाबाट युवाहरूका लागि प्रसारित कार्यक्रमताई पहिलो दूर शिक्षा पद्धति मानिएको छ।
- वि.स. २०३५ रेडियो शिक्षा शिक्षक तालिम USAID को सहयोगमा सञ्चालन भएको थियो।
- वि.स. २०५० मा दूर शिक्षा केन्द्रको स्थापना भएपछि कार्यक्रमको विकास र विस्तार भएको थियो।
- नवौं योजना २०५४-२०५९ मा खुला विश्व विद्यालयको स्थापना गर्ने नीति लिएको हो।
- शिक्षा मन्त्रालयबाट २०६९ पौष २० मा खुला शिक्षा तथा दूर सिकाइ नीति लागू गरिएको छ।

वि.सं. २०६३ माघ २५ गते मन्त्री परिषद्बाट पारित राष्ट्रिय अनौपचारिक नीतिले "विभिन्न उमेर र वर्गका व्यक्तिहरूलाई आवश्यकता अनुसार प्राज्ञिक तथा व्यावहारिक ज्ञान सिप र सूचना प्रदान गरी

अनौपचारिक शिक्षा क्षेत्रको विस्तार गर्ने"(*अशिके,२०६३)* उद्देश्य लियो । जस अनुसार हाल अनौपारिक शिक्षा केन्द्रले निर्माबि तहको खुला विद्यालय सञ्चालन गर्ने गरेको छ । त्यस्तै माध्यमिक तहको खुला विद्यालय शैक्षिक जनशक्ति विकास केन्द्रबाट सञ्चालन हुँदै आएको छ ।

खुला तथा दूर शिक्षा नीति

नेपालमा खुला शिक्षा तथा दूर सिकाइ सम्बन्धी नीति २०६३ मा लागु भएको थियो । जसमा शिक्षामा पहुँच विस्तार,परम्परागत शिक्षाको गुणस्तर वृद्धि,जीवनपर्यन्त शिक्षा र पेसागत अभिवृद्धि तथा ज्ञान र सिपको प्रमाणीकरण गर्ने नीतिलाई प्राथमिकता दिइएको छ(*शैजविके,२०६३)*।

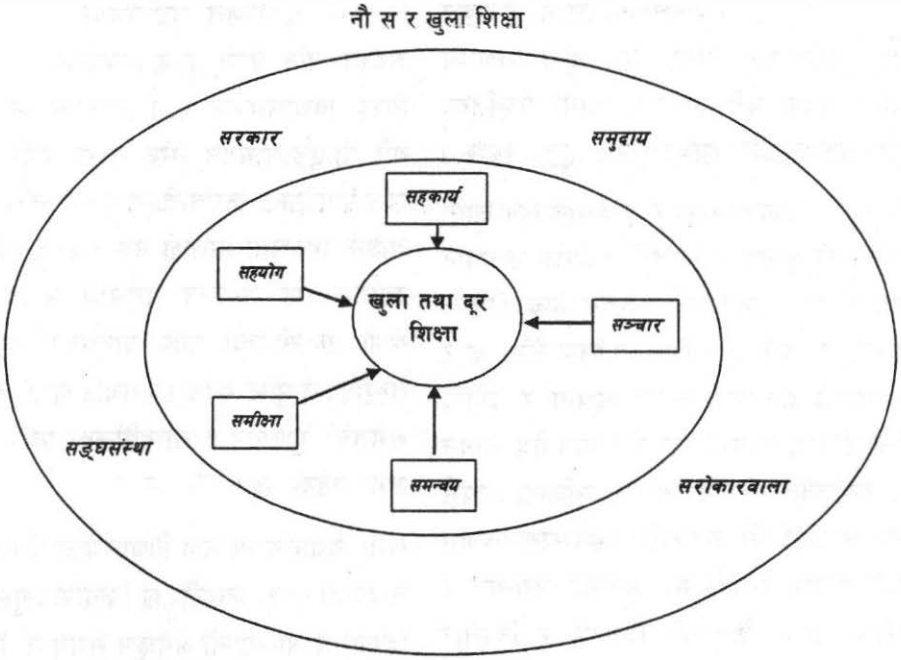
दूर तथा खुला शिक्षाका लागि कस्तो नीति अवलम्बन गर्नुपर्ला ? संस्थागत संरचना र व्यवस्थापन कस्तो ढाँचाको हुनुपर्छ ? खुला शिक्षाका लक्षित वर्ग छुट्याएर तिनीहरूको उत्साहजनक सहभागिता कसरी जुटाउन सकिएला ? संस्थाको साधन स्रोत तर्जुमा गर्न के कस्तो व्यवस्थापनको रणनीति अपनाउनु पर्ला ? शिक्षण सिकाइ क्रियाकलाप तथा विषय वस्तु निर्क्यौल कसरी गर्ने ? विश्वसनीय परीक्षा र मूल्याङ्कनको तर्जुमा के कसरी गर्न सकिन्छ ? यी र यस्तै प्रश्नहरूको उत्तरको आधारमा दूर तथा खुला शिक्षाको नीति तथा कार्यक्रम सुनिश्चित गरिनुपर्दछ । खुला शिक्षाको दायरा स्वभावले नै फराकिलो हुने भएकाले यसलाई व्यवस्थित गर्नका लागि सरोकारवालाका विचमा व्यापक छलफल एवं सहकार्य हुन जरूरी छ । कामकार्वाहीमा पारदर्शिता, निर्णयमा सरोकारवालाको सहभागिता, विकेन्द्रित जिम्मेवारी र जवाफदेहिताको नीति अवलम्बन गरिनु पर्दछ । सार्वजानिक सरकारी नीति अनुरूप साधनस्रोतको तर्जुमा र परिचालनका साथै कार्यदक्षता र प्रगतिको मूल्याङ्कनका आधार परिक्रमाभन्दा पराक्रम, हाम्रो भन्दा राम्रो तथा नियतभन्दा नीतिलाई प्रोत्साहित गर्ने खालको चाहिन्छ । खुला शिक्षाको पहुँको दायरा पनि स्वभावैले फराकिलो हुनु पर्दछ । विभिन्न कारणबाट औपचारिक शिक्षा पुरा गर्न नसकेकालाई पुनःऔपचारिक शिक्षाको मूल प्रवाहमा ल्याउने रणनीतिलाई उच्च प्राथमिकता दिइनु पर्दछ । औपचारिक शिक्षाका विकृति, विसङ्गति तथा क्षतिलाई न्यूनीकरण गर्न सक्षम खुला शिक्षा नीति आजको आवश्यकता हो ।

खुला शिक्षाका विद्यालय र महाविद्यालय छुट्टा-छुट्टै सञ्चालन गरिए तापनि सारभूत रूपमा एक अर्काका परिपूरक हुनुपर्दछ । दुवैको उद्देश्य एवं मर्म र भावना संरचनागत रूपमा सामान्य रूपमा फरक भए पनि सारमा तात्विक भिन्नता हुनुहुँदैन । राष्ट्रिय नीतिले निर्देशित गरे अनुसार खुला शिक्षाको कार्यक्रम तथा पाठ्यक्रमलाई प्रभावकारी रूपमा कार्यान्वय गरिनु पर्दछ ।

कार्यक्रमको सार्थकता तब हुन्छ, जब लक्षित वर्गको आस्था र विश्वास जिती अपनत्वको भावना सिर्जना गर्न सकिन्छ । अर्थात आर्थिक, सामाजिक, भौगोलिक, संस्कार र संस्कृति, उमेर, समय आदि विविध वाध्यतामा सहज हुने गरी सबैलाई समेट्ने खालको खुला शिक्षा नीति अवलम्वन गरिनुपर्दछ ।

खुला शिक्षा र नौ स

दूर तथा खुला शिक्षालाई सार्थक लक्ष्यमा पुऱ्याउन सरकार तथा समुदाय लगायत सरोकारवाला सबैको साथ सहयोग अपरिहार्य हुन्छ । तीमध्ये तल डायग्राममा देखाए अनुसार ***सरकार, सङ्घसंस्था, समुदाय र सरोकारवाला,*** तथा तिनीहरूको बीचमा ***स्वामित्व, समन्वय, सहकार्य, समीक्षा र सञ्चार*** (नौ स) *(कार्की,२०६७)* को प्रवाभकारी कार्यान्वयनबाट खुला शिक्षा दिगोरूपमा फस्टाउने यर्थात हो ।



सार्वजनिक निजी साझेदारी अवधारणाको मर्मलाई आत्मसात् गर्ने नीति लिएमा सहकार्य समन्वय र सद्भावलाई प्रवर्द्धन गर्छ। सरोकार पक्षको अपनत्वको भावनालाई बढावा दिनुपर्छ। खर्च मितव्ययी गर्न विषयगत विशेषज्ञताताई शिक्षणमा भित्र्याउन आंशिक सेवा करारमा लिने व्यवस्था गरिनु पर्दछ। खुला शिक्षा सञ्चालन एवं व्यवस्थापनमा सामुदायिक अध्ययन केन्द्रलाई पनि जिम्मेवार बनाउन सकिन्छ। विद्यार्थीको जीवनपद्धतिताई सहज र प्रतिस्पर्धी बनाउन आवश्यक ज्ञान, सिप र अभिवृत्तिको विकास र विस्तार गर्ने खालको विषय एवं विधि हुनु पर्दछ।

पाठ्यक्रममा र सूचना तथा सञ्चार प्रविधि (ICT)

पाठ्यक्रम पाठ्यपुस्तकलाई यथासक्य स्थानीयकरणका साथै समयानुकूल परिमार्जन र परिस्कृत गर्ने लचकता प्रदान गर्नाले जीवनोपयोगी शिक्षा हांसिल गर्ने मौका प्राप्त हुनुको साथै कार्यक्रममा रोचकता ल्याउन पनि त्यत्तिकै हौसला प्रदान गर्दछ। खुला शिक्षा र नियमित औपचारिक शिक्षाका पाठ्यक्रमहरू बिच तात्विक फरक हुनु हुदैन। नियमित र खुला शिक्षाबाट एक अर्कामा जान सक्ने खालका पाठ्यक्रम लागु गरिनुपर्दछ। पाठ्यवस्तुको प्रकृति र आवश्यकता अनुसार सम्पर्क कक्षा र सञ्चार माध्यमबाट सिक्ने सिकाउने खालको सिकाइ प्रणाली चयन गरिनुपर्दछ। परम्परागत शिक्षण विधिलाई विस्थापन गर्दै सूचना तथा सञ्चार प्रविधि (ICT) अनुरूप e-learning लाई प्रोत्साहित गरिनुपर्दछ। इमेल, इन्टरनेट, टेलिफोन, टेलिभिजन, एफ.एम, मोवाइल, टेलिकन्फ्रेन्सिङ, भिडियो कन्फ्रेन्सिङ *(शैजविके,२०६३)* आदि सञ्चारका माध्यमको चयन विषय अध्ययनकर्ताको पहुँच र क्षमता अनुसार गरिनु पर्दछ। वर्तमान प्रतिस्पर्धी युगमा गुणस्तरीय जीवनयापन गर्नका लागि विज्ञान र प्रविधिमा भएको नवीनतम ज्ञान र सिपबाट सुसज्जित हुन इच्छुक जो कोहीलाई खुला शिक्षाले समेट्न सक्नुपर्दछ। सिकाइ भाषाको माध्यम लक्ष्यित वर्गको चेतना एवं शिक्षाको स्तरको आधारमा स्थानीयकरण गर्दै दायरा फराकिलो

गर्नुपर्दछ। विद्यालय शिक्षाको लागि देशभर विद्यालयहरू सञ्चालन गरिए जस्तै खुला शिक्षाका लागि पनि पायक पर्ने ठाउमा स्थायी प्रकृतिका संस्थागत संरचनाको व्यवस्थापन हुनु पर्दछ ।

प्रारम्भमा खुला शिक्षाको सम्पर्क र अध्ययनका लागि शैक्षिक संस्थाको रूपमा अनौपचारिक शिक्षा केन्द्रबाट सञ्चालित १८३१ सामुदायिक अध्ययन केन्द्र, शैक्षिक जनशक्तिबाट सञ्चालित शैक्षिक तालिम केन्द्र क र ख तथा स्रोतकेन्द्रहरूलाई समेत सूचना र प्रविधि लगाएतका शैक्षिक सामग्री एवं दक्ष मानवीय साधन स्रोतबाट सुसज्जित गरेर प्रयोग गर्न सकिन्छ । त्यसै गरी अन्य सरकारी गैर सरकारी सङ्घसंस्थाहरूसँग उनीहरूको क्षमता र हैसियत अनुसार समन्वय र साझेदारीमा खुला शिक्षाको विकास र विस्तार दिगोरूपमा गर्न सकिन्छ। खुला शिक्षाको आवश्यकता र औचित्य, विकास र विस्तार एवं लोकप्रियता त्यहाँबाट उत्पादन हुने विद्यार्थीको उपलब्धिस्तरले निर्क्यौल गर्दछ ।

परीक्षा र मूल्याङ्कन

खुला शिक्षाको वैधानिकता र विश्वसनीयतालाई सुनिश्चित गर्नको लागि व्यवस्थित र मर्यादित परीक्षा प्रणालीको अहम् भूमिका हुन्छ। विद्यार्थीको उपलब्धि धरातल पत्ता लगाई उनीहरूको प्रगतिलाई निरन्तर प्रोत्साहित गर्नका लागि परीक्षा र मूल्याङ्कन केन्द्रित हुनुपर्छ। शैक्षिक जनशक्ति विकास केन्द्रबाट ८५ खुला माध्यमिक विद्यालय सञ्चालनमा छन। खुला विद्यालय स्थापना भए पश्चात् २०६५ सालको एसएलसीमा १,१६३ जना सम्मिलित भएका परीक्षार्थीहरू मध्ये ५५९ जना अर्थात् ४४.०७ प्रतिशत र २०६६ सालमा ४,२९१ जनाले जाँच दिएकोमा २,६९६ अर्थात ६२.८८ प्रतिशत उत्तीर्ण हुनलाई उत्साहजनक उपलब्धि मान्न सकिन्छ। खुला शिक्षा पद्धतिबाट जो कोही पेसाकर्मीलाई नवीनतम ज्ञान र सिपबाट सुसज्जित भई पेसागत दक्षता बढाउने अवसर पनि प्राप्त हुन्छ। जसको पुष्टि पूर्वाञ्चल विश्व विद्यालयबाट हाल सञ्चालनमा रहेको एक वर्षे बी.एड.अध्ययन गरेर उच्च श्रेणी हासिल गर्ने राज पत्राङ्कित कर्मचारीहरूले पदोन्नति प्रतिस्पर्धामा अधिक सफलता मिलेको यथार्थ हो। अर्कोतर्फ उक्त स्नातक तह अध्ययन गर्नेमध्ये अधिकांशले प्रथम श्रेणी वा सोभन्दा माथि प्राप्ताङ्क ल्याउने गरेको तथ्याङ्कले पुष्टि गर्दछ। जसबाट खुला विश्वविद्यालय समेतको गुणस्तर र सान्दर्भिकता एवंम् लोकप्रियता अझ बढेको छ।

खुला विद्यालय वा महा विद्यालयको परीक्षा प्रणालीमा लचकता हुनु जरूरी छ किनकि खुला शिक्षामा विद्यार्थीले आ-आफ्नो अनुकूल समयमा शिक्षा आर्जन गर्ने भएकोले उनीहरूको परीक्षा र मूल्याङ्कनको समयमा पनि लचकता अपनाउनु व्यावहारिक हुन्छ। जसका लागि विद्यार्थीको मागमा आधारित परीक्षा (On demand exam.) सञ्चालन गर्न सकिन्छ। विद्यार्थीको आन्तरिक परीक्षा शिक्षकले लिने व्यवस्था हुनु पर्दछ। कम्प्युटर तथा इल ष्लिभ मा आधारित परीक्षा तथा फोनबाट प्रत्यक्ष वार्ता गरी मौखिक परीक्षा लिन सकिन्छ। Assignment को आधारमा लिने परीक्षाको लागि पनि केही अङ्कभार छुट्याउन सकिन्छ। खुला शिक्षा कार्यक्रमको अनुगमन र निरीक्षण वर्तमान शिक्षाको संरचनाको अतिरिक्त सेवाग्राही र सरोकारवालाको प्रत्यक्ष संलग्नतामा गर्ने नीति भएमा कार्यक्रम अझ सशक्त हुनेछ। तर गुणस्तरीयता कायम राख्न कुनै पनि किसिमको सम्झौता गरिनु हुन्न। अनुगमन निरीक्षणलाई आवद्ध संस्था र पदाधिकारीहरू बिच सञ्जाल खडा गरी आपसी समझदारीको आधारमा कार्यक्रम बनाई निरन्तरता दिन सके वास्तविक रूपमा फलदायी अनुगमन हुनेछ।

आर्थिक व्यवस्थापन

दूर तथा खुला सिकाइ सञ्चालनमा आर्थिक व्यवस्थापनले प्रत्यक्ष असर पार्दछ। दूर तथा खुला शिक्षा परम्परागत औपचारिक शिक्षा भन्दा सस्तो पर्ने यथार्थता हो। राज्यबाट शिक्षामा पर्याप्त लगानी गर्न नसकेको वर्तमान परिप्रेक्षमा खुला शिक्षामा पूर्ण लगानीको अपेक्षा गर्न सकिन्न। त्यसकारण आर्थिक व्यवस्थापनका लागि निम्नानुसारको नीति व्यावहारिक हुन सक्छ।

क. आधारभूत तहको शिक्षा निःशुल्क (Cost free) गर्ने।

ख. माध्यमिक तहको हकमा लागत साझेदारी (Cost sharing) गर्ने।

ग. उच्च शिक्षाको हकमा आपूरण (Cost recovery) को नीति अवलम्बन गर्ने।

उल्लिखित खर्च व्यवस्थापन औपचारिक शिक्षातर्फ राज्यले लिएको नीति नै आवश्यकता अनुसार क्रमिकरूपमा लागू गर्दै जानु न्यायोचित हुन्छ किनकि अहिले खुला विद्यालयमा पढाउने पर्याप्त दक्ष शिक्षकको अभाव भएको सर्वत्र गुनासो छ। नागरिकलाई उनीहरूका योग्यता, क्षमता आवश्यकता र चाहना अनुसारको शिक्षा आर्जन गर्ने अवसरको सुनिश्चित गर्नु राज्यको दायित्व हो।

अन्तमा, खुला शिक्षा समावेशीकरणको ढोका हो। उमेर, समय, पाठ्यक्रम विषयवस्तुमा लचकता भएकोले यसमा सबैको पहुँच सहज हुन्छ। नेपाल जस्तो धार्मिक, सांस्कृतिक, सामाजिक, आर्थिक विविधता र भौगोलिक विकटता भएको देशको शिक्षामा विकास र विस्तारका लागि खुला शिक्षा अपरिहार्य छ। शिक्षाको सहज पहुँचबाट अन्तरनिहित प्रतिभाको प्रस्फुटन गराउँदै एक पौरखी नागरिक बनाउन व्यवस्थित एवं गतिशील खुला शिक्षा नीति अत्यावश्यक हुन्छ। नियमित र खुला शिक्षा एक अर्काका परिपूरक हुन्। तसर्थ, खुला मानसिकताले यी दुवैलाई उतिकै महत्व दिएर सञ्चालन गर्नु भनेको मौजुदा जनशक्तिलाई नवीनतम ज्ञान र सिपबाट सुसज्जित एवं सशक्तीकरण गर्दै नयाँ नेपाल बनाउने कुशल कालिगढ उत्पादन गर्नु हो।

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Educational video production techniques

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Media takes many forms in our world today. One can use any form of media to express your ideas and present opinions to the public. The media is often considered the mouthpiece of modem culture.

Video is becoming increasingly more productive as a supplemental medium for education to traditional textbooks and classroom lectures. The videos can take on a traditional serious tone or they can take a light-hearted and entertaining approach to education depending on the audience age and the material. Video can reach the listeners/ learners more effectively compared to the other forms like text or a PowerPoint presentation.

Production process

The *production process* refers to the stages (phases) required to complete a media product, from the idea to the final master copy. The process can apply to any type of media production including film, video, television and audio recording. The stages in each medium vary: for example, there is obviously no storyboard in an audio recording. However, the same general concepts work for any medium.

The three main stages of production are:

1. Pre-production: Planning, scripting & storyboarding, etc.
2. Production: The actual shooting/ recording.
3. Post-Production: Everything between production and creating the final master copy.

Terminologies used

a. Shot:

The video is made up of shots. A shot is basically from when you press record to when you stop recording. Like the individual photos which make up an album, the shots are put together to make a video.

b. Framing & composition:

The *frame* is the picture one sees in the viewfinder (or on a monitor). *Composition* refers to the layout of everything within a picture frame - what the subject is, where it is in the frame, which way it is facing/looking, the background, the foreground, lighting, etc.

When you "frame" a shot, you adjust the camera position and zoom lens until your shot has the desired composition.

c. Transition:

Shots are linked (edited) in a sequence to tell a larger story. The way in which any two shots are joined together is called the *transition*.

Usually this is a simple *cut*, in which one shot changes instantly to the next. More complex transitions include *mixing*, *wipes* and *digital effects*. A moving shot (e.g. pan) can also be thought of as a transition from one shot to a new one.

The transition is very important in camera work, and one has to think constantly about how every shot will fit in with the ones before and after it. The key is not so much how the transition is achieved technically, but how the composition of each shot fits together.

d. Shot Types

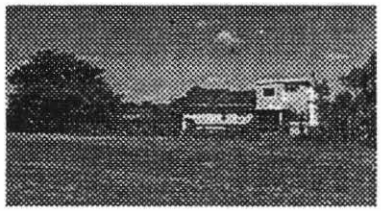
There is a convention in the video, film and television industries which assign names and guidelines to common types of shots, framing and picture composition. The list below briefly describes the most common shot types.

EWS (Extreme Wide Shot)

The view is so far from the subject that he isnot ever visible often it is used as an establishing shot.

VWS (Very Wide Shot)

The subject is visible (barely), but the emphasis is still on placing him in his environment.



WS (Wide Shot)

The subject takes up the full frame, or at least as much as comfortably possible.

MS (Mid Shot)

Shows some part of the subject in more detail while still giving an impression of the whole subject.

MCU (Medium Close Up)

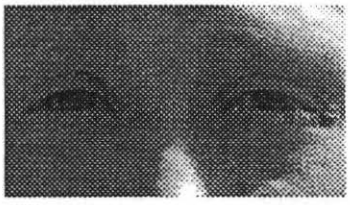
Half way between a MS and a CU.

CU (Close Up)

A certain feature or part of the subject takes up the whole frame.

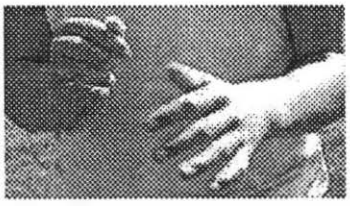
ECU (Extreme Close Up)

The ECU gets right in and shows extreme detail.



Cut-In

Shows some (other) part of the subject in detail.



CA (Cutaway)

A shot of something other than the subject.

Two-Shot

A shot of two people, framed similarly to a mid shot.

(OSS) Over-the-Shoulder Shot

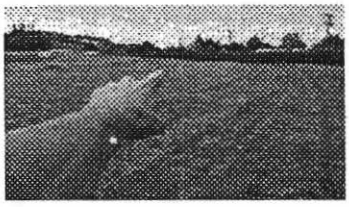
Looking from behind a person at the subject.

Noddy Shot

Usually refers to a shot of the interviewer listening and reacting to the subject.

Point-of-View Shot (POV)

Shows a view from the subject's perspective.



Weather Shot

The subject is the weather. Can be used for other purposes, e.g. background for graphics.

e. Camera angles

The term *camera angle* means slightly different things to different people but it always refers to the way a shot is composed. Some people use it to include all camera shot types, others use it to specifically mean the angle between the camera and the subject. We will concentrate on the literal interpretation of camera angles, that is, the angle of the camera relative to the subject.

i. Eye-Level : This is the most common view, being the real-world angle that we are all used to. It shows subjects as we would expect to see them in real life. It is a fairly neutral shot.

ii. **High angle :** A high angle shows the subject from above, i.e. the camera is angled down towards the subject. This has the effect of diminishing the subject, making them appear less powerful, less significant or even submissive.

iii. **Low Angle:** This shows the subject from below, giving them the impression of being more powerful or dominant.

iv. **Bird's Eye :** The scene is shown from directly above. This is a completely different and somewhat unnatural point of view which can be used for dramatic effect or for showing a different spatial perspective. In drama it can be used to show the positions and motions of different characters and objects, enabling the viewer to see things the characters cannot. The bird's-eye view is also very useful in sports, documentaries, etc.

f. Camera moves

As with camera framing, there are standard descriptions for the basic camera moves. These are the main ones:

i. **Pan:** The framing moves left & right, with no vertical movement.

ii. **Tilt:** The framing moves up & down, with no horizontal movement.

iii. **Zoom:** In & out, appearing as if the camera is moving closer to or further away from the subject. (There is a difference between zooming and moving the camera in and out, though. When a shot zooms in closer to the subject, it is said to be getting "tighter". As the shot zooms out, it is getting "looser".

iv. **Follow:** Any sort of shot one is holding the camera (or have it mounted on one's shoulder), and one follows the action whilst walking. Hard to keep steady, but very effective when done well.

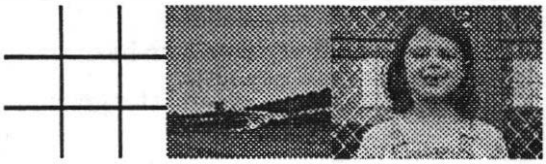
Note: Most camera moves are a combination of these basic moves. For example, when one is zooming in, unless the subject is in the exact centre of frame, one has to pan and/or tilt at the same time to end up where one wants to be.

g. Framing

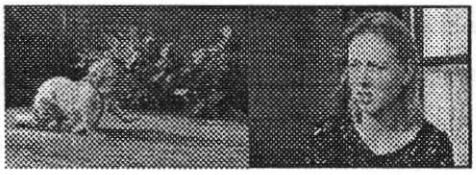
Shots are all about composition. Rather than *pointing* the camera at the subject, one needs to *compose* an image. Framing is the process of creating composition. Some Rules of Framing:

i. Look for horizontal and vertical lines in the frame (e.g. the horizon, poles, etc). Make sure the horizontals are level, and the verticals are straight up and down (unless of course you are purposely going for a tilted effect).

ii. The rule of thirds. This rule divides the frame into nine sections, as in the first frame below. Points (or lines) of interest should occur at 1/3 or 2/3 of the way up (or across) the frame, rather than in the centre.



iii. "Headroom", "looking room", and "leading room". These terms refer to the amount of room in the frame which is strategically left empty. The shot of the baby crawling has some leading room for him to crawl into, and the shot of his mother has some looking room for her to look into. Without this empty space, the framing will look uncomfortable. Headroom is the amount of space between the top of the subject's head and the top of the frame. A common mistake in amateur video is to have far too much headroom, which doesnot look good and wastes frame space. In any "person shot" tighter than a MS, there should be very little headroom.



iv. Everything in the frame is important, not just the subject. What does the background look like? What's the lighting like? Is there anything in the frame which is going to be distracting, or disrupt the continuity of the video? Pay attention to the edges of your frame. Avoid having half

objects in frame, especially people (showing half of someone's face is very unflattering). Also try not to cut people of at the joints or at the bottom of the frame, one can however, cut across a person's stomach, but not their knees. It just doesnot look right.

When one is comfortable with the do's and don'ts, one can become more creative. Think about the best way to convey the meaning of the shot. If it is a baby crawling, get down on the floor and see it from a baby's point-of-view (POV). If it is a football game, maybe one needs to get up high to see all the action.

Look for interesting and unusual shots. Most of the shots will probably be quite "straight"; that is, normal shots from approximate adult eye-level. Try mixing in a few variations. Different angles and different camera positions can make all the difference. For example, a shot can become much more dramatic if shot from a low point. On the other hand, a new and interesting perspective can be obtained by looking straight down on the scene. Be aware that looking up at a person can make them appear more imposing, whereas looking down at a person can diminish them.

h. Lighting

Light is the "raw material" for creating visual images. Everything related to vision is related to light. Whether the medium is still photography, motion film, video or computer-generated images, light forms the basis of everything one can see.

It is important to think of lighting not as something extra which is added in some situations, but as a fundamental part of ***all*** visual media production.

All video uses some sort of lighting, whether it be natural light (from the sun) or artificial lights. The goal of video lighting is to choose the best source(s) to achieve the goals.

First and foremost one need *to have enough* light. One must ensure that the camera is able to record an acceptable picture in the conditions. With modern cameras this is seldom a problem except in very low light or strong contrast.

Assuming that there is enough light, one must then consider the quality of the light and how the various light sources combine to produce the image.

If there are clashing light sources (e.g. artificial interior lights with sunlight coming through the windows), you may find the colours in your image appear unnatural. It is best to control the light sources oneself if possible (e.g. turn off the lights or close the curtains).

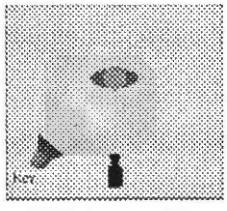
When moving between locations, think about what light source one is using. If one moves from an outside setting to an inside one with artificial lights, the *amount* of light may seem the same but the colour temperature will change according to the type of lights. In this

case one needs to white balance the camera for the new light source.

The Three Point Lighting Technique is a standard method used in visual media such as video, film, still photography and computer-generated imagery. It is a simple but versatile system which forms the basis of most lighting. Once the three point lighting is understood one is well on the way to understanding all lighting.

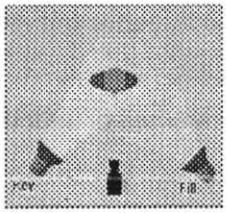
The technique uses three lights called the **key light**, **fill light** and **back light**. Naturally, one will need three lights to utilize the technique fully, but the principles are still important even if you only one or two lights is used. As a rule:

- If you only have one light, it becomes the key.
- If you have 2 lights, one is the key and the other is either the fill or the backlight.



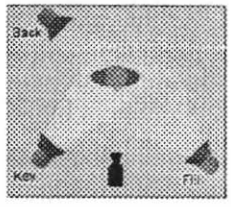
Key Light

This is the main light. It is usually the strongest and has the most influence on the look of the scene. It is placed at one side of the camera/ subject so that this side is well lit and the other side has some shadow.



Fill Light

This is the secondary light and is placed on the opposite side of the key light. It is used to fill the shadows created by the key. The fill will usually be softer and less bright than the key. To achieve this, one could move the light further away or use some spun. One might also want to set the fill light to more of a flood than the key.



Back Light

The back light is placed behind the subject and lights it from the rear. Rather than providing direct lighting (like the key and fill), its purpose is to provide definition and subtle highlights around the subject's outlines. This helps separate the subject from the background and provide a three-dimensional look.

i.Audio

Audio means "of sound" or "of the reproduction of sound". Specifically, it refers to the range of frequencies detectable by the human ear approximately 20Hz to 20kHz. It is not a bad idea to memorize those numbers 20Hz is the lowest-pitched sound we can hear, 20kHz is the highest pitch we can hear.

Audio work involves the production, recording, manipulation and reproduction of sound waves. To understand audio one must have a grasp of two things:

1. **Sound waves:** What they are, how they are produced and how we hear them.
2. **Sound equipment:** What the different components are, what they do, how to choose the correct equipment and use it properly.

Audio theory is simpler than video theory and once the basic path from the sound source through the sound equipment to the ear is understood, it all starts to make sense.

One simple way of visualizing any audio system is by dividing it up into three sections: the source(s), processor(s) and output(s).

- **The source** is where the electronic audio signal is generated. This could be a "live" source such as a microphone or electric musical instrument, or a "playback" source such as a tape deck, CD, etc.
- **The processing section** is where the signal is manipulated. For our purposes, we will include the amplifiers in this section.
- **The output section** is where the signal is converted into sound waves (by loudspeakers), so that it can be heard by humans.

j. Editing

In the early days of electronic video production, linear (tape-to-tape) editing was the only way to edit video tapes. Then, in the 1990s, non-linear editing computers became available and opened a completely new world of editing power and flexibility.

Non-linear editing was not welcomed by everyone and many editors resisted the new wave. In addition, early digital video was plagued with performance issues and uncertainty. However, the advantages of non-linear video eventually became so overwhelming that they could not be ignored.

Linear editing : Linear editing was the original video tape editing method, before non-linear editing computers became available in the 1990s. These days, many people consider linear editing to be obsolete. This is not actually true. Although non-linear editing is the preferred method for most projects, linear editing still has a place

Non linear (Digital) editing : The world of computer-based digital video editing is known as *non-linear editing*. Editing with a computer can be a complex process.

Deciding which video editing software to use is not easy. There is a huge range available, from very basic applications such as *Windows Movie Maker* to professional packages such as *Final Cut Pro, ULead MediaStudio, Avid* and *Adobe Premiere etc.*

In digital video editing, non-linear editing is a method that allows one to access any frame in a digital video clip regardless of sequence in the clip. The freedom to access any frame, and use a cut-and-paste method, similar to

the case of cutting and pasting text in a word processor, allows one to easily include fades, transitions, and other effects that cannot be achieved with linear editing.

Most general-purpose editing software does three things: Capture, Edit and Output

This means the software controls the capturing (recording) of the footage, provides a way to edit the footage, and allows the finished product to be output to a recording device such as a VCR or DVD.

k. Script writing, presentation and final script writing

Script writing is a real or imagined piece of text setting out what somebody is to say or do on a specific time. For anyone writing a script it is necessary to visualize the shots, as this will help the production crew whilst on location. The best script might actually be a storyboard containing the copy and a drawing for each shot

In educational video film, a Split- Page format is used. The video information is written down on one side of the page and audio information is placed opposite it.

Table-1 : Split- page format of script

Video	Audio

Conclusion

In film and video, *production* refers to the part of the process in which footage is recorded. This is what most people imagine when they think of a film being made-actors on sets, cameras rolling, etc. The production phase is also known as *principal photography*.

The goal of principal photography is obviously to record all required shots, however it is fairly common to shoot "pick-up" shots in post-production. Pick-up shots may be required when a mistake is noticed, a script change is made (this is unusual), or even if a performance is deemed to be unsatisfactory.

Prior to shooting a sheet with the locations and the shot list is prepared so that everyone knows what is going on and what should be done on location. This is a simple method used by crew members, especially the director, of the programme and the cameraman and it helps to keep track with the shots required for the editing.

Post-production is the third and final major phase of the production process. It is often referred to simply as *post*, e.g. "We can sort that out in post".

There are many things which can happen in post-production. Common tasks include:

- Capturing and editing video footage
- Voice recording

- Editing the soundtrack, adding sound effects, music, etc.
- Adding titles and graphics
- Colour and exposure correction
- Adding special effects
- Making a CD/DVD

Editing is a fairly tedious task as it is meant for adjusting the script according to the shots that were available. As some shots are not available due to time constraints and unavailability of resources, some elements of the text are removed.

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Empowering the dalit women

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Introduction

In order to trace the traditional status of "Dalit women" one has to trun over the pages of Nepalese history on the origin and features of the caste system.

The caste system is probably the longest surviving hierarchical system in existence in the world today. Its roots can be traced back to the "Manusmriti" a sacred document of the Hindus. The Hindu social organization is traditionally divided into two substrata known respectively as Dwija and Sudra. The Dwija comprises three higher Varnas-the Brahman, the Kshatriya and the Vaishya. The Shudra consists of the lower castes (Dalits) who are meant to serve the Dwija and are thus placed lower in the social order (Samel, 2006). The caste system was, however, formally abolished following the introduction of the New legal code (Naya Muluki Ain) in 1963.

The story of women in Nepal in general depicts a continued way of exploilation and discrimination. The society refuses to recognise their potenlialities, hardwork and contribution to the welfare of the society. They are considered to be unequal and inferior to men. Women are possessious, subjugation to men, They have no independence. Anit-women ideas and acts are glorified. The Dalit woman is a socialforce, a cultural symbol and has a historical background.

Dalit women, like other Nepalese women, perform three roles: 1) reproductive, 2) productive, and 3) community. They spend most of their lives in reproductive and domestic work, including giving birth, child care, cooking, washing clothes, fetching water, collecting firewood and raising animals. They also work as agricultural labourers, daily wageworkers, perform traditional occupation and engage in homehold production. Despite doing all these types of work, they are still deprived of ownership of property (BPFA, 2010).

Dalit women are triply exploited: being a woman, being a victim of partriarchal society, and being a woman of Dalit caste (Yami, 1995 as cited in FEDO, 2002). Being a Dalit is a reason enough to be ready to face a life full of miseries, suffering degradation and dehumanized way of life. Being a woman means a life of exploilation in the name of sex, a weak variety of human subordinating to man, unwanted burden since birth and a domestic

servant for life. Almost all Dalit spokesmen (mostly men) clearly recognise women to be the most oppressed of their groups. Dalit among the Dalits and also oppresed.

B.R. Ambedkar, the leader of Dalits, described the Hindu caste sysem as a pyramid of earthen pots set on to one other where Brahmins and Kshatriyas are at the top, Shudras and the untouchables are at the bottom like crushed and wasted powder. And at the very bottom are the Dalits and below them are the suppressed Dalit women (Samel, 2006).

Status of dalit women in Nepal.

In Nepal, women are basically oppressed and are not treated at par with men. Moreover, the Dalit women are oppressed among the oppresed and slaves of the slaves. People living outside the boundaries of village, away from civilization and education are Dalits. Women are treated as commodity and second class citizens. Nepal is one of the seven nations, in South Asia, with a social structure that is predominanthy patriarchal with inscriptive values combined with gender disparity contrary to the constitutional provisions, equality in education, occupation, property rights, civil services, wages and political structure (Chalise, 1995).

The law is made for society but its implementation will be unsatisfactory. There is no any consideration regarding the rights and liberties of women. There are still pervasive laws and regulations posing the sex or gender discrimination. Instead of attempting for equality, women are still under miserable conditions. Though the Supreme Court has recently given directives protecting the marital property rights and personal liberty, the perception of society has not been changed yet (FEDO, 2003).

Dalit women are the most backward of women in Nepal. As a group, they have been deprived of the opportunity to own land, they do not own houses. Poverty affects all members of Dalit households specially Dalit women. Being illiterate, they are not aware of their own rights and their own life situation. Therefore, the educational status of Dalit women can be tabled as table 1.

At present, a majority of Dalits in Nepal are deprived of education. The above table shows that the literacy rate of all women in Nepal is 54.5 percentage, but for Dalit women it is only 34.8 percentage. Similarly, only 11.8 percentage of Dalit girls are enrolled in secondary or higher levels of education. These educational disadvantage are tagged with social andeconomic disadvantages of the Dalit community. To address this, it is essential that education should be free and compulsory, and that education levels, in both technical and non-technical fields should be made accessible to them.

There is also an under representation of Dalit women in the Teaching Profession, and

Table1 : Differences in educational attainment by gender, caste and ethnicity.

S.N.	Caste/Ethnicity	Literacy rate (%)		Secondary School or Higher level Education (%)	
		Female	Male	Female	Male
1.	All Brahman/Chhetri	68.6	92.8	44.4	75.4
2.	Madeshi other caste	24.4	72.0	12.1	44.5
3.	All Dalits	34.8	59.9	11.8	23.2
4.	Newar	74.6	93.5	46.1	70.0
5.	All Janjatis	56.9	79.6	26.4	45.8
6.	Muslim	26.5	61.8	12.0	25.5
7.	All Hill/Mountain groups	63.4	86.9	36.1	60.5
8.	All Teari/Madhesi groups	35.9	69.9	16.0	40.0
9.	Others (unidentified)	62.3	97.4	20.8	75.8
10.	All Nepalese	54.5	81.0	29.3	53.5

Source: UNDP, Nepal Human Development Report 2009.

particularly in higher levels of education (SSR core Document, 2008). Statistics for all women are already below par. The position for Dalit women is even worse. Therefore, under representation in the teaching profession contributes to continued discrimination against Dalit girl students in schools. The existing situation of Dalit girls' enrolment and Dalit women teachers in school education have been shown below:

Table2 : Share of women, Dalit, Janjatis- Student/Teachers (2009-10) in percentage

S.N.	Level	Primary (1-5)	Lower Secondary (6-8)	Secondary (9-10)	Higher Secondary (11-12)
1.	Girls percent	50.1	49.0	48.1	51.3
2.	GPI	0.98	0.96	0.97	1.01
3.	Dalit girls	20.0	12.6	8.6	4.2
4.	Janjatis girls	38.6	41.7	40.7	22.9
5.	Disabled girls	1.1	0.8	0.7	0.3
6.	Women teachers	39.6	24.7	15.6	4.7
7.	Dalit teachers	4.2	2.0	2.9	0.7

Source: DOE, 2009 and MOE, 2010.

The above table shows that, as a whole, girls' participation in school education is seen good but the percentages of Dalit, Disabled and Janjati girls are very low. Similarly, participation of Dalits in Teaching profession at higher secondary level is 0.7 percentage which is very low. If we separate the Dalits and Janajati teachers by sex, then the position for Dalit women is teaching profession in seen worse. The scinario of Dalit Women Teachers is given below:

Table 3 : Share of Dalit/Janajati teachers in schools by sex. (2009/10) in percentage

S.N.	Social groups	Primary (1-5)			Lower Secondary (6-8)			Secondary (9-10)			Higher Secondary (11-12)		
		F.	M.	Total	F.	M.	Total	F.	M.	Total	F.	M.	Total
1.	Dalit	2.2	5.6	4.2	1.3	2.3	2.0	2.1	3.1	2.9	0.7	0.6	0.7
2.	Janajati	24.8	22.4	23.4	15.6	16.1	16.0	10.4	10.6	10.6	26.4	5.2	16.2

Source: DOE, 2009 (Consolidated Report, 2010)

The above table presents the share of teachers by social groups (i.e Dalit and Janjati) and levels. In comparison to Janajati teachers, Dalit women teacher's share is very low.

The economic condition of most of the Dalit communities is miserable. The economic condition of the Dalit women today has remained stagnant when compared to women as a whole. Dalit women in the Terai today have the worse economic situation of any group of women in any region of Nepal. Haribansha Jha (1999), an economist, has estimated that about 68 percentage of Dalit women suffer from disproportionately high unemployment rates and therefore, it is almost impossible for Dalit empowerment both in employment and politics in Nepal.

Table 4: Position of women's jobs

S.N.	Kinds of Jobs	Percentage of all positions held by women candidates
1.	Women in professional jobs	29.78
2	Women in administrative jobs	28.95
3	Women participating in local election	19.33

Source: Nepal Demographic Health Survey (NDHS) 2006 and NLSS (2003\04)

According to Nepal Living Standard Survey (NLSS), the average consumption for Brahmin/Chhetri (higher castes) household is almost double that of Dalit households (Nrs. 19,105 compared to NRS. 10207). So the economic condition of Dalit women is depressing because they are unemployed and mostly involved in non-skilled job and agriculture.

The participation of women in civil services, police and private sector is very low. The scenario is given below:

Table 5 : Number of civil servants

S.N.	Class	Number of civil servants	Percentage of women	
			1991	2000
1.	Special	85	3.5	2.4
2.	First	633	5.1	4.1
3.	Second	2719	4.9	3.2
4.	Third	7418	5.3	5.2
5.	Non-gazetted	87,834	8.0	8.2
	Total	98,689	7.7	7.8

Source: UNDP, Nepal Human Development Report 2009.

There are only two women in Secretary position in civil service. There is only one joint secretary, one district education officer, comparatively few section officers and some are in non-gazetted post in education sector. Some are in managerial posts also like Head teacher, Principal but not a single woman in post of vice-president or like that at the University level.

Also, political participation power is measured by women's percentage share of parliamentary seats. In Nepal, this has increased dramatically, from a mere 3.4 percent in 1991 and 5.8 percent in 1999, to almost 33 percent in the 2008 Constitution Assembly (CA). A similar shift has occurred in representation of Dalit women. Until 2008, Dalit women were almost entirely absent from parliament and had only one representative during the entire multiparty period. After the adoption of special quotas prior to the 2008 election, there are now 25 Dalit women in the Constitution Assembly.

Women's representation is local government is given below:

Despite a number of initiatives and provisions made by the government in different sectors, the resources allocated for empowering and

Table 6 : Women's representation in local government, 1997-2000, Nepal

S.N.	Social bodies	Total represention	Share of women (010)
1.	District Development Council	10,000	1.5
2.	District Development Committee	1117	6.7
3.	Municipalities	4146	19.6
4.	Village Development Committee	50857	7
5.	Village Councils	183865	2.1
6.	Ward Committee	176031	20.0
7.	Constitution Assembly	601	32.7 (2008)

Source: UNDP, Nepal Human Development Report 2009.

including both women and Dalit women are either too low or not properly used. This demonstrates the very poor performance and low priority of the government towards the empowerment of women and gender equality. It is clearly a matter of weak political will. The convention, CEDAW (Convention on Elimination of All Kinds of Discrimination Against Women) ratified by Nepal, has also obliged various guidelines to be adopted for the welfare of women. Based on this, the government has started some programs for women. But they do not cover Dalit women. Dalit women are deprived of all these rights. A few women belonging to the so-called upper caste have benefited from such povision. Despite the positive laws and regulations for women, the problems regarding Dalit women

Table 7 : Share of Nepalese Women in different sectors

S.N.	Sector	Male	Female
1.	Total population	49.96	50.03
2.	Average age	61.8	62.2
3.	Literacy	62.2	34.6
4.	Representative assembly	94.15	8.85
5.	National assembly	86.67	13.33
6.	Cabinet	94.45	5.55
7.	Public service	91.45	8.55
8.	Teaching profession	74.00	26.00
9.	Media communication	88.00	12.00
10.	Foreign employment	89.15	10.85
11.	Land owner	89.16	10.83
12.	House holders	94.49	5.51

Source: CBS, 2001

are immense: domestic violence, trafficking, dowry, Inter-caste marriage, unequal remuneration, violation of rights to property and problems of Badi women.

The above table further shows that present status of Nepalese women in different sectors is not encouraging. The participation of women is very low (hardly 5 percent) in cabinet and householders sector. Although the condition of Dalit women in the above sectors is very miserable, the Interim Parliament has passed a bill to ensure at least 33 percent women's representation in all the state machinery.

Issues and challenges

Issues:

Since the political change in 2007, the situation of women has certainly improved but not as much as it should have. Its significant achievement lies in electing 197 women members, almost 33 percent of the total seats. Out of 197 women, there are 25 Dalit women in the Constituent Assembly (FFDO, 2010) Beijing Action Plan, Convention on the Elimination of all forms of Discrimination Against Women related National Action Plan and controlling girls trafficking, have been prepared with women issues taken into consideration.

Remaining under the constitutional parameter, Dalit (Dalit women) and marginalized community issues must be addressed in the new constitution if the peace process wants to gain momentums. Dalit women are still at the bottom from socio- economic and political perspective. Nepal has already entered in constitution making process but Dalit rights are not fully secured..

Political issues, economic issues, social issues, legal issues, education issues, health issues and election system have to be revamped to address the challenges Dalit women are facing (FEDO,Annual Report, 2009).

The Beijing Action Plan for Dalit women has pointed out:Dalit women and poverty, education training, Dalit women and health, violence against Dalit women, Dalit women and armed conflict, Dalit women and the economy, Dalit women in power and decision making, human rights of Dalit women, Dalit women in media, the Dalit girl child/trafficking as being interrelated.

Challenges:

According to FEDO, Annual Report (2009) political instability stands as a challenge. Nepal is highly depended on foreign assistance especially for its development programmes but the political dead lock shakes the confidence of international donor agencies. Political instability and weak government have added more challenges to the women issues, particularly the Dalit women issues.

Armed conflict in Terai: Different armed groups especially in the plains (Terai) of

Nepal, are developing in different names with their demands; so it is difficult to work in Terai for the course of Dalit women.

Weak implementation of inclusion policy combined with poor structural reform and near absence of representation in local and national government bodies or in any sector, unfavorable policies, acts and methods of functioning of state, all these stand as challenges

Future direction

To strengthen the role of Dalit women in sustainable development and peace process and to eliminate various forms of gender based violence and discriminations against women the following measures should be kept in mind:

- Launch targeted and empowerment programs for enhancing capacity and improving the living standards of the Dalit women.
- There presentation of women should be increased over 33 percent by strengthening the exercise of Dalit women's political, economical and social rights.
- Dalit women's empowerment should be enhanced through the adoption of various measures.
- Social and legal awareness programs should be carried out in order to control the dowry system.
- Special emphasis should be given to raise Dalit women's access and influence in resources and means.
- Programs for employment and social protection should be carried out for the empowerment of Dalit women.
- Reform the existing policies, legal and structural provisions for the upliftmen of Dalit women.
- Equal pay for equal work to Dalit women should be ensured.
- Equal employment opportunity, legal equity should be enhanced for Dalit women.

Conclusions and recommendations

Conclusion:

It is a pitiable scenario as one side of Nepal has entered into 21st century and the other side still lives below 31 percent poverty line. Though the Interim Constitution of Nepal, 2007, grants equal rights to all the citizens of Nepal, it is said that the caste people still suffer humiliations and discrimination in the hands of the higher class people of the society. Even the various laws and policies that have been formed for the protection of the rights of the Dalits have been always violated and misinterpreted for the benefit for the upper class of the society. It is thus clear that liberalization and globalization has made the rich people richer and the poor poorer.

Recommendations:

The following are the suggestion for the improvement of status of Dalit women in Nepal:

- Enforcement of laws at the grass root level to improve the conditions of Dalit women for the protection of their rights at the grass roots level.
- Education should be made compulsory: Basic education should be made compulsory not only by law but also by practice for them.
- Monetary assistance should be provided to Dalit parents so that they can allow their children to go to school and pursue education.
- Grievance cells should be formed at different levels of the governments with a concrete plan with an officer to investigate in a team the realities in interior villages so as to find out the facts about the harassment of the dalits or dalit women.
- Economically well off people should be motivated to bear the educational expenses of the Dalit children.

The government should bring out change in the tax laws where by the economically well off people should bear the educational expenses of the Dalit children, they should be given the tax rebate to the extent they have spent the money on the education of the Dalit children. This would have double benefits, one is that the Dalit child should be able to study without facing the financial burden and on other hand, the paying people would be benefited from tax reduction.

The married couple who do not have any children due to any reason, should be motivated to adopt the Dalit children, so that they get a deprived child who really needs their love, affection and care. The Dalit children will be benefited as they would get proper education and would be able to develop their personality through such provision.

The primary role of the teacher is to impart quality education, which not only helps students to develop, their career but also transform them into good human beings. The teachers' training programs like the refresher course, orientation programs should include teaching on human rights, social justice, and equity for all. This could make the teachers realize their roles in removing the discrimination which stands as a disease in the society.

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General trends of universal primary education

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Abstract

This paper reviews trends in educational development over the last two decades since the World Conference on Education for All (EFA) in Jomtien, Thailand. The review includes various international analyses conducted by UNESCO, Asian Development Bank and the World Bank. While acknowledging some obvious developments in educational enrolments and schooling quality, this review also finds that educational provision to date is still to meet the goals of Educational for All. The paper highlights important policy issues to be addressed in order to achieve the EFA goals, with an emphasis on eradication of poverty and gender inequalities. However, the paper argues of all the education reform efforts initiated by various governments, towards empowerment. Without empowerment, education reform initiatives will only be seen as window dressing and provide no prospects of achieving the EFA goals.

Introduction

EFA has become a significant educational development agenda since the 1990 World Conference on Education for All in Jomtien, Thailand (UNESCO, 1990). The conference set the EFA goal to be achieved by 2000. Ten years after such an international goal was set, the World Education Forum in Dakar held in 2000 reaffirmed such a goal, and extended the Jomtien commitment. While acknowledging general emphasis on the quality of schools across the world, the Forum also acknowledged that the goals of universal primary education had not been attained. Universal primary education and gender equity in primary and secondary education were set as Millennium Development Goals (MDGs), to be achieved by 2015:

- Ensuring that by 2015, all children, particularly girls, children in difficult circumstances and from ethnic minorities, have access to free primary education.
- Achieving 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.
- Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by

2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.

- Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

In 2003, a World Bank Report entitled "Achieving Universal Primary Education by 2015: A Chance for Every Child" was published. The report reviews the progress of educational provisions across the world in the 1990s. It acknowledges the trends over the 1990s and provides some encouraging evidences of political will to improve education (Bruns, Mingat & Rakotomalala, 2003), but it also notes the world remains far from the core Education for All (EFA) goal- universal primary school completion, and that such a goal will not be reached without a significant acceleration of current progress. Indeed, various reviews of educational trends suggest similar findings. the review of educational development in Asian countries found similar educational trends. Obviously, developments in educational provisions across Asian countries are made in the last few decades, but there were also findings showing that educational development in Asia was still far from ideal. Specifically, the following phenomena are criticals :

- Asia and the Pacific has accounted for more than three-quarters of adult illiterates in the developing world.
- Increase of female illiterates has outweighed the decrease in male illiterates.
- Most of the developing member countries of the Asian Development Bank still rank low in gender development as compared to other parts of the world.
- Gender disparity in illiteracy is clear in South Asia.

The review in this work was dated to educational development in Asia in the mid-2000s. More updated review of educational development in Asia can be referred to EFA Global Monitoring Report 2006. It provides the latest data analysis on educational provisions from the late 2000s to early 2010s. The report notes the following trends of development:

- There are signs that literacy is receiving increased attention. The United Nations declared 2003-2012 as the Literacy Decade. Some governments have recently begun to devote increased attention to literacy, joining countries such as Bangladesh, China and India, all of which achieved considerable results in the 2000s.
- However, despite this general trend, there has been steady but insufficient progress

towards the goals of Education for All (EFA). Changes in the Education for All Index (EDI) between 1998 and 2002 were moderate. On average, the index increased by 1.2%. Among the 163 countries for which data were available, 47 had achieved EFA goals in that year. Projections for about 90 of the remaining 116 countries in the report show that only 20 countries are likely to achieve universal primary education (UPE). Indonesia achieved UPE in 2000, but its Net Enrolment Rate (NER) had decreased to 95% by 2004, Bangladesh's NER rose from 78% in 2000 to 88% in 2004 and since then has stagnated. Twenty countries are at risk of not achieving the goal because their NERs are decreasing. These are mostly countries in transition in Central and Eastern Europe and Central Asia.

- Reviewing the developments in literacy, the report identifies that there is no standard international definition of literacy. Understanding about literacy varies, and sometimes contradict one another. The report, though, has identified two common problems in defining literacy. First, it ignores the crucial question of language (i.e. literacy in which language?). Second, there is a definitional problem towards the literacy goal. For example, a 50% improvement in literacy level is impossible for countries with literacy levels of about 50%. Different countries experience different problems in eradicating illiteracy. One cannot expect a country, which has managed to eradicate illiteracy by 50% of its illiterate population by 2015. Such a country will not be able to elevate its illiterate population to a level of literacy identified by the present world standards of literacy. Yet, it might be able to elevate the majority of the society to a level of literacy defined some two decades ago, which is considered quite a big success for such a country.
- By conventional measurements, some 771 million adults are illiterate, of which two-thirds are women. This is a fifth of the world's adult population, and the report regards it as a serious violation of human rights.
- Despite rising enrolments, about 100 million children of primary school age were still not enrolled in primary schools in 2002, of which 55% were girls. Sub-Sahara Africa, and South and West Asia accounted for 70% of these out-of-school children.
- Although East Asia and the Pacific has the highest literacy rate among the developed regions at 91%, its large

population is still home to 17% of the world's illiterates.

Pupil teacher ratio (PTR)

Proponents of small class size argue that smaller classes provide teachers with the opportunity to cover content in greater depth, minimize the depersonalization that is typical of larger classes, reduce the number of disciplinary problems and encourage student engagement (Heartling et al., 2000; Thompson & Cunningham, 2001). Opponents suggest that the benefits of small classes do not compensate for the cost associated with class size reduction policies (Hanushek, 1999). Notwithstanding the polemical arguments that have been raised, small classes provide teachers with the opportunity to teach and students with the opportunity to learn. The PTR is an internationally comparable indicator that allows one to determine the degree across countries of both students and teachers who have opportunity structures that facilitate teaching and learning. Data for the region are presented in Table 1.

Table 1: Average Primary School Pupil-Teacher Ratios in Asia Pacific Region

Country	Per Pupil Ratio in 1998	Per Pupil Ratio in 2002	Per Pupil Ratio in 2004	Per Pupil Ratio in 2006
Brunei	14.00	14.00	13.00	
Cambodia	33.00	48.00	56.00	55.00
China	22.00	19.00	20.00	21.00
Fiji	34.00	23.00	28.00	28.00
Indonesia	23.00		21.00	20.00
Japan	21.00	21.00	20.00	19.00
Lao	27.00	31.00	28.00	31.00
Macao		31.00	28.00	24.00
Malaysia	20.00	22.00	20.00	18.00
Mynmar	48.00	31.00	33.00	31.00
New Zealand	18.00		18.00	16.00
Papua	32.00	36.00	36.00	35.00
Philippines	33.00	35.00	35.00	35.00
North Korea	36.00		32.00	
Samoa	24.00	25.00	25.00	25.00
Thailand	22.00	21.00	19.00	21.00
Timor			51.00	51.00
Tonga	24.00	22.00	21.00	20.00
Vanuatu	27.00	22.00	29.00	20.00
Viet Nam	35.00	30.00	26.00	23.00
South and West Asian nations				
Afghanistan	41.00	32.00	43.00	65.00
Bangladesh	63.00	57.00	55.00	55.00
Bhutan		38.00	40.00	38.00
India	47.00	40.00	40.00	40.00
Iran	31.00	27.00	24.00	20.00
Maldives		26.00	23.00	18.00
Nepal	39.00	41.00	40.00	40.00
Pakistan			44.00	37.00
Sri Lanka	29.00			22.00

Challenges

All the efforts and achievements made by various Asian countries have to be commended. However, the persistence in educational inequalities requires attention. Despite active educational reform initiatives made by various governments in Asia, these efforts can be offset by the efforts of the advantaged social groups (or classes) to protect their interests. For example, poor kids cannot afford to participate in many co-curricular activities. Project learning and critical thinking are culture and class bound, reflecting thinking and mentalities of the middle class and educated families. The increased emphasis on experiential learning that involves traveling and school exchange requires a lot of extra resources which cannot be afforded by kids from poorer families. The increasing trend of sending kids to study overseas and for employers to recruits graduates who have overseas education is another obvious illustration of imposing disadvantages upon those who do not have the resources to gain overseas experiences. The growing emphasis on the mastery of English in many Asian countries adds difficulties in defining literacy. When there is growth in literacy in terms of the local language, the lack of an additional language makes the deprives continue to be disadvantaged socially and economically. The growing importance of ICT in learning also significantly gives an advantage towards kids from families that can provide extra resources to purchase both hardware and software. The move towards quality education is a new way of perpetuating educational deprivation among the socially disadvantaged.

Common problems of education in Asia

Despite modest progress in EFA and literacy, vigorous educational reform initiatives can be identified in many Asian countries, leading to the development of many new educational policies in the last decade. For example, Kennedy (2005) has identified new policies developed in the following countries:

Table 2: Changing schools for changing times

Country	Policy	Year
Korea	Adapting Education to the Information Age	1998
Taiwan	Towards a Learning Society	1998
Japan	Education Reform Plan for the 21st Century	2001
Singapore	Thinking Schools, Learning Nation	1997
Hong Kong	Learning for Life, Learning through Life	2000
Thailand	National Education Act	1999

Source: Kennedy, 2005

In a conference on curriculum reform in Asia organized by the Hong Kong Institute of Education in 2002, many country representatives reported that educational reforms were put forward to address various problems in education in their own countries. For example, the representation from China said, "The harder the teacher works, the more the students dislike learning". The Hong Kong representative said, "Hong Kong could not afford to lose out in the knowledge-economy". The Malaysian representative said, "The public criticized the existing curriculum is overloaded, student numbers are too big and students are unable to read." Singapore's representative said, "Education reform is needed to face globalization challenges." Thailand's representative said, "Education reform is needed to development of science and technology". The Korean representative said, "Standardized individuals lack individuality; Intellectuals lack creativity; students lack moral values." The Japan representative said, "Decline in achievements is a concern in the country." (Kennedy, p.78)

In general, despite continued efforts in developing education throughout the last half a century, Asian countries at large feel that the education system is still far from satisfactory, and the population is not competent enough to face the rapidly changing societies, the emerging knowledge societies, and the increasingly globalized economies.

Common solutions to educational problems

In 1998, the International Bureau of Education (IBE) organized a Conference on Curriculum Adaptation for the 21st Century in Switzerland. Fifteen countries were invited to report on the latest curriculum reforms in their countries. The following common trends of curriculum development were noted:

- All-around personal development, e.g. intellectual, spiritual, moral, social, physical, aesthetics;
- Students' adaptability to face rapid social changes, pluralistic society, technological changes, in order to enhance employment opportunities;
- Students' thinking abilities, critical abilities, and problem solving abilities;
- Cross-disciplinary integration;
- Right values and attitudes;
- Learning a foreign language; and
- Environmental education;

These features show some common solutions to educational problems encountered in Asian countries, leading to common emphases on:

- Integration and diversification of the curriculum;
- Lifelong learning;
- Civic and moral values;
- Individual development, creative and critical thinking;

- Key learning area (Australia, Hong Kong, Taiwan, Malaysia);
- General skills;
- Reducing loads;
- Information and communication technology;
- Decentralization;
- School-based curriculum development;
- Flexible curriculum; and Relevance.

These changes also show some common changes in social realities across Asian countries, characterized by rapid social changes such as economic restructuring, with a more competitive job market, intense global competition, increased uncertainties, and increased global competition across countries.

The above review shows several common features in Asia:

- First, there were obvious efforts made by various Asian countries to achieve EFA goals, but detailed analysis would find the pace of development towards their goals is modest.
- Second, inequality in education remains especially between genders and social classes. Some countries made obvious developments in reducing inequalities. In some countries, there were even higher enrolment rates for girls than boys, but in general, inequalities persist. The gap between the rich and the poor remains wide, and even widened in several economies such as Hong Kong, Malaysia and Taiwan.
- Third, the various reform initiatives show that many Asian countries have responded towards global trends in education. In general, these reform initiatives show signs that educational development is moving from quantitative concerns to quality concerns. Such emphasis is flexibility in curriculum.
- Four, there have been emphasis on lifelong learning in many Asian countries in order to prepare the populace to face rapid job changes in the knowledge economy, but at the same time using it as a means of broadening opportunities for everyone.

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Heutagogy as teaching learning approach to distance education

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Concepts of learning styles: Pedagogy, Andragogy and Heutagogy

In distance education, it is important to shift from teacher-directed to student-directed learning and the interest and eagerness of the learner is most essential factor. It should be slightly different from that of andragogy aspect. It is because distance education is not only about elder people, it is applicable to young people too who have not access to face to face education system. In this regard, some terminologies developed in education for different levels of learners are presented. At first, Knowles tends to separate pedagogy, related only to children, from Andragogy, related only to adults. However, in 1970-1980, he considered pedagogy and adragogy as a continuum ranging from teacher-directed to student-directed learning. Knowles perceived a learner as self-directed and autonomous and the teacher as a facilitator of learning process rather than dictator and presenter of a rigid content. There are some differences from heutagogical approach and therefore they are presented here :

Pedagogy

Pedagogy is the study of being a teacher or the process of teaching. The term generally refers to strategies of instruction, or a style of instruction. It is generally refered as the instructions to children. Pedagogy is also occasionally referred to as the correct use of instructive strategies. For example, Paulo Freire referred to his method of teaching adult humans as "critical pedagogy". In correlation with those instructive strategies the instructor's own philosophical beliefs of instruction are governed by the pupil's background knowledge and experience, situation, and environment, as well as learning goals set by the student and teacher.

Andragogy

The term andragogy was originally formulated by a German teacher, Alexander Kapp, in 1833. He used it to describe elements of Plato's education theory. Andragogy (*andr-* meaning 'man') could be contrasted with pedagogy (ped- meaning 'child' and *agogos* meaning 'leading'). Kapp's use of andragogy had some currency but it was disputed, and

fell into disuse. 'Adult education required special teachers, methods and philosophy, and he used the term andragogy to refer collectively to these special requirements'. The term was being used extensively 'to refer to the discipline which studies the adult education process or the science of adult education'. The key features of andragogy are:

- The adult learners are self-directed and responsible for their own learning;
- Self-evaluations plays important role in assessment of learning process;
- The learners bring a great volume and quality of their experience;
- Adults learn to perform better in some aspects of their life;
- Learning is organized more around life/work situation than subject matter units.
- Adults learn for better quality of life, self-confidence, and for self-actualization

With these things in mind we can look at the assumptions that Knowles makes about adult learners:

1. ***Self-concept:*** *As a person matures, his self concept moves from one of being a dependent personality toward one of being a self-directed human being.* The point at which a person becomes an adult, according to Knowles, psychologically, 'is that point at which he perceives himself to be wholly self-directing. And at that point he also experiences a deep need to be perceived by others as being self-directing' (Knowles 1983: 56). However, there is some confusion as to whether self-direction is meant here by Knowles to be an empirically verifiable indicator of adulthood which is an assumption. Children are not dependent learners for much of the time, 'quite to the contrary, learning for them is an activity which is natural and spontaneous'. It may be that Knowles was using 'self-direction' in a particular way here or needed to ask a further question - 'dependent or independent with respect to what?'

- the concept is culturally bound - it arises out of a particular (humanist) discourse about the self which is largely North American in its expression. This was looked at last week - and will be returned to in future weeks.

2. ***Experience:*** As a person matures he accumulates a growing reservoir of experience that becomes an increasing resource for learning. The next step is the belief that adults learn more effectively through experiential techniques of education such as discussion or problem solving (Knowles 1980: 43). The immediate problem we have is the unqualified way in which the statement is made. There may be times when experiential learning is not

appropriate - such as when a substantial amount of new information is required. We have to ask the question, what is being learnt. before we can make judgments.

A second aspect here is whether children's and young people's experiences are any less real or less rich than those of adults. They may not have the accumulation of so many years, but the experiences they have are no less consuming, and still have to be returned to, entertained, and made sense of. Dewey argues that age and amount of experience makes no educational difference. If this is correct. then the case for the distinctiveness of adult learning is seriously damaged.

3. Readiness to learn. As a person matures his readiness to learn becomes oriented increasingly to the developmental tasks of his social roles. It is difficult to see how this assumption has any implication at all for the process of learning, let alone how this process should be differentially applied to adults and children. Children also have to perform social roles. Knowles does, however, make some important points at this point about 'teachable' moments. The relevance of study or education becomes clear, as it is needed to carry out a particular task. At this point more ground can be made as the subject seems relevant. Hence adult education programs, therefore, should be organised around 'life application' categories and sequenced according to learners' readiness to learn'.

4. Orientation to learning. As a person matures, his perspective changes from postponed application of knowledge to immediacy of application. Accordingly, his orientation toward learning shifts from subject-centeredness to problem centered. If young children were not conditioned to be subject-centered then they would be problem-centered in their approach to learning. The question here does not relate to age or maturity but to what may make for effective teaching. We also need to note here the assumption that adults have a greater wish for immediacy of application. Tennant (1988: 22) suggests that a reverse argument can be made for adults being better able to tolerate the postponed application of knowledge.

***5. Motivation to learn*:** As a person matures, the motivation to learn is internal (Knowles 1984:12). Again, Knowles does not see this as something 'natural' but as conditioned - in particular, through schooling. This assumption sits awkwardly with the view that adults' readiness to learn is 'the result of the need to perform (externally imposed) social roles and that adults have a problem-centered (utilitarian) approach to learning' (Tennant 1988: 23).

Andragogy and pedagogy

As we compare Knowles' versions of pedagogy and andragogy what we can see is a mirroring of the difference between what is known as the romantic and the classical

curriculum (although this is confused by the introduction of behaviorist elements such as the learning contract). As Jarvis (1985) puts it, perhaps even more significant is that, for Knowles 'education from above' is pedagogy, while 'education of equals' is andragogy. As a result, the contrasts drawn are rather crude and do not reflect debates within the literature of curriculumand pedagogy. The differences of pedagogy and andragogy can be compared in the learners' charcaterisits, experiences, readiness to learn and orientation to learn. A summary can be as follows:

We need to be extremely cautious about claiming that there is anything distinctive about andragogy. In his reference to romantic and classic notions of curriculum Jarvis (1985) brings out that what lies behind these formulations are competing conceptualizations of education itself. Crucially, these are not directly related to the age or social status of learners. There are various ways of categorizing strands of educational thinking and practice - and they are somewhat more complex than Knowles' setting of pedagogy against andragogy. Four main forces of curriculum can be identified as:

Table 1 : Four main forces of curriculum

	Pedagogy	**Andragogy**
The learner	*Dependent.* Teacher directs what, when, how a subject is learned and tests that it has been learned	*Moves towards independence.* *Self-directing.* Teacher encourages and nurtures this movement
The learner's experience	*Of little worth.* Hence teaching methods are didactic	*A rich resource for learning.* Hence teaching methods include discussion, problem-solving etc.
Readiness to learn	*People learn what society expects them to.* So that the curriculum is standardized.	*People learn what they need to know,* so that learning programmes organised around life application.
Orientation to learning	*Acquisition of subject matter.* Curriculum organized by subjects.	*Learning experiences should be based around experiences,* since people are performance centred in their learning

- the transmission of knowledge,
- product
- process, and
- praxis.

Viewed in this way, Knowles' version of pedagogy looks more like transmission; and andragogy, as represented in the chart, like process. But as we have seen, he mixes in other elements - especially some rather mechanistic assumptions and ideas which can be identified with scientific curriculum making.

Beyond pedagogy and andragogy

Our educational systems have traditionally been based on Lockean assumptions which assume that the individual mind is a clean slate at birth, the world is a buzzing confusion, and that concepts and causal relations are inferred from associations of stimuli (Emery, 1974). In this paradigm, learning has to be organized by others who make the appropriate associations and generalizations on behalf of the learner. Thus, random individual experiences are taken to be very inadequate as sources of knowledge, the educational process needs disciplined students, and literacy is seen to precede knowledge acquisition. Success is based on attending to narrow stimuli presented by a teacher, an ability to remember that is not understood, and repeated rehearsal (Emery, 1974, p.2).

An alternate view is proposed by Heider who assumes that people can make sense of the world, and generalise from their particular perceptions, can conceptualize, and can perceive invariance (Emery, 1974). Thus, people have the potential to learn continuously and in real time by interacting with their environment, they learn through their lifespan, can be led to ideas rather than be force-fed the wisdom of others, and thereby they enhance their creativity, and re-learn how to learn. People want to learn and have a natural inclination to do so throughout their life. Indeed he argues strongly that teacher-centered learning has been grossly over emphasized. Rogers (1969) based his *student-centered* approach on five key hypotheses:

- We cannot teach another person directly: we can only facilitate learning;
- People learn significantly only those things that they perceive as being involved in the maintenance or enhancement of the structure of self;
- Experience which if assimilated would involve a change in the organization of self tends to be resisted through denial or distortion of symbolization, and the structure and organization of self appear to become more rigid under threat;
- Experience which is perceived as inconsistent with the self can only be assimilated if the current organization of self is relaxed and expanded to include it; and

- The educational system which most effectively promotes significant learning is one in which threat to the self, as learner, is reduced to a minimum."

Rogers (1951) also suggests that learning is natural "like breathing" and that it is an internal process controlled by the learner. Emery (1993, p79) comments on learning as "learning to learn." He said: "in learning to learn we are learning to learn from our own perceptions; learning to accept our own perceptions as a direct form of knowledge and learning to suspect forms of knowledge that advance themselves by systematically discounting direct knowledge that people have in their life-sized range of things, event and processes".

Argyris and Schon (1996) made a major contribution to the paradigm shift from teacher-centred learning to heutagogy in their conceptualization of double loop learning. Double loop learning involves the challenging of our 'theories in use', our values and our assumptions rather than simply reacting to problems with strategies found in single loop learning. In describing learner managed learning, Long (1990) suggested that learning 'is an active process in which individuals either seek out education and experiences or obtain feedback and do evaluation as they move through life's experiences' (p 36). This is more than self-directed learning as Knowles (1970) defined it in that it recognizes the value of everyday, unorganized experiences and the process of reflection.

Action learning recognizes reflection. It is therefore, the prospect of double loop learning in processes designed to facilitate learning. The teacher here takes a back seat and becomes a learner like everyone else, enabling people to become learners as well as to find solutions or, even, pose questions.

One of the most recent models to challenge traditional concepts of learning and which looks at outcomes as well as process is that of Capability (Stephenson and Weil, 1992). Capable people are those who: know how to learn; are creative; have a high degree of self-efficacy; can apply competencies in novel as well as familiar situations; and can work well with others. In comparison with competencies, which consist of knowledge and skills, capability is a holistic attribute. Developing capable people requires innovative approaches to learning consistent with the concept of heutagogy. Work-based learning (Graves, 1993; Hase, 1998) and contract learning are two examples of processes designed to enable people to become capable. These processes focus on the need to learn how to learn and are learner, rather than teacher, centered. Helping people to become 'capable' necessitates new approaches to educational management.

It is important to make a distinction between the idea of self-directed learning and heutagogy. Heutagogy is not a departure from andragogy but, rather an extension that

incorporates self-directed learning. Thenotion that pedagogical approaches to learning were perhaps inappropriate for adults was an important leap forward. Andragogy, or approaches to teaching adults, quickly became a part of the lexicon of educators, trainers, and academics. Knowles (1970, p7) defined self-directed learning as:

"The process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing learning strategies, and evaluating learning outcomes."

Knowles' definition provides a linear approach to learning and sounds a little like the chapters of a train the trainer guide. Heutagogy takes account of intuition and concepts such as 'double loop learning' that arenot linear and not necessarily planned. It may well be that a person does not identify a learning need at all but identifies the potential to learn from a novel experience as a matter of course and recognizes that opportunity to reflect on what has happened and see how it challenges, disconfirms or supports existing values and assumptions. Heutagogy includes aspects of capability, action learning processes such as reflection, environmental scanning as understood in Systems Theory, and valuing experience and interaction with others. It goes beyond problem solving by enabling proactively.

Heutagogy

Implication of the concept of truly self-determined learning, called heutagogy, builds on humanistic theory and approaches to learning described in the 1950s. It is suggested that heutagogy is appropriate to the needs of learners in the twenty-first century, particularly in the development of individual capability. A number of implications of heutagogy for higher education and teaching education are discussed.

Education has traditionally been seen as a pedagogic relationship between the teacher and the learner. It was always the teacher who decided what the learner needed to know, and indeed, how the knowledge and skills should be taught. In the past fifty years or so there has been quite a revolution in education through research into how people learn, and resulting from that, further work on how teaching could and should be provided. While andragogy (Knowles, 1970) provided many useful approaches for improving educational methodology, and indeed has been accepted almost universally, it still has connotations of a teacher-learner relationship. It may be argued that the rapid rate of change in society, and the so-called information explosion, suggest that we should now be looking at an educational approach where it is the learner

himself who determines what and how learning should take place. Heutagogy, the study of self-determined learning, may be viewed as a natural progression from earlier educational methodologies - in particular from capability development - and may well provide the optimal approach to learning in the twenty-first century.

In this era, world is becoming narrow in which information is readily and easily accessible. Due to rapid growth of technological and scientific knowledge, there is rapid change in traditional methods of teaching/training. This change has made traditional methods of education inadequate; discipline based knowledge is inappropriate to prepare for living in modern communities and workplaces. Eventually, learning is increasingly aligned with what we do; modern organizational structures require flexible learning practices; and there is a need for immediacy of learning. In this situation there have emerged some innovative approaches that address the deficiencies of the pedagogical and andragogical methods. The idea that, given the right environment, people can learn and be self-directed in the way learning is applied is not new and has been an important humanistic theme.

The thrust that underscores these approaches is a desire to go beyond the simple acquisition of skills and knowledge as a learning experience. They emphasize a more holistic development in the learner of an independent capability (Stephenson, 1993), the capacity for questioning one's values and assumptions (Argyris & Schon, 1996), and the critical role of the system-environment interface.

Heutagogy is the study of self-determined learning and draws together some of the ideas presented by these various approaches to learning. It is also an attempt to challenge some ideas about teaching and learning that still prevail in teacher centered learning and the need for, as Bill Ford (1997) eloquently puts it 'knowledge sharing' rather than 'knowledge hoarding'. In this respect heutagogy looks to the future in which knowing how to learn will be a fundamental skill given the pace of innovation and the changing structure of communities and workplaces.

Heutagogy and people organizations

The concept of capability was developed in the UK in the mid 1980s as a response to the need to improve the capacity of British organizations to compete in a shrinking marketplace. It had been recognized that globalization and its entire squeal were creating a different kind of workplace where people needed to be more than just competent in order for them and their organizations to survive in a very turbulent environment. There was no longer any certainty about one's job, chosen career, place of work, abode, relationships, and economic circumstances. Turbulence and rapid change characterized an

environment that was, and still is, dominated by economic forces beyond any individual's and most organization's control.

The world is no place for the inflexible. the unprepared. Those continue their generation who can compete in the world of capable. This applies to organizations as well as individuals. Capable people are more likely to be able to deal effectively with the turbulent environment in which they live by possessing an 'all round' capacity centered on self-efficacy, knowing how to learn. creativity, the ability to use competencies in novel as well as familiar situations and working with others. Research and theorizing about capability would suggest that there is a need to develop an understanding of how to develop capable people and how to enable capability to express itself in organizations. Both of these needs require a heutagogical approach.

An example of the need to shift to a heutagogical approach can be found in what could be called the 'myth of flexible delivery'. Since Knowles and the rise of concepts such as instructional design, there has been a rapid rise in the use of distance education in both the higher education and vocational education sectors. This has been important for reasons of equity and access. However, there is a myth that the carefully crafted print-based materials somehow enable self-directed learning and enable 'flexible learning'. The delivery is certainly flexible, but not the learning. Any examination of distance education materials and, the various forms of just in time learning found in VET, are teacher-centered, not learner-centered. The recent emphasis on competency based curricula and training is a good example of the importance attached to single loop learning as opposed to developing people who will be able to manage their own learning.

A heutagogical approach recognizes the need to be flexible in the learning where the teacher provides resources but the learner designs the actual course he or she might take by negotiating the learning. Thus, learners might read around critical issues or questions, determine what is of interest and relevance to them. and then negotiate further reading and assessment tasks. With respect to the latter, assessment becomes more of a learning experience rather than a means to measure attainment. As trainer we should concern ourselves with developing the learner's capability not just embedding discipline based skills and knowledge.

Some implications for distance education

Educational efforts are to change the behavior of learners and promote their capability. But the output is somehow misleading. It raises some interesting questions about how a university education should change participants. This is not a liberal - utilitarian

debate but rather a concern that universities should do more than merely develop competent people. Similarly, educational training is increasingly being asked to become more involved with the real needs of people at work. Again, the emphasis is being placed on developing people who can cope with a rapidly changing world, a flexible workplace and uncertainty. That is addressed through various modes of teacher training and the open schooling system through NCED.

Our education systems and particularly higher education need to develop people who can examine these sorts of questions, who can be proactive rather than simply reactive in their thinking, and who can be more involved citizens. This will only occur by changing the ways in which we help people learn. There is a need to go beyond the possible self-interest of the academic and the teacher, to move beyond the status quo and the interests of dominant institutions.

Heutagogical approaches to education and training emphasize humanness in human resources, the worth of self, capability, a systems approach that recognizes the system-environment interface, and learning as opposed to teaching. Heutagogy addresses issues about human adaptation as we enter the new millennium. For example, work based learning models currently exist that demonstrate how to integrate human resource development and human resource management (Hase, 1998) that are heutagogically sound. These models challenge our ways of thinking about learning and the learner about process than content. It enables learners to make sense of their world rather than make sense of the world of the teacher. It forces us to move into the world of the learner, and enables teachers to look beyond their own discipline and favorite theories.

If handled well, the current enthusiasm for providing courses using the internet and intranets may provide superb opportunities for the use of a heutagogical approach. It will not be enough to simply place print based materials onto a server. Rather electronic delivery offers the hope of increased learner-learner and learner-teacher interaction through chat rooms and email lists. It also provides opportunities for learners to access and browse a variety of resources, the identification of current learning and then focus on areas of need and interest. Email and chat rooms will enable easier negotiation of assessment items and even learning contracts so that control for learning is passed on to the learner in a guided way as self-efficacy is increased.

Conclusion

The usual meaning currently given to 'flexible learning' is that 'students' are able to undertake a course of study face-to-face or by distance education. Distance education can

prove to be even more flexible by offering web-based delivery in the place of print materials. However, no matter what way a course is delivered, and no matter how strong the claims for andragogy, the learning is very much teacher-directed as opposed to student-directed.

A shift in thinking towards heutagogy will enable the control of learning to shift more appropriately to the learner. Furthermore, it will enable a far more creative approach to learning, no matter what the context. The flexible context of learning is being popular as the development of technology. We can also have opportunities to develop the heutagogy approach in open and distance education in the field of school education as well as the teacher and other professional education simultaneously.

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ICT as a tool in education

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Abstract

Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavour within business and governance. Within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT as a tool in education lends itself to more student-centred learning settings and often this creates some tensions for some teachers and students. But with the world moving rapidly into digital media and information. the role of ICT in educationis becoming more and more important and this importance will continue to grow and develop throughout 21st century. This topic highlights the various impacts of ICT on contemporary basic to secondary education and explores potential future developments. The role of ICT in transforming teaching and learning is explored and the way programs will be offered and delivered in the schools in future is discussed in this paper.

Context

'Traditional learning' refers to the learning which occurs during face-to-face teaching. The teacher conveys information (written and oral) to the student directly.

Moreover, E-learning is the delivery and administration of learning opportunities and support via computer, networked and web-based technology to help individual performance and development. In some cases the teacher will not provide a series of facts to the students, but ask them to locate information from online sources. The teacher becomes a facilitator, as opposed to the keeper and transmitter of information. This approach is favoured by the action learning community; 'ICT' information and communication technology; edutainment has come to have a specific meaning: products that are educational but that have some entertainment value, the term typically applies to games, stories, educational software in whichthe entertainmentelementsare obvious.

Government of Nepal is in the process to implement ICT as a tool in learning process. A project like "ICT Master Plan"-under Ministry of Education One-Laptop Per Child (OLPC)--under Department of Education and "ICT/E-Governance"-under Ministry of General Public Administration are the cureast ventures. This will provide the Computer Hardware, Software, Networking/Internet and Training to the teachers.

Introduction

ICT has turned from being a technology of communication and information to a curriculum creation and delivery system for teachers and learners. However, there is an unresolved tension around the issue of ICT as a subject in its own right that comprises the knowledge, skills and understanding to make appropriate, productive use of ICT, or as a set of tools with which to deliver and absorb other subjects in the curriculum. "The focus is on the subject being taught or studied rather than developing students' skills with, and knowledge of, the technologies themselves'(Collis, 2002)."

ICT is a force that has changed many aspects of the way we live. If one was to compare such fields as medicine, tourism, travel, business, law, banking, engineering and architecture, the impact of ICT over the past two or three decades has been enormous. The way these fields operate today is vastly different from the ways they operated in the past. But when one looks at education, there seems to have been an uncanny lack of influence and far less change than other fields have experienced. A number of people have attempted to explore this lack of activity and influence.

There have been a number of factors impeding the wholesale uptake of ICT in education across all sectors. These have included such factors as a lack of funding to support the purchase of the technology, a lack of training among established teaching practitioners, a lack of motivation and need among teachers to adopt ICT as a teaching tool. But in recent times, factors have emerged which have strengthened and encouraged moves to adopt ICTs into classrooms and learning settings. These have included a growing need to explore efficiencies in terms of program delivery, the opportunities for flexible delivery provided by ICTs; the capacity of technology to provide support for customized educational programs to meet the needs of individual learners; and the growing use of the Internet and web technology as tools for information access and communication.

As we have moved into the 21st century, these factors and many others are bringing strong forces to bear on the adoption of ICTs in education and contemporary trends suggest we will soon see large scale changes in the

way education is planned and delivered as a consequence of the opportunities and affordances of ICT. The likely changes we will see in education as ICT acts as a powerful agent to change many of the educational practices to which we have become accustomed.

The impact both current and emerging information and communication technologies will be likely to have in coming years is on *what* is learned, *when* and *where* learning will take place and *how* the learning will occur.

Accordingly, this argument is a discussion that shows no sign of coming to resolution. The prediction is that "the qualitative and quantitative gaps between the students' and the teacher's understanding of the affordances of ICT as a technology of teaching are much greater than has heretofore been the case with any other teaching technology (Belmont, 1996)."

As a tool, "ICT has the potential to transform the way that ducation is delivered". ICT can facilitate differentiation and individualization in education: it makes it possible to tailor both the content and the presentation of the subject matter to the individual background, experience and needs of students. In addition, "ICT enhances what is possible by amplifying what teachers are able to do, by providing an entry point to content and enquiries that were not possible without the use of ICT, by extending what students are able to produce as a result of their investigations, and finally by providing teachers with the opportunity to become learners again (Jonassen, 1996)."

According to the possibilities of utilizing ICT as a tool in education, the basic and secondary schools teachers can make regular use of ICT for teaching and learning. However, "In basic and secondary schools, ICT can be used mainly to support English and mathematics; there can be some use of ICT in other subjects but application across the curriculum is still largely undeveloped(Barron, 1998)."

In addition to the current concern of raising standards of ICT usage across curriculum, "the Curriculum Development Center" has considered to provide a useful framework for 'ICT capability' or 'information literacy'. Such capability enables students to demonstrate the development of their knowledge, understanding, and skill in making 'informed judgments about when and where to use ICT , and to consider its implications for home and work both now and in future". This signifies that ICT capability is not limited to a facility with a range of techniques and skills with particular technologies and software applications.

The Curriculum Development Center of Nepal has introduced 'Computer Science' as an optional subject for Secondary level schools; some schools can develop their planning and

organization of the curriculum. The framework for the knowledge, skills and understanding in ICT curriculum is presented in four aspects: Finding things out; developing ideas and making things happen; exchanging and sharing information; reviewing, modifying and evaluating work as it progresses.

The impact of ICT on *what* is learned

Conventional teaching has emphasised content. For many years, courses have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and rehearse the content. Contemporary settings are now favouring curricula that promote competency and performance. Curricula are starting to emphasise capabilities and to be concerned more with *how* the information will be used than with *what* the information is.

a. Competency and performance-based curricula

The moves to competency and performance-based curricula are well supported and encouraged by emerging instructional technologies. Such curricula tend to require:

- access to a variety of information sources;
- access to a variety of information forms and types;
- student-centred learning settings based on information access and inquiry;
- learning environments centred on problem-centred and inquiry-based activities;
- authentic settings and examples; and
- teachers as coaches and mentors rather than content experts.

Contemporary ICTs are able to provide strong support for all these requirements and there are now many outstanding examples of world class settings for competency and performance-based curricula that make sound use of the affordances of these technologies. For many years, teachers wishing to adopt such curricula have been limited by their resources and tools but with the proliferation and widespread availability of contemporary ICTs, many restrictions and impediments of the past have been removed. And new technologies will continue to drive these forms of learning further. As students and teachers gain access to higher bandwidths, more direct forms of communication and access to sharable resources, the capability to support these quality learning settings will continue to grow.

b. Information literacy

Another way in which emerging ICTs are impacting on the content of education curricula stems from the ways in which ICTs are dominating so much of contemporary life and work. Already there has emerged a need for educational institutions to ensure that

graduates are able to display appropriate levels of information literacy, "the capacity to identify and issue and then to identify, locate and evaluate relevant information in order to engage with it or to solve a problem arising from it"(McCausland,1999,P2). The drive to promote such developments stems from general moves among institutions to ensure their graduates demonstrate not only skills and knowledge in their subject domains but also general attributes and generic skills. Traditionally generic skills have involved such capabilities as an ability to reason formally, to solve problems, to communicate effectively, to be able to negotiate outcomes, to manage time, project management, and collaboration and teamwork skills. The growing use of ICTs as tools of every day life have seen the pool of generic skills expanded in recent years to include information literacy and it is highly probable that future developments and technology applications will see this set of skills growing even more.

The impact of ICT on students' learning

As technology is influencing and supporting what is being learned in schools and universities, so too is it supporting changes on the way students are learning. Moves from content-centred curricula to competency-based curricula are associated with moves away from teacher-centred forms of delivery to student-centred forms. Through technology-facilitated approaches, contemporary learning settings now encourage students to take responsibility for their own learning .In the past, students have become very comfortable to learning through transmissive modes. Students have been trained to let others present them the information that forms the curriculum. The growing use of ICT as an instructional medium is changing and will likely continue to change many of the strategies employed by both teachers and students in the learning process. The following sections describe particular forms of learning that are gaining prominence in universities and schools worldwide.

a. Student-centred learning

Technology has the capacity to promote and encourage the transformation of education from a very teacher directed enterprise to one which supports more student-centred models. Evidence of this today is manifested in:

- The proliferation of capability, competency and outcomes focused curricula
- Moves towards problem-based learning
- Increased use of the Web as an information source; Internet users are able to choose the experts from whom they will learn

The use of ICT in educational settings, by itself, acts as a catalyst for change in this domain. ICTs by their very nature are tools that encourage and support independent

learning. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools, the influence of the technology on supporting how students learn will continue to increase.

b. Supporting knowledge construction

The emergence of ICTs as learning technologies has coincided with a growing awareness and recognition of alternative theories for learning. The theories of learning that hold the greatest way today are those based on constructivist principles. These principles posit that learning is achieved by the active construction of knowledge supported by various perspectives within meaningful contexts. In constructivist theories, social interactions are seen to play a critical role in the processes of learning and cognition. In the past, the conventional process of teaching has revolved around teachers' planning and leading students through a series of instructional sequences to achieve a desired learning outcome. Typically, these forms of teaching have revolved around the planned transmission of a body of knowledge followed by some forms of interaction with the content as a means to consolidate knowledge acquisition. Contemporary learning theory is based on the notion that learning is an active process of constructing knowledge rather than acquiring knowledge and that instruction is the process by which this knowledge construction is supported rather than a process of knowledge transmission.

The strengths of constructivism lie in its emphasis on learning as a process of personal understanding and the development of meaning in ways which are active and interpretative. In this domain, learning is viewed as the construction of meaning rather than as the memorisation of facts. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice. As mentioned previously, any use of ICT in learning settings can act to support various aspects of knowledge construction and as more and more students employ ICTs in their learning processes, the more pronounced the impact of this will become.

When and where students learn ?

In the past educational institutions have provided little choice for students in terms of the method and manner in which programs have been delivered. Students have typically been forced to accept what has been delivered and institutions have tended to be quite staid and traditional in terms of the delivery of their programs. ICT applications provide many options and choices and many institutions are

now creating competitive edges for themselves through the choices they are offering students. These choices extend from when students can choose to learn to where they learn.

a. Any place learning

The concept of flexibility in the delivery place of educational programs is not new. Educational institutions have been offering programs at a distance for many years and there has been a vast amount of research and development associated with establishing effective practices and procedures in off-campus teaching and learning. Use of the technology, however, has extended the scope of this activity and whereas previously off-campus delivery was an option for students who were unable to attend campuses, today, many more students are able to make this choice through technology-facilitated learning settings. The scope and extent of this activity is demonstrated in some of the examples below.

- In many instances traditional classroom learning has given way to learning in work-based settings with students able to access courses and programs from their workplace. The advantages of education and training at the point of need relate not only to convenience but include cost savings associated with travel and time away from work, and also situation and application of the learning activities within relevant and meaningful contexts.
- The communications capabilities of modern technologies provide opportunities for many learners to enroll in courses offered by external institutions rather than those situated locally. These opportunities provide such advantages as extended course offerings and eclectic class cohorts comprised of students of differing backgrounds, cultures and perspectives.
- The freedoms of choice provided by programs that can be accessed at any place are also supporting the delivery of programs with units and courses from a variety of institutions, There are now countless ways for students completing undergraduate degrees for example, to study units for a single degree, through a number of different institutions, an activity that provides considerable diversity and choice for students in the programs they complete.

b. Anytime learning

In connection with geographical flexibility, technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs. Students are starting to appreciate the capability to undertake education anywhere, anytime and any place. This flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more

learners who previously were constrained by other commitments

- Through online technologies learning has become an activity that is no longer set within programmed schedules and slots. Learners are free to participate in learning activities when time permits and these freedoms have greatly increased the opportunities for many students to participate in formal programs.
- The wide variety of technologies that support learning are able to provide asynchronous supports for learning so that the need for real-time participation can be avoided while the advantages of communication and collaboration with other learners are retained.
- As well as learning at anytime, teachers are also finding the capabilities of teaching at any time to be opportunistic and able to be used to advantage. Mobile technologies and seamless communications technologies support 24x7 teaching and learning. Choosing how much time will be used within the 24x7 envelope and what periods of time arechallengesthat will facethe educators of the future.

The continued and increased use of ICTs in education in years to come will serve to increase the temporal and geographical opportunities that are currently experienced. Advancements in learning opportunities tend to be held back by the ICT capabilities of the lowest common denominator, namely the students with the least access to ICT. As ICT access increases among students so too will these opportunities.

Emerging issues

A number of other issues have emerged from the uptake of technology whose impacts have yet to be fully explored. These include changes to the makeup of the teacher pool, changes to the profile of who are the learners in our courses and paramount in all of this, changes in the costing and economics of course delivery.

a. Expanding the pool of teachers

In the past, the role of teacher in an educational institution was a role given to only highly qualified people. With technology-facilitated learning, there are now opportunities to extend the teaching pool beyond this specialist set to include many more people. The changing role of the teacher has seen increased opportunities for others to participate in the process including workplace trainers, mentors, specialists from the workplace and others. Through the affordances and capabilities of technology, today we have a much expanded pool of teachers with varying roles to provide support for learners in a variety of flexible settings. This trend seems to continue and to grow with new

ICT developments and applications. And within this changed pool of teachers will come changed responsibilities and skill sets for future teaching involving high levels of ICT and the need for more facilitative than didactic teaching roles.

b. Expanding the pool of students

In the past, education has been a privilege and an opportunity that often was unavailable to many students whose situation did not fit the mainstream. Through the flexibilities provided by technology, many students who previously were unable to participate in educational activities are now finding opportunities to do so. The pool of students is changing and will continue to change as more and more people who have a need for education and training are able to take advantage of the increased opportunities. Interesting opportunities are now being observed among, for example, school students studying university courses to overcome limitations in their school programs and workers undertaking courses from their desktops.

c. The cost of education

Traditional thinking has always been that technology-facilitated learning would provide economies and efficiencies that would see significant reductions in the costs associated with the delivery of educational programs. The costs would come from the ability to create courses with fixed establishment costs, for example technology-based courses, and for which there would be savings in delivery through large scale uptake. There are a number of virtual universities built around technology delivery alone. The reality is that few institutions have been able to realize these aims for economy. There appears to have been many underestimated costs in such areas as course development and course delivery.

The costs associated with the development of high quality technology-facilitated learning materials are quite high. It has been found to be more than a matter of repackaging existing materials and large scale reengineering has been found to be necessary with large scale costs. Likewise, costs associated with delivery have not been found to diminish as expected. The main reason for this has been the need to maintain a relatively stable student to staff ratio and the expectation of students that they will have access to teachers in their courses and programs. Compared to traditional forms of off-campus learning, technology-facilitated learning has proven to be quite expensive in all areas of consideration, infrastructure, course development and course delivery. We may have to brace ourselves for the advantages and affordances which will improve the quality of education in the near future to also increase components of the cost.

Stakeholders and influences

Through ICTs may not have had a large impact to date, their use will grow to play a significant role in many aspects of the design, development and delivery of educational programs in the coming years. Various influences that have been discussed above provide examples of an agent that has the capacity to influence education at all levels and hence to be an agent supporting and encouraging considerable change. When the future of education is considered in this way, it is interesting to speculate among the stakeholders, for whom the change will be the greatest.

Clearly the stakeholders for whom technology would seem to offer the most influence and change are the students. So while institutions are pondering how they will be influenced in years to come, whatever the outcomes, the beneficiaries of the activity and change will be the students.

Conclusions

ICT in education as we progress into of the 21st century has argued that ICTs impact on educational practice has been quite small. The impact will grow considerably in years to come and that ICT will become a strong agent for change among many educational practices. Extrapolating current activities and practices, the continued use and development of ICTs within education will have a strong impact on:

- What is learned;
- How it is learned;
- When and where learning takes place;
- Who is learning and who is teaching.

The upshot of all this activity is that we should see marked improvements in many areas of educational endeavour. Learning should become more relevant to stakeholders' needs, learning outcomes should become more deliberate and targeted, and learning opportunities should diversity in what is learned and who is learning. At the same time, quality of programs as measured by fitness for purpose should continue to grow as stakeholder groups find the offerings matched to their needs and expectations.

To ensure that the opportunities and advantages are realized, it will be important as it is in every other walk of life to ensure that the educational research and development is sustained so that education at large can learn from within and that experiences and activities in different institutions and sectors can inform and guide others without the continual need for re-invention of the wheel. Once again ICTs serve to provide the means for much of this activity to realize the potential it holds.

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ICT based in-service teacher training in Nepal

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Abstract

Teacher development is the key to quality education and updating teachers with modern teaching skills and technologies in the arena of teaching and learning is a necessity. Along with introduction of ICT in education, teachers' role has become more challenging. They need to be acquainted with ICT both as a technique and a content. Moreover, teacher training on ICT in many countries has been mainly guided by two perspectives: teacher training in ICT and teacher training via ICT.

On the foundation of teacher development policy as stated in SSRP (2009 – 2015), NCED has initiated Teachers' Professional Development (TPD) massively throughout the country since 2010. TPD as a unique program for teacher development advocates demand based modules each of which comprises three sections viz. training workshop, self study and educational counseling. So far, no training centers have developed ICT based TPD modules NCED and its ETCs should take initiation for developing such modules based on the principle of TPD No doubt, there are ample challenges in terms of inefficiency of power, efficient human resources in ICT and financial resources to do so but something can be done with the proper utilization of present resources.

NCED has prior experience of handling distance based teacher training and developing materials accordingly. In fact, it has done a lot in teacher training mainly via radio channel. Similarly in developing audio, audio visual, printed and to some extent, web based materials has been its past experience. Moreover, NCED and its training centers have multimedia lab with various types of electronic devices that support ICT based teacher training, to some extent. These are the opportunities for NCED to launch ICT based teacher training despite many challenges.

Obviously, Nepal can progress a lot in this field by learning from developed countries' practices, utilizing present resources properly and finally, developing and mobilizing the resources. Lastly, but not the

least, effective technoware, humanware and systemware are the required components that is possible because of all the stakeholders' strong will power and dedication. It is said that every thing is difficult before it is easy.

Introduction

Teaching is becoming one of the most challenging professions in our society where knowledge, skill and technology are expanding rapidly. As new concepts of learning have evolved, teachers are expected to facilitate learning and make it meaningful to individual learners rather than just to provide knowledge and skills. Modem developments of innovative technologies have provided new possibilities to teaching professions, but at the same time, have placed more demands on teachers to learn how to use these new technologies in their teaching. To cope up with this challenge, teachers need to be trained on how to use ICT in teaching and learning, not only this, they can be also trained in knowledge and pedagogical skills via ICT.

Today, a variety of ICTs can facilitate not only delivery of instruction, but also learning process itself. Moreover, ICT can promote international collaboration and networking in education and professional development. There's a range of ICT options – from videoconferencing through multimedia delivery to web sites - which can be used to meet the challenges teachers face today. In fact, there has been increasing evidence that ICT may be able to provide more flexible and effective ways for lifelong professional development for today's teachers. Because of rapid development in ICT, especially the Internet, traditional initial teacher training as well as in-service continued training institutions worldwide are undergoing a rapid change in the structure and content of their training and delivery methods.

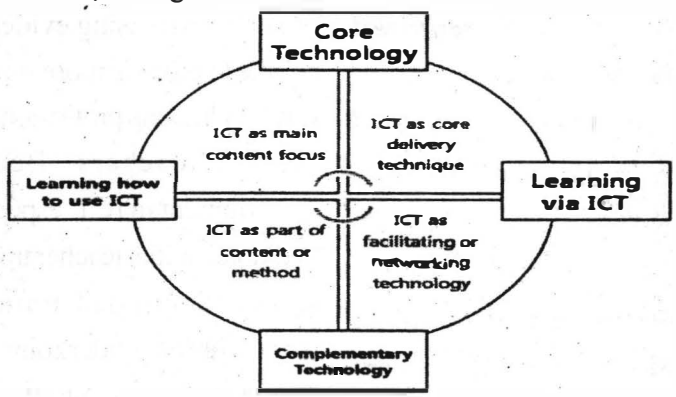
Theoretical aspect

Several researches indicate that ICT can change the way teachers teach and that it is especially useful in supporting more student-centered approaches to instruction and developing the higher order skills as well as promoting collaborative activities. Recognizing the importance of ICT in teaching and learning, a majority of the countries in the world have provided ICT teacher training in a variety of forms and degrees.

Use of ICT within teacher-training programs around the world is being approached in a number of ways with varying degrees of success. These approaches are subsequently described, refined and merged into four primary approaches as given in the following diagram:

- ICT can be useed as main content focus of teacher training (An emphasis on teacher training on how to use ICT in the classroom)

Linkages of different factors in ICT



(Adapted from Collis & Jung, 2003, p.176)

- ICT can be used as part of teaching methods (Integration of ICT into teacher training to facilitate some aspects of training)
- ICT can be used as core technology for delivering teacher training (Use of ICT as the major way of providing the learning experience of teacher training)
- ICT can be used to facilitate professional development and networking (Use of ICT as core technology for enhancing continuous professional development activities of teachers, connecting teachers to larger teaching communities and allowing for interaction with expert groups).

There are also some approaches as below to ICT based teacher training:

- Teacher training about ICT
  ICT as a subject of learning in the training, for example, computer and information literacy
- Teacher training with ICT
  The use of various computer capabilities such as computation, multimedia, internet as a medium to enhance instruction or as a replacement for other media without changing beliefs about the approach to and the methods of training
- Teacher training through ICT
  Here ICT is integrated so completely as essential tool in a course/curriculum that the training of that course/curriculum is no longer possible without it.

Use of ICT in teacher training in Nepal

The development stages of ICT application in in-service teacher training can be generally divided as below:

Initial stage:

In this stage, Radio Education Teacher Training Project (RETTP) was established to enhance primary in service teachers'

professional capabilities mainly through radio lessons.

First phase of the project (1980-1986)

This phase had targeted under S.L.C. (School Leaving Certificate) in -service primary teachers and aimed at enhancing their professional capabilities. Mainly, the contents of major subjects taught in primary level and relevant pedagogy were covered by radio lessons.

Second phase of the project (1986-1988)

The second phase of the RETTP was effective during 1986- 1988.Target population of the project was also under S.L.C. in service primary teachers of only ten pilot districts. The objective was to provide them English tuition to enhance educational qualification and help them pass S.L.C. exam. In 1987, the Government decided to upgrade the qualification of primary school teachers to minimum S.L.C. So from 1988, the focus was on S.L.C. pass primary school teachers. The RETTP conducted 150 hour basic teacher training program for the SLC pass untrained in-service teachers. (Distance Education. 2010. Page. 144)

Modality of the program

- Teacher training curriculum was prepared by Curriculum Development Center/ Ministry of Education and approved by the Faculty of Education/ Tribhuwan University of Nepal.
- Provision of a set of radio and a set of self learning materials to each trainee teacher
- Provision of face to face contact sessions during the training period
- Interactive radio lessons for 6 days a week for 1 hour and exam at the end of the sessions
- Provision of exam at the end of the training

Institutionalized stage

In this stage, RETTP was upgraded to Distance Education Center (DEC). The then 10 month teacher training program was split into four packages each of them being 2.5 month long. The first and fourth packages were to be conducted through face to face mode while the rest packages by distance mode for which DEC was fully responsible.

Modality of teacher training:

- Preparation of Radio lessons and broadcasting through the national broadcasting system.
- Resource persons to conduct contact sessions in resource centers.
- Provision of cassette player and cassettes made available in the resource centers
- The programs were also supplemented with audio/video materials

Professional development stage (Media based teacher education system)

Teacher Education Project (2002-2009) started to improve the quality and coverage of teacher education by enhancing institutional capacity for teacher training system. Also, NCED was converted into the only apex body under MoE where NCED, DEC and SEDP were merged in NCED. In lower secondary and secondary levels too, five month duration of total ten month teacher training was also based on distance mode.

Activities performed for teacher training during this period:

- Computerized Teacher Management Information System developed to update and manage the teacher's record to help teacher education
- Use of ICT, for example, multimedia projector and computers, to develop training materials and make presentations.
- Every ETC was provided with cassette players, printer, photocopy machine, scanner and camera to develop training materials.
- Curriculum for ICT awareness program was developed and implemented for different target groups
- Master trainers for ICT received training and ICT labs /centers have been developed.
- Developing and distributing audio visual and multimedia CDs to each ETC as supplementary materials for all level school teachers.
- Development of printed self learning materials.
- Digitalization of printed self learning materials.
- Development of self learning materials, news paper series, audio and audio visual materials for SLC examinees.

Policies for ICT in education and teacher development

Information technology policy, 2067 BS

This policy advocates the following objects with regard to IT education:

- To expand access to internet in schools. For this, environment in educational institutions and organizations will be made conducive to develop IT infrastructures.
- To develop sufficient competent human resources regarding IT by continuously updating qualitatively the field of IT education. For this, relationship or collaboration among national and international IT based educational institutions will be prioritized.
- To encourage Industry academia collaboration among the institutes providing IT industry and IT education.

Teacher development policy in SSRP (2009 – 2015)

- A one-year Teacher Preparation Course (TPC) in addition to the minimum academic qualification will be offered so as to prepare the teachers for:
  - Teaching all subjects at the foundation grades (grades 1-3) with options for specialization in multi-grade teaching and at least three subjects of the basic education (grades 4-8).
  - Teaching at least two subjects at the secondary education (grades 9-12).
  - Provisions will be made to prepare specialized teachers for multi grade classes and special needs education.
- The Government will remain responsible for teacher development functions. In order to keep abreast of new developments in teaching and learning practices, teachers must acquire one month in-service training at least once in every five years.
- Provision will be made to accredite the short term training courses to link with teacher career development.
- Teacher professional development will be linked to career development made available through both long and short term means.

National curriculum framework, 2007

'The curriculum will make special room for Information, Communication and Technology. In the context of globalization, it is essential to incorporate ICT education in school curricula; however, in our context, it is not that convenient. If this new area of learning is not included in the curriculum, the youths will be deprived of today's global education reality. Thus, the curriculum will be designed by acknowledging ICT education as a subject or medium in order to bring educational transformation.'

Teacher development policy guideline, 2011

NCED has recently brought out Teacher Development Policy Guideline in line with the spirit of SSRP (2009-2015); this policy guideline focuses on ICT based teacher development mainly in the following two points:

- Teachers designated for teaching through ICT/ computers will be provided 1-3 months' intensive capacity building training under ETCs.
- Teachers' will be encouraged to get registered to the online professional development courses supported by self learning print/ audio/ audiovisual materials through respective ETCs.

Teachers' professional development

As stated in SSRP, the Government has adopted teacher development policy ensuring one month in-service training for all teachers at least once in every five years to orient the teachers to new developments in teaching and learning practices. On the foundation of this policy, NCED has initiated Teachers' Professional Development (TPD) Program that comprises ten day each three modules which are segmented into three parts viz. training work shop (5 days), self study (3 days) and instructional counseling (2 days). Accordingly, NCED has developed TPD program implementation hand book to run the program smoothly.

TPD is being operated nationwide by 1053 Resource Centers (RC) for basic teachers but in case of secondary teachers, by 46 Lead Resource Centers (LRC) and 29 Educational Training Centers (ETC). Therefore, capacity development of all trainers and roster trainers of the concerned training organizations is the key to success of TPD. From this perspective, at central level, NCED has conducted training of master trainers who then conducted training of trainers in 29 ETCs in 2010. Similarly, NCED has just conducted training of trainers through ETCs for roster trainers from all RCs and LRCs. In addition to face to face training, NCED is planning to run three month online/ offline capacity building program for interested TPD trainers via distance mode through nine ETCs. For this, NCED has allocated budget in 2010/2011 for running the program for 20 trainers along with program operation handbook.

Opportunities and challenges of ICT based teacher training system

Challenges

Transforming traditional teaching to online and ICT based teaching is really a challenging job, especially in the developing countries like Nepal where ICT facility is limited to certain places. Currently, NCED is faceing the following challenges to apply ICT in teachers' professional development.

Institutional challenges

- Inadequate ICT equipments/ infrastructures

  NCED is still inexperienced of using email, web based materials and programs, web conferencing, video conferencing for teacher training despite its long experience in distance mode teacher training

- Inadequate ICT skills

  Though NCED and its training centers' human resources have basic ICT skill, it is insufficient to run ICT based teacher training using modern technologies.

- High cost of program development

  NCED needs larger budget for ICT friendly infrastructures for the training.

Lack of appropriate software/ teachers' portal

No software/ teacher's portal has been developed yet to support teachers' continuous professional development.

Other challenges

- **Access to technology**

  Though, ICT in Nepal is limited to urban areas, connectivity costs are considerably high for the majority of the population.

- **Motivation**

  Mostly old generation teachers seem to be less motivated to learn and use ICT.

- **Lack of ICT literacy**

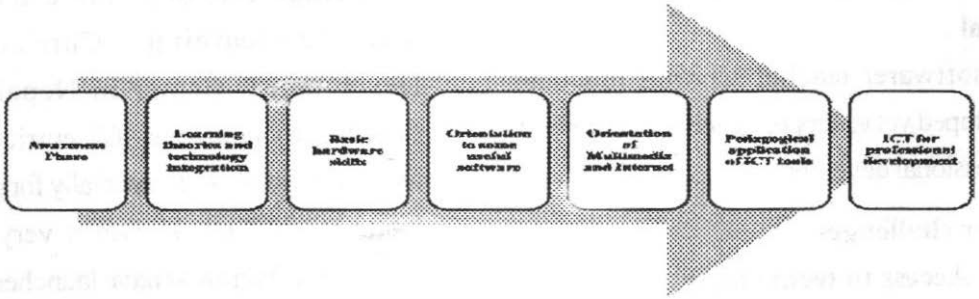
  Most of the teachers have no ICT literacy; even some teachers have no idea to turn the computer on.

Opportunities

Despite many challenges, there are some opportunities that support the launching of ICT based teacher training program. Some opportunities are listed as below:

- Awareness of ICT especially in urban areas has been growing rapidly. In addition, a sizeable human resource of different standards and base is being produced.
- With the view of ICT as an academic curriculum subject to equip the students with skills required to succeed in the knowledge economy and a tool of teaching learning, Curriculum Development Center in Nepal has developed school level ICT curriculum as an optional subject, especially for grade 9 and 10 students. However very few schools in urban areas have launched this subject in their curriculums.
- Higher Secondary Education Board has also developed ICT/ computer based curriculum (elective) for the students of grades 11 and 12.
- Universities in Nepal have offered different ICT courses, for example, Bachelor of Computer Application (BCA), Bachelor in Computer and Information System (BCIS), Bachelor in Information Technology (BIT), Bachelor of Engineering in Information Technology (BEIT), Bachelor of Computer Engineering.
- In urban areas and urban oriented areas, there are several private institutes that provide non academic courses on ICT. These institutions have played major role to increase ICT literacy in Nepal.
- Wireless Network Connection has been set up in some rural areas and it is going to be extended to other areas.
- Government has developed ICT policy and is implementing various programs accordingly.

Steps of ICT based Teacher Training



- the ICT craze has been growing rapidly in young generation.
- Educational multimedia as CDs/ DVDs have been commercially developed by private organizations to enhance school children's learning.
- Piloting of OLPC (One laptop per child) in 26 schools of six districts of Nepal has encouraged students and teachers to learn and use ICT in teaching and learning.

Strengths of NCED:

- Multimedia lab with computer,DVD Player, camera are available both in NCED and its each training center.
- Most of the training officers in ETCs are aware of ICT.
- Some staff have got national and international level ICT training.
- NCED and all training centers have internet access.
- The training centers have sufficient number of computers.
- NCED has long experience of conducting distance teacher training program despite using asynchronous technologies.

Way forward

With the overview of different practices in different countries, some common steps of ICT based teacher training can be followed as shown in the figure below:

Keeping these steps in view, ICT based teacher training can be conducted into three modules as per TPD in the following way:

Module I (Computer/ ICT literacy)

- Awareness phase (making the teachers aware of the concept and importance of ICT)
- Learning theories and technology integration (traditional Vs modern view of learning, shift from teaching to learning, constructivism, role of ICT in lifelong learning)
- Basic hardware skills
- Hands on experiences in operating a) the PC and laptops-switching on, shutting down, and networking, b) storage devices- using pen drive, CD ROM drive, flash drive, and burning CD-ROM, c) output devices-using printers and

speakers, d) input devices-using keyboard (including shortcuts), mouse, modem, scanners, web cam, digital camera, camcorders, date loggers and d) display devices- data projectors, and interactive white boards.

- Orientation to some useful software and learning their operation system
- Features of desktop, starting an application, resizing windows, organizing files (Creating, editing, saving and renaming), switching between programs, copying etc.
- Word processing, spreadsheet, database, presentation, publishing, creation of Portable Document Format (PDF) files, test generation, data logging, image processing etc.

Module II (Using multimedia and ICT in teaching and learning)

- Orientation to multimedia and internet and their u .e in teaching and learning
- Exposure to multimedia CD ROMs in different subjects, installing programs, evaluating CD ROMs, approaches to using CD ROMs, creating multimedia presentations.
- Subscription to mailing lists, e-mail and internet projects, web searching strategies (navigating, searching, selecting, and saving information)
- videoconferencing, designing web pages, freeware and shareware, evaluating website resources, virtual fieldtrips, learning opportunities using the web.
- Pedagogical application of ICT tools
- Specific use of application software in different subjects, appropriate ICT tools and pedagogy, unit plan integrating ICT tools, approaches to managing ICT-based learning groups, assessment of learning, electronic portfolio and assessment rubrics, creating teacher and student support materials, supporting students with special needs.

Module III: ICT for professional and personal productivity

- Teachers' portal for professional development
- Networking among teachers, trainers and subject experts via. internet
- Online training activities

Outputs of the program

After completion of all the three modules, the trainee teachers will have the following competencies:

- Operating computers and use basic software for word processing, spreadsheets, email, etc
- Evaluating and using computers and related ICT tools for instruction

- Applying current instructional principles, research, and appropriate assessment practices to the use of ICTs
- Evaluating educational software
- Creating effective computer-based presentations
- Searching the Internet for resources
- Integrating ICT tools into student learning activities across the curriculum
- Creating multimedia documents to support instruction
- Creating hypertext documents to support instruction
- Demonstrating knowledge of ethics and equity issues related to technology
- Keeping up-to-date as far as educational technology is concerned

Implementation of the modules

It would be better to take the following points into consideration prior to operating all the three modules as proposed :

a) NCED should be responsible to develop following materials.
   - Teachers' Portal (A resourceful website for teachers)
   - Free Software

     Software like CD-ROM contains free (open source) software which may help teachers to produce their own ICT based learning objects, learning materials and classroom resources.
   - Multimedia Resources

     When creating local teaching and learning materials, teachers often need to incorporate multimedia such as clip art, presentation backgrounds and audio clips.
   - Web tools for teachers

     "Web tools for teachers", contains free web-based tools (computer software that is accessible via the Internet) that are useful for teachers. In particular, this CD-ROM contains software that teachers can use to enhance teaching and learning.

b) NCED should develop model TPD modules with detailed training activities. Then concerned ETC(s) would develop modules addressing teachers' actual demands.

c) NCED and ETCs should take initiatives for human resource development.

d) NCED and ETCs should be so well equipped that the modules could be effectively and efficiently handled.

e) At first, training program should be conducted for those teachers who are interested on ICT and have accessibility to ICT at their school.

f) While selecting the training center(s) to run the training, human resource and ICT

infrastructures in those training centers should be kept into consideration.

g) NCED should conduct Training of Trainers(TOT).

h) For the third module, NCED should start developing teachers' portal, webpage, professional development software, audio cassette and audio visual CD or DVD.

i) NCED should create online monitoring and follow-up support system to update the program.

j) While designing training program, present TPD module should be taken into consideration but with flexibility.

k) At first, it would be better to run the training program for secondary level teachers as a pilot program.

Conclusions

In this 21st century, ICT has provided new possibilities to teaching profession and can facilitate not only delivery of instruction, but also learning process itself. Moreover, ICT can promote international collaboration and networking in education and professional development. Because of rapid development in ICT. especially the Internet, traditional teacher training institutions worldwide are undergoing a rapid change in the structure and content of their training and delivery methods.

Several researches indicate that ICT can change the way teachers teach and it is also especially useful in supporting more student-centered approaches to instruction. It can be used in developing the higher order skills and promoting collaborative activities. Recognizing the importance of ICT in teaching and learning, a majority of the countries in the world have provided ICT teacher training in a variety of forms and degrees. ICT based teacher training is led by mainly by two aspects: ICT as contents of training and ICT as a means of training delivery.

Nepal has long experience of conducting teacher training program in distance mode even though technologies used in the program were not so advanced like internet, audio/ video conference. Only telephone, audio/ visual CD, audio cassette and printed materials were used in distance based teacher training. Nepal has still many challenges like institutional capacity, facility of ICT, condition of ICT literacy, financial resources, motivational factor, ICT access, and teachers' portal and educational software to run ICT based teacher training program. Despite these challenges, NCED and its training centers have human resources with know-how about ICT; there is internet access to all centers and they have well equipped multimedia lab with computer, DVD Player, projectors etc. even if they are not in sufficient numbers. Similarly, in urban area schools have computers with few of them having internet access.

NCED has different roles, one of which is to govern in-service teacher training in Nepal. From 2010 onwards, many training centers have been implementing TPD program based

on teachers' need. Nevertheless, ICT based TPD module is yet to be developed. Therefore, following best international practices of ICT based teacher training programs, considering present Nepalese situations of ICT in schools and training centers, and potential developments in ICT education, NCED needs to design ICT based training program based on present teacher training policy of Nepal.

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Lifelong learning

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Introduction

Education is a continuous process; it starts from the birth and ends with the death; during the span of life, learning process does not stop. It is very difficult to categorize the types of lifelong learning. The following four statements are typical expressions of person's decision to learn; together they represent the fundamental types of lifelong learning (Mocker, 1982).

Learner I: My advisor said I had to take this course to graduate.

Learner II: I need to learn about these new drugs, I think I will attend that workshop.

Learner III: The certification board said I need to become competent in that area. Judy can teach me how to do that.

Learner IV: I have always wanted to learn how to keep good financial records. I bet I can learn that from my son's accounting books.

Four types of learners as stated above illustrate there are four types of lifelong learning such as formal learning, non- formal learning, informal learning and self directed learning. There is still a debate in the world about lifelong education or lifelong learning.

Lifelong learning (LLL) means literally "learning throughout life". This is what we all do, regardless of who we are, where we live and whether we go to school or not; continuous learning is today essential for survival and for enhancing people's quality of life, as well as for national human, social and economic development (Torres, 2006). Lifelong learning is the continuous building of skills and knowledge throughout the life of an individual. It occurs through experiences encountered in the course of a lifetime. These experiences could be formal (training, counseling, tutoring, mentorship, apprenticeship, higher education, etc.) or informal (experiences, situations, etc.). Harper Collins Dictionary: defines lifelong learning as the provision or use of both formal and informal learning opportunities throughout people's lives in order to foster the continuous development and improvement of the knowledge and skills needed for employment and personal fulfillment.

Since the middle of 1960s a new movement in the world of education was initiated. That new movement has expressed its presence through a body of reports, conferences, publicity, and through experiments carried out in its name: lifelong education (Singh, 1997). Hence, the new term was introduced in the field of education; however, the concept was

not clear, later on initiative was taken by UNESCO to clarify its concept and studied its implications for educational practice. The dissemination of the concept of lifelong education in the 1960s gave a powerful momentum to educational thinking and stimulated reforms, some of which where concerned with the whole education system. Later, in the 1970s, the concept was further developed and refined; later on in 1990s UNESCO has changed the expression from lifelong education to 'learning throughout life' from (UNESCO, 2010).

Conceptualizing lifelong education

Lifelong learning offers people the opportunity to bring up to date their knowledge of activities which they had either previously laid aside or always wanted to try but were unable; to try out activities and pursuits that they had previously imagined were outside their time or competence; or to work at extending their intellectual horizons by seeking to understand and master some of the recent cognitive advances, that have transformed their worlds (Terres, 2006). Individuals can only be developed as autonomous agents capable of fully participating in society if they are sufficiently informed, prepared and pre-disposed; for this lifelong learning is very essential which accelerates the economic progress and development, personal development and fulfillment, and social inclusiveness and democratic understanding, and activity.

Traditional education systems, in which the teacher is sole source of knowledge, are ill situated to equip people to work and live in a knowledge economy. Some of the

Dissimilarities of traditonal and lifelong learning

SN	Traditional learning	Lifelong learning
1	The teacher is as a source of knowledge.	Educators are guide to sources of knowledge.
2	Learners receive knowledge from the teacher.	People learn by doing.
3	Learners work by themselves.	People learn in groups and from each other.
4	Tests are given to prevent progress until students have completely mastered a set of skills and to ration access do the same thing.	Assessment is used to guide learning strategies and identify pathways for future learning.
5	Teacher receives initial training plus ad hoc in-service training.	Educators are lifelong learners. Initial training and ongoing professional development are lined.
6	All learners do the same thing.	Educators develop individualized learning plans.
7	Good learners are identified and permitted to continue their education.	People have access to learning opportunities over a lifetime.

competencies which demand team work, problem solving, and motivation for lifelong learning cannot be acquired in a learning setting in which teachers dictate facts to learners who seek to learn only to repeat the aewefies and knowledge (World Bank, 2003). Traditional and lifelong mode of education is obviously different; the dissimilarities between these two modes are given above.

As thetraditional and lifelong mode of learning is different there are differences in scope, content and delivery approaches. They are given below (World Bank, 2003).

Existing situation and issues related to lifelong education

The discussion so far illustrates that there are four types of lifelong learning; these are formal, non- formal, informal, and self-directed. Research work in the field of lifelong learning in Nepalese context is almost non-existents. Issues regarding lifelong learning are briefly described below:

Institutional arrangement

Any institute responsible to address the problems in the field of lifelong learning is non-existents. We have 32,130 schools (DOE. 2009) and 6 universities to provide formal education; Non- formal Education Center under Ministry of Education is responsible for conducting non- formal education activities; however, we donot have responsible institute for the promotion of informal and self-directed learning.

Scope, center & delivery of traditional & lifelong learning

Dimension	Traditional mode	Lifelong learning mode
Scope	• Formal schooling from primary to higher education.	Learning throughout the lifecycle in schools on the job, after retirement.
Content	• Acquisition and repetition of knowledge • Curriculum driven	• Creation, acquisition, and application of knowledge • Diverse sources of knowledge • Empowerment of learners • Competency driven
Delivery	• Limited learning options and modalities • Formal institutions • Uniform centralized control • Supply driven	• Multitude of learning options, settings, and modalities • New pedagogical approaches • Technology supported delivery • Pluralistic, flexible decentralized system • Learner driven

Certification

There is no formal organization to certify the skills and knowledge acquired by self practice and infomal way. CTEVT certifies very limited skills but it does not certify the knowledge. There is provision to certify skills and knowledge earned by self practice and informalmechanism inDistance Education and Open Learning Policy (NCED, 2006); nevertheless, it has to be materialized yet.

Resource management

Out of four types of lifelong learning self directed and informal sector is always in the shadow from all perspectives such as financial, physical, motivation, and human; the other two sectors of lifelong learning are proactive to take the advantage from the nation.

Permanency in service

Permanency in job is the barrier of continuous professional development for the people who are working in government sector. I believe that once people enter government sector their professional development via lifelong education is virtually stopped whereas it is not so if one joins the private sector; this is because of permanent job in the public sector.

Access and participation

We do have permanent nature of institutes which are responsible for formal and non formal education but there no any organization to account for self directed and informal education is there; hence, we do not have any record of access and participation in the field of lifelong education. Each social phenomenon or interaction is an agent for lifelong education; the home, family, society, state, etc are all agencies of lifelong education (Singh, 1997). This indicates that it is very difficult to maintain the record of access and participation in lifelong education unless and until the government takes care of this issue seriously.

Recognition

Nepalese society has not been recognizing the skills and knowledge gained by informal ways as an economic capital; this is the major cause why women are exploited in our society due to economic activity; most of the tasks carried out by house hold women in rural and urban area belong to this category.

Coordination

Media and formal educational institutes could play vital role to promote lifelong education once these organizations work in collaborative time. Neither the public sector nor private highlights the importance of collaboration for the enhancement of lifelong education in Nepalese context.

Theory and approaches of lifelong learning

The concept of lifelong education was endorsed by UNESCO since the middle of 1960s. Dave published a book under the name of Foundations of Lifelong Education in 1972 which had declared the scope of providing an

initial exercise in constructing theoretical foundations of lifelong education for a clearer understanding and effective implementation of the concept by establishing binding threads through an interdisciplinary synthesis (Singh, 1997). Dave highlighted that lifelong education is the nearest attempt approaching the formal education. Dave's concept of lifelong education as elucidated by Singh (1997) is as follows:

- Lifelong education encompasses those sectors of education commonly described as formal, non-formal and informal. This flexibility allows for varied patterns and forms of acquiring education.
- Lifelong education is rooted in the community which performs an important educative role; life itself is a major source of learning.
- Lifelong education also seeks integration at its horizontal and depth dimensions at every stage of life.
- The ultimate goal of lifelong education is to maintain and improve the quality of life.
- There are three major prerequisites for lifelong education: opportunity, motivation and educability.

Cropley produced a book in 1979 entitled Lifelong Education as a Stocktaking; according to him, three different levels of statement: the necessary, which refers to those features of the concept without the inclusion of which one could not properly be taken to be referring to lifelong education program, and the contingent which he subdivides into two levels continuing, respectively, those characterstatics which are not inevitably linked with lifelong education. in the sense that one could still referring to a particular program as a lifelong education program in their absence. and those characterstatics which are best seen as happy outcomes of the implementation of the ideas of lifelong education (Singh, 1997). Knapper and Cropley have described the characteristics of a lifelong learner as someone who is strongly aware of the relationship between learning and real life, recognizes the need for lifelong learning and is highly motivated to engage in the process, and has the necessary confidence and learning skills. These skills include the following dimensions (Knapper, 2001):

Lifelong learning

- people plan and monitor their own learning
- learners engage in self-evaluation and reflection
- assessment focuses on feedback for change and improvement

Life-wide learning

- learning is active, not passive
- learning occurs in both formal and informal settings
- people learn with and from peers

- learners can locate and evaluate information from a wide range of sources
- learners integrate ideas from different fields
- people use different learning strategies as needed and appropriate
- learning tackles real-world problems
- Learning stresses process as well as content.

The characteristics of a lifelong learner described here are highly relevant to the people's work lives, especially in the complex and rapidly changing work environments that are increasingly typical of the modern world (Knapper, 2001). Knapper (2001) said his father would not particularly have thought of the factory where he worked as an opportunity for learning new skills, but nowadays the workplace is seen as much as a place for learning as an organization that manufactures goods or provides services. Business environments are characterized by greater competitiveness in global markets, pressure to reduce costs, and increased use of technology, which places substantial demands on management and employees. One way of coping is to empower workers, encourage the use of autonomous teams and give employees a greater say in management decisions. It is the greatest advantage of lifelong learning in the changing context.

Like other approaches to education, lifelong education thus shares the view that autonomy is better than conformity, open- mindedness better than dogmatism, democracy better than elitism, sharing better than authoritarianism, and so on; these can be seen as its basic values (Cropley, 1979). Lifelong education is unavoidable tool for the betterment of life; as life has different dimensions so do the dimensions of lifelong education. Lifelong education makes people fit for present and future. There are different approaches and theories associated with lifelong education as described below.

Education for employability and national economic growth

One approach to lifelong learning claims it is concerned with promoting skills and competences necessary for developing general capabilities and specific performance in work situations, skills and competences developed through programs of lifelong learning are vital for workers performance in their tackling of precise job responsibilities and how well they can adapt their general and particular knowledge and competences to new tasks (Aspin, 2001). On this analysis a more highly educated and skilled workforce will contribute to a more advanced and competitive economy. However, there is much more to be derived from stressing the necessity of

lifelong learning for all than merely its economic imperatives.

Many countries support initiatives that develop this view. OECD members maintain that their future citizens must be equipped with the skills of 'the knowledge economy' (OECD, 1992). These include wide-ranging and thorough bases of knowledge content and cognitive competences: communication; numeracy and computer literacy; research ability and 'learning how to learn'; team-building and cooperation; inter-personal skills; judgment and discrimination, imagination and creativity. Governments believe that strategies to promote these skills and extend knowledge need to be developed and put into place. The aim of such strategies is to achieve change in all levels and sectors of education, while providing for an integrated, multi-faceted approach to the provision of learning opportunities throughout their citizens' lives.

Lifelong education and personal growth

The economic justification for lifelong learning depends upon two prior assumptions: that 'lifelong education' is instrumental for a further goal; that the goal of lifelong learning is economics-related. This approach has now been re-assessed: it presents a limited account of the need for 'lifelong learning'. Another approach claims lifelong learning is good in and for itself. Its aim is to enable those engaging in it, not arrive anywhere but 'to travel with a different view' (Peters, 1965). This way people travel with wider, richer and more elevated perspectives for the development of economic growth of individuals.

Lifelong learning and social inclusiveness

The availability of educational opportunities over the whole of people's lifespan is a pre-requisite for informed and effective participation in a democratic society (Grace, 1994). The same may be said of health, welfare, law and order, and housing, all of which, with education, constitute the infra-structure upon which individuals may construct, realize and work out their own versions of a good life in a society that is mutually supportive, inclusive and just, and so provides the necessary preconditions for active life in a participative democracy.

The notion of education as a public good provided the basis in many countries for making 'free and compulsory' education available to all; proponents of education for a socially inclusive and democratic society now also claim lifelong learning as a public good(Aspin,2001). It is the fact that education, like other 'public goods' such as health and welfare services, requires no further financial investment from individuals and other sources; all such community services have to be supported financially and in a myriad other ways. But these services are vital and indispensable to the nature, quality and

operation of the democratic society in which as citizens we all live and share in.

A pragmatic approach to conceptualizing lifelong learning

There is no shortage of problems, issues and questions on which individual countries, institutions and individuals have to address in attempting to work out what will best promote their welfare, how they should act, what choices they need to make, in what directions should they try to shape their futures. Studying how to face the problems of economic growth, social inclusiveness and personal development will empower people to work out ways of improvement of their own life and that of their community and hand it on better shape to their successors.

The criteria for determining improvement and advance in their respective accounts, policies and undertakings of lifelong learning will require philosophers, researchers, educators and policy-makers to attend to the purposes of the institution in which they are engaged. Chief of these is the solving of problems. The area of common ground in which interests are 'enmeshed' (Aspin & Chapman, 1994) provides researchers and policy-makers with a standard against which the progression or degeneration of their research programs or policy initiatives may be measured.

In this area the activities of philosophers, educators, researchers and policy-makers coincide. Their common interests provide the area of overlap that Lakatos named the 'touchstone' against which the theories of one and the policy enterprises of the other may be tested; this it may call the pragmatic approach to policy construction, and management in education (Aspin, 2001). It is to the application, extension, elaboration and refinement of this new way of looking at and trying to deal with the problems of society, community and education that is believed those concerned with lifelong learning should consider turning.

We believe that adopting a pragmatic approach will serve us well in our search for solution of one of the most pressing problems in education today: how best can we face the challenges posed by the need for our policies of education and learning to be 'lifelong'? Let us conceive of our enterprise as an activity of problem-solving and offering solutions as tentative hypotheses to be, if possible, knocked down (Popper, 1972).

Efforts made to resolve the issues of lifelong learning

Lifelong education is the process of making mature and skillful humans to accomplish the objective of their life; there are four ways as stated above. Out of them formal and non-formal are organized and institutionalized while the other two such as informal and self-directed have not been institutionalized yet.

These two sectors of lifelong education are no more organized; however some efforts have been made for the promotion of lifelong education from the private and public sector are discussed below.

The concept of open school, open university, department of distance education, department of adult education, department of continuing education is the examples of the principles of lifelong education (Singh, 1997). We do not have open university so far and hopefully it will be established soon in near future. There are 85 open schools at secondary level under NCED, 37 open schools at lower secondary level, and non formal schools for the adults are operating under department of education from primary to secondary level; the number of non formal schools at primary, lower secondary and secondary level are 1185, 84 and 50 respectively (NCED, 2067). Moreover, Distance Education Center (DEC) has been functioning under Ministry of Education as a division of NCED for the past 32 years. Its basic function is to train teachers through distance mode and create public awareness towards lifelong learning and continuous professional development.

The Community Learning Center (CLC) is a community owned institution outside the formal education system set up and managed by community people to provide educational and learning opportunities to the local community people for the development of community and improvement of the life of the local people. Non-Formal Education Center has established CLCs across the country as one of the approaches of the non-formal education programs. The 10th five year plan stipulates that 205 CLCs, one for each electoral constitution, will be established with the financial and technical support of the government of Nepal. Now 166 CLCs have already been established and being operated. In addition, other CLCs are also in operation with the financial support of UNESCO, Kathmandu and NRC-NFE. Remaining 39 CLCs will be established within the last year of 10th five year plan (www.nfec.gov.np).

Besides these achievements, Purbanchal University has launched one year B.Ed. program in education through distance mode; Medias like radio, FM, television, news papers, and web-sites are creating awareness and extending the concept of lifelong education throughout the country. Moreover, there is remarkable contribution in this field by NGOs and INGOs. Finally, the stable source of lifelong education is family and society. I believe that major contribution in the field of lifelong education has been provided by the society and the community.

We donot have department of continuing education like other countries; due to lack of this institute, there is no record keeping system; different organizations have been working independently, and there is no coordination among them at all. It is an urgent need to establish an organization responsible

for the promotion of lifelong education in Nepalese context.

Conclusion

Life is full of a bundle of problems; every day we face new challenges; knowledge and skills we acquir from formal education is very limited and insufficient. For this we need to learn various skills in accordance with the problems faced which is the real process of learning. People learned even in the Stone Age to solve their problem. Lifelong learning is the process of educating people which takes place from the womb to the tomb. The goal of lifelong education can be seen as that of developing a new man, eager to learn throughout life, capable of doing so, able to set priorities and judge results, democratic, concerned about the quality of life and so on (Cropley, 1979). Consequently, lifelong education has tremendous implications in our life for solving the problems and making the life easy.

All the processes of acquiring knowledge and skills for the betterment of life are categorized into four streams such as formal, non- formal, informal, and self- directed. People may learn skills informally and solve their daily problems but society has not given credit to knowledge and skills thus learnt; this is the major problem of lifelong learning. Moreover, due to lack of proper institutional arrangement, certification, and research in this field, knowledge gained in this style has not been counted. The provision of separate institute responsible for lifelong education under the ministry of education is urgent to address the issues in the field of lifelong learning; it could be the distance education and open learning council. Private public partnership and massive use of media is the key for enhancement of lifelong learning. People can stay at work while studying so that they suffer no loss of income, and the country suffers no loss of productivity; no one need to pay a maintenance grant for this (Singh, 1997). This the greatest advantage of lifelong learning; hence it must be promoted.

There are many issues such as formation of learning society, workplace as a setting for learning, lifelong learning for the economic growth; lifelong education and personal growth, etc. As stated in this paper, these issues need to be addressed as soon as possible. Education is linked with materialistic world in the west and that of spiritual world in the east; lifelong learning is the way of getting mastery in either of these two worlds.

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Lifelong learning through academic credit bank system in Nepal

Lessons learned from ACBS in South Korea

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Abstract

Ministry of Education is implementing School Sector Reform Plan (SSRP). This Plan requires the up-gradation of the in-service teachers' qualifications and professional skills. Prevailing infrastructure for formal education is not sufficient to accomplish the targets. For this lifelong learning through Academic Credit Bank System (ACBS) can be one of many alternatives.

The impact of ACBS and lifelong learning in the development of education across nations have played crucial role. ACBS had great contribution in development of Korean education and socio-economic development and ACBS learners have been found satisfied to work and study simultaneously.

People, employees, teachers and students deprived of formal education are in dire need of alternate opportunities so that they can study and acquire degrees to lead a life of dignity as society value educated people more than the uneducated ones. Establishing ACBS in Nepal will be a milestone in the educational development of Nepal.

Background

SSRP has the policy to restructure and upgrade the prevailing 10 years schooling system to 12 years. For this, SSRP aims to upgrade the qualificationof the teachers who want to adapt to the new policy. It also mentions to provide alternate avenues of access to education.

Most of the teachers are under-qualified. They need to upgrade their qualification and professional skills for the new structure. Teachers/learners working in the remote village and mountains do not have access to higher education. Teacher trainings courses have been implemented since 1970. There were various types and durations of trainings but none of them was accredited as formal education. The policies were changed without making sound connections to the former policies. The changes did not recognize or accredite the former training. This led to the devaluation of training programs. Nepal has no long term visions regarding teacher training program. The teachers are declared to have been trained but it has resulted into barriers to their career development.

For the solution of this problem, the Ministry of Education can introduce Open Learning Policies and establish Open Learning Centers or University Projects for Lifelong Learning. The teachers/learners can self-study being guided by institutions and upgrade their qualification and skills to survive and develop. There are several models across the nations. Nepal can develop its own models. Teaching professionals and employees can register to these programs and study while they work. They can participate in the programs and evaluation process and accumulate credits. After getting the required credits they can apply for the degree equivalent to formal university courses. Evaluation committee studies their documents and awards them the degree they deserve. In this way, after winning the award they can continue their university course for further education compiling qualification either ways: formally and/ornon-formally.

The valuation of non-formal education as formal education motivates the participants to training course. They find its link to lifelong education and career development. It develops a learning culture and, eventually, boosts economic and social development of Nepal. The author experienced remarkable achievements in educational and socio-economic development through ACBS in Republic of Korea.

The Korean credit bank system

A. Background and objectives

The Credit Bank System (CBS) is an open education system that recognizes diverse learning experiences gained not only in school but also out of school. When a student accumulates the necessary CBS-approved credits, that student can obtain an associate or bachelor's degree.

B. Background of credit bank system

Previously, non-formal modes of higher education in Korea were not given formal recognition or credit. Education was considered as the sole domain of the formal school system. Such a belief placed inordinate demands on the university or college system and created excessive competition among students. Moreover, the value and power of non-formal education was greatly underestimated, even though it provided people with practical knowledge and skills and people were willing to pay for it.

In 1995, the Presidential Commission on Education Reform (PCER), established in 1994 as a policy advising body to the President, presented an innovative vision of a new education system to promote the development of a society of open and lifelong learning.

The purpose of this new education system was to give people a better opportunity toenhance

their individual capabilities. The introduction of the Credit Bank System (CBS) was proposed by the PCER as a concrete way to realize this vision.

On the basis of this proposal, the CBS gained government endorsement through a law, passed on January 13, 1997. The accreditation system and standardized curriculum were subsequently developed and the first applications for accreditation from educational institutions were evaluated. In March 1998, the first stage of implementation began.

C. Objective of the credit bank system

The CBS aims to provide all citizens with greater access to various educational opportunities and to foster a lifetime of learning. The CBS seeks to innovate, diversify, and maximize educational opportunities for students who are studying at post-secondary institutions and for adults who are seeking additional education and training. In the long term, the CBS will raise the overall standards and status of the non-formal education sector as a vital means for promoting educational self-achievement and guaranteeing the global competitiveness of the Korean population.

D. Management and organization of credit bank system

Students primarily acquire credits by completing programs at educational and vocational training institutions, enrolling as part-time students in colleges or universities, acquiring various national certificates, and passing the bachelor's degree examination program for the self-educated. The CBS provides associate and bachelor's degree courses based on the standardized curriculum and syllabus. The standardized curriculum works as the criterion for accreditation and credit approval. The accreditation of educational programs is approved through a set of criteria. If a student completes an accredited program, she/he is eligible for credit recognition. A non-formal education program is re-accredited twice a year, and each non-formal education institute has to pay a minimum commission for this accreditation.

E. Administrative organization

The Lifelong Learning Policy Division of the Ministry of Education formulates all policies related to the CBS, approves the educational programs offered by education and training institutions, and finalizes the standardized curriculum and awards degrees. The Ministry of Education delegates much of the developmental and administrative work to the Korean Educational Development Institute (KEDI).

KEDI is responsible for student registration, credit approval, review and approval of degree requirements, accreditation, re-evaluation of education programs, and management of the Credit Bank Information Service System.

occupational skill standards in 153 different occupations, and thousands of crafts persons are already certified.

International co-operation

Nepal is looking to TVET as one way of alleviating poverty and addressing the social exclusion problems which have resulted from the insurgencies. For example, GTZ is setting up a project which aims to help businesses to employ ex-Maoist soldiers. The Swiss Development Co-operation (SDC) was the first organization to invest in TVET in Nepal and is the largest player in the sector.

Recommendations

To provide all citizens with greater access to a variety of educational opportunities and to foster a society of lifelong learning, Government of Nepal is suggested to:

- Develop policies for giving students more choices and alternative learning opportunities to learn through non-formal way and recognize and certify them equivalent to formal education.
- Formulate rules and regulations and standards in order to gaining solid social recognition by raising the quality of educational institutions participating in the CBS and lif elong learning programs.
- Focus on vocational and technical areas feasible to local environment that fulfill the societal demands.
- Establish a society which promotes lifelong learning culture and respects knowledgeable individuals

The CBS and lifelong learning policy should guarantee each student's right to access learning, at any time and at any place, through a variety of ways. The means of obtaining credits should be more diversified. The CBS should recognize individuals' diverse prior learning experience, many national and private certificates, and online learning. The goal of the CBS, through cooperation between diverse educational institutions, should be to build a consensus regarding educational forms and outcomes, thereby maximizing the efficiency of human and educational resources.

For this, the present Resource Centers (RCs) should be made more resourceful with the establishment of library and cyber labs and on line learning centers should be developed as village learning centers and the villages should be the learning places.

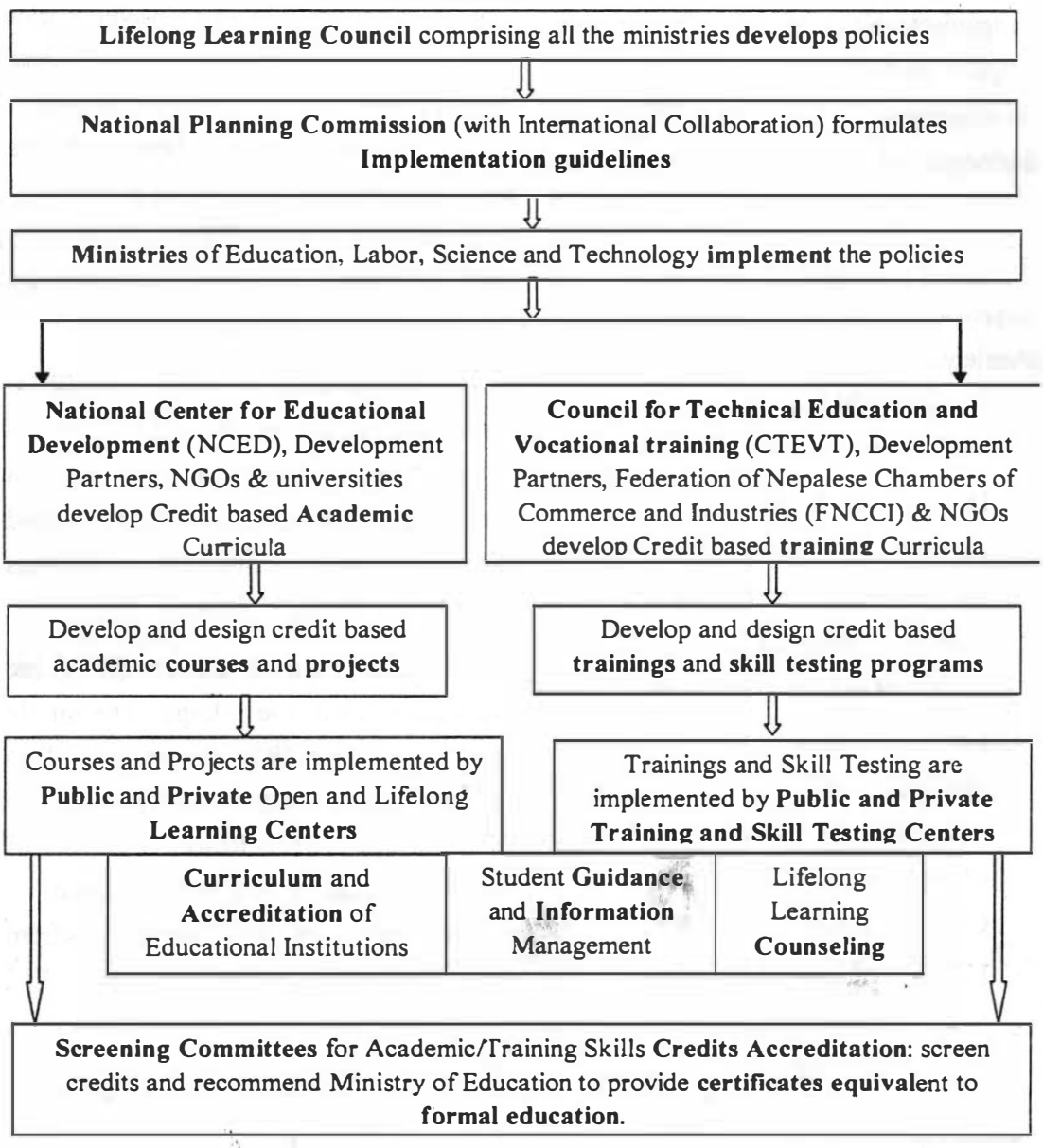
The present resources centers (RCs) are segregated from the village. The single Resource Person (RP) per RC (RP: RC) system is not productive so there should be placement of as many Resource Persons as possible to address the learning needs of students and society. Volunteer services from the society members should be sought. This will provide more access of communication between the social members and educational

professionals. This will provide them the opportunity to collaborate and cooperate.

At the same time, leaders within traditional education institutions, colleges and universities, should aggressively seek new sources of revenues to counteract current federal, state and local budgeting shortfalls.

In summary, first, recognize all forms of learning, not just formal courses of study. Secondly, recognize the importance of developing foundation skills that are wider than those traditionally identified as central, including in particular, motivation and the capacity for self-directed learning. The

Policy Plan and implementation framework



international evidence clearly shows that those people without an upper secondary qualification and without strong literacy skills are among the least likely to participate in further education and training as adults, to take part in training within enterprises.

Thirdly, there is emphasis on the reformulation of access and equity priorities in a lifelong context by looking at the opportunities that are available to individuals across their life-cycle and in the different settings where learning can occur.

Fourthly, the OECD stressed the importance of considering resource allocation across all sectors and settings, including – one might add – the incentives facing the various participants and the likely effect of such incentives on outcomes in terms of lifelong learning.

Fifthly, there is the requirement for collaboration in policy development and implementation among a wide range of partners, including ministries other than education.

Conclusion

By acknowledging the range of factors that act as both a motivation and barrier to engagement in education and training, lifelong learning policies tend to promote participation in learning for its own sake rather than as a means to a specific end (i.e. employment). The goal of participation in learning thus appears to be more significant than the reason why. This can be seen as an acknowledgment of the range of factors that motivate people to participate in formal and informal learning other than, or in addition to, instrumental goals.

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The Korean Credit Bank System: Effective Implementation of Continuing Education at the Grassroots

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Promoting educational opportunities for out of school children

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Abstract

Education has the power to transform lives. It broadens people's freedom of choice and action, empowering them to participate in the social and political lives of their societies and equipping them with the skills they need to develop their livelihoods (UNESCO, 2010). Therefore, having the opportunity for a meaningful education is one of the basic human rights. It is a condition for advancing social justice. People who are left behind in education face the prospect of diminished life chances in many other areas including employment, health and participation in the political processes that affect their lives. Therefore, everyone should have the opportunity to have meaningful education. In line with this argument this paper deals mainly with the educational opportunities in Nepalese context, and measures for providing educational opportunities.

The paper, firstly, presents the evolution of educational opportunity, secondly it describes the vision of educational opportunity of Nepal, and finally, it presents some measures for providing educational opportunity with special reference to Nepal.

Educational opportunity in the Nepalese context

The drive for universal (primary) education (UPE) has gained momentum during last decades. Various initiatives and declarations (for example the Dakar Declaration and the Millennium Development Goals) have stressed the importance of achieving universal primary education. The millennium goals, which were agreed on in 2000, have set 2015 as the year in which universal education and gender equality in this respect are to be achieved.

Universal Declaration of Human Rights (UNDHR 1948) and subsequent treaties have established the right to education, and act as the force of law for governments that ratify them. The Convention on the Rights of the Child (CRC), the mostwidely ratified human Rights treaty, reaffirms the right to free and compulsory primary schooling (Article 28) and emphasizes child well-being and development (Article 29). As education is incorporated in Human and Child Rights, it became the responsibility of nation to educate all the children without distinction of any kind. Everyone has right to education. Similarly, half a century ago, governments around the world

made a clear statement of intent on education convention Against Discrimination in Education (1960). This imposed a comprehensive ban not just on discrimination by legal intent, but on the processes that have the effect of causing discrimination (UNESCO, 1960, Article 1, Para 1).

Going forward, in 1990, from around the world including Nepal, 164 governments, together with partner organizations made a collective commitment to dramatically expand educational opportunities for children, youth and adults by 2000 for providing basic education to all the children without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status, as the opportunity to education. Nepal also made commitment to EFA and prepared a National Plan of Action for EFA. Thus, to educate all the children is the obligation of the nation.

Education for All (EFA) plan of Nepal made the provision to ensuring that all children in Nepal have quality basic and primary education, in caring and joyful environment (MoES, 2003). That all children have experience of caring and joyful childhood development, primary education in their mother tongue without having to feel prejudices of cultural, ethnic or cast discrimination. That almost all adults are literate and are engaged in continuous learning through Community Learning Centres (CLCs). Provisions of varities of appropriate learning and life skill education that are contextual and directly beneficial for youths and adults are available through different modes including CLCs (MoES, 2003). This is the educational opportunity defined by EFA core document prepared by Nepal.

Global NER is 87% whereas Nepal has 93.7 percent. To put it another way, globally more than 13 percent children are out-of-school where the number of Nepal is 6.3 percent (DoE, 2009, p. 5). Butthe scenario of internal efficiency is painful where 63.5 percent of the total students enrolled in grade one are promoted to grade two and the share of repeaters of the same grade in current year is 9.9 percent. Such a painful scenario is not only limited to dropouts in grade 1-5 (70.8 %) but also to the internal efficiency of primary level which is 70 percent (ibid). The 2001 census shows that Nepal's literacy rate is 57 percent whereas it is estimated to be about 67 percent. These statistics show that a large number of school aged children are out of school and they are the hard core group to be served by the nation. Keeping this fact in the centre, Nepal has identified girls/female, children with disabilities, Dalit children, Janajati, street children, children in conflict, sexually abused children, poor children, children in prison, orphan, and children victimized from HIVAIDs and language minorities as the

disadvantaged from educational facilitiespoint of view (MoES, 2003). They should be treated as hard core group for providing educational opportunities in Nepal.

The facts mentioned above indicate that Nepal's school education system is facing two challenges: in adequacy of access and quality as other developing countries (UN Millennium Project, 2005). If so, Nepal has significantly accelerated the enrollment of children and improved their ability to keep children in school. Increasing access and improving the quality are mutually reinforcing. If schools cannot offer a good-quality education, parents are far likely to send their children to school (ibid). The first concern of short falls in access should be primary focus in Nepal because the concern for quality is valid when all the children have equal access to schooling opportunity.

What can be done to provide educational opportunity?

Non-enrollment and drop-out particularly affect thechildren of thepoor people. Special efforts should be directed at the geographically isolated and ethnically marginalized children, child labourer in particular. Various forms of deprivation and the compulsion to work and to fight for one's survival continue to put tens of millions of children in a difficult situation without accessto education. The estimatesof these children not attending school vary from 100 to 300 million worldwide. Which strategies are to be deployed in order to include these children inthe education system? Not enough is known of how to reach and involve this particular group of children. Unless this group is reached, this particular target of the MDG will surely not be met (See G. K. Lieten, 2004, the Status report written for the expert meeting in The Hague, September 2004). For these children, the fact of attending school in itself has many advantages which go beyond the debate of quality and beyond the debate of economic rewards. The assumed irrelevance and bad quality of education disregards many functions which education has. Schools are the only institutions that deal exclusively with children that keep children away from work and monitor their development in various ways.

Three strategies can help get out-of-school children into school: crafting specific interventions to reach out-of-school children, increasing educational opportunities (formal and non formal) for girls and women, and increasing access to post-primary education (UN Millennium Project, 2005, p.5). The same report states that all of these strategies take into account the powerful demand-side influences that affect the propensity of parents to send their children to school.

The concept of out-of-school and disadvantages from school/educational facilities implies the solution for providing

opportunity to education (Woodward, 2000). There are globally accepted measures to serve the disadvantaged people from the educational opportunities. According to Education for All, Global Monitoring Report (GMR, 2008) expanding equitable access, improving learning, teaching and learning and restoring education in difficult circumstances are the necessary measures. Opportunity in education is associated with various problems. Different factors affect the attainment of educational opportunity in education. Some measures are listed as below:

- Assure provision of early childhood care and education programmes with health, nutrition and education components, especially for the most disadvantaged children because children having experience of early childhood development classes can perform better as compared to the children without it. Therefore, Nepal has to concentrate its efforts for establishing well equipped ECD classes with trained teachers so that well prepared new entrants can be produced for grade one.
- Parents' income is directly proportional to educational attainment (UN Millennium Project, 2005). Poor children are less likely to attend school. Low levels of enrollment and completion are concentrated not only in certain regions but also among certain segments of the population. In central Africa, the median grade completed by the bottom 40 percent of the income distribution is zero, because less than half of poor children complete over the first year of school (ibid). Nepal is not different from this scenario. Therefore, abolishing school fees, providing enough places and teachers in school to cope with the problems of new entrants in school could be one means for bringing out of school children to school.
- Provide financial support such as scholarships, cash or in-kind transfers to children from poorer households. Economy is a barrier to girls' schooling which is highlighted by a recent research study (as cited in Political Perspectives, 2008). Nepal has different kinds of incentives for students from poor, Dalit and disadvantaged groups but researches state that the amount is not as per the need of the students. Scholarships are not sufficient to cover the cost of education materials, and money was found to be misused (UNESCO, 2004; Ridley and Bista, 2006). The same study highlighted that scholarship program in Nepal was neither relevant nor efficient. In line with this finding of the study another study, highlighted that (Ridley, 2004) poor families who rely on children's labour and income will not be prepared to release

their children for schooling despite the provision of a cash incentive if the incentive is too small (CERID, 1999). Students from low-income families are 2.4 times more likely to drop out of school than are children from middle-income families, and 10.5 times likely than students from high-income families. But there is no research done in this area. Excessive domestic chores are also identified as the barriers to children's schooling. Opportunity costs related to the work girls perform in the family are high because girls have a load of domestic and seasonal labour (World Bank 2005). In other words, to girls' parents it may seem economically inefficient to send their daughters to school when they have so much houseworks. Therefore, providing sufficient scholarship and opportunity cost could be one of the means for providing educational opportunities in Nepal.

- Take measures to alleviate the need for child labour and allow for flexible schooling and non-formal equivalency course for working children and youths. Community Learning Centre (CLC) will be the best practices for the rural illiterate people because not only formal schooling but also work experience contribute to accumulating significant knowledge, skills, and attitudes values (KSA), As change is accelerated, KSA gained in previous learning gradually becomes also largely obsolete (Saxton, 2000).
- Promote inclusive policies that open schools to disabled children, indigenous children and those from other disadvantaged groups: In this sense, education becomes a public good and the society benefits from increased education of the individual. In every country completion rates are low for children from poor households. Moreover, the education income gap exacerbates gender disparities. Girls from poor households register very low levels of completion in many countries (Bruns, Mingat and Rakotomalala, 2003).
- Reports on girl trafficking estimate that 5,000 to 12,000 girls between the ages of 12-20 years are trafficked from Nepal to other countries for prostitution (HimRights, 2003 cited in Tuladhar, 2007). The study found that majority of the trafficked girls' parents (75%) are illiterate (IIDS, 2003, cited in ibid). Another study conducted with commercial sex workers found that more than 55% of the respondents were totally illiterate, only about 15% had primary schooling, and only 1% had completed the tenth grade and above (Tuladhar p.

97-109). Thus, trafficking, and prostitution are responsible barriers to education. Therefore, establishing media and publishing policies promote education. Provision of advocacy programs against the trafficking, sexual abusing, discrimination etc are the measures for ensuring educational opportunities for the affected population.

- Create safe and healthy learning environment by recruiting teachers from ethnic minorities and schedule cast (Dalit) along with better teacher training. Create and use child-friendly teaching learning environment in the classroom. This provision can be fulfilled from the better teacher training program because experience, training and education are the three main mechanisms for acquiring human capital, with education being primary for most individuals (Saxton, 2000). Recruiting teachers from ethnic minorities and Dalit is the main responsibility of Ministry of Education and producing better trained teachers is the responsibility of National Centre for Educational Development (NCED) and Faculty of Education (FoE). Then NCED and FoE should reform their teacher training curricula for addressing learner-friendly teaching learning issues.
- Address gender disparities by increasing the number of female teachers and building schools close to home with proper sanitation: It is generally more cost-effective to locate schools in relatively densely populated places, poorer families, which tend to be disproportionately located in remote rural areas. They may face substantially higher costs to send their female children to school and, as a result, tend to acquire less education (Coady and Paker, 2002). In 2000, a UNICEF (20001) study found that majority of young women do not attend school when they are menstruating; if there are no private latrine facilities to enable them to care for personal hygiene (World Bank, 2005 cited in UN Millennium project, 2005). The availability of schools and latrines causes limited access to school and particularly affect girls, because they are more vulnerable than boys to travel long distances or study in a school with no hygiene facilities. In the case of Nepal, about 90% schools do not have separate toilets for girls (Bista, 2006). Thus this is a genuine problem affecting girl's attendance in school.
- Provision of Open and Distance mode of eduation: Formal education system, for various reasons, is not being able to enroll all the school age children in school. Those enrolled are not completing their education cycle. Access to education was

denied due to various reasons. From these scenarios, it can be argued that there are several challenges in our education system.

Challenges

- Language barrier of schooling: Language and ethnicity are deeply intertwined. People who cannot speak a country's dominant language may have less access to written and spoken sources, restricting their opportunities for employment and social mobility (Smits and GØndØz-Hosg r, 2003, Smits et al., 2008 cited in UNESCO, 2010, p. 172). Parent who does not speak the official language in which their children are being educated may have less opportunity to engage with teacher, education authorities and homework. And their children may not grasp what is being taught if teachers do not speak their home language. This results inequalities in opportunities and become major factor in leaving behind from educational opportunities. In line to this argument, let us see some empirical examples. Ethno-Linguistic diversity has created series of challenges in Bangladesh, Ethiopia and Pakistan. In Balochistan province (Pakistan), for example, language barriers have a significant impact on access to education, especially for girls in rural areas, where local language is predominant. Since, Nepal is a multi- lingual country, people of Nepal speak many languages. According to Central Bureau of Statistics (CBS) there are 100 caste/ethnic groups and 92 different mother tongues in Nepal. Those children, whose mother language is not Nepali, speak their language at home and they speak Nepali and English language in school as a medium of learning. Language becomes the distracting factor for them; this causes drop out from school. Elaborated code in class room and restricted code of language in home is directly related to the understanding level of the children. Because of these code children cannot understand the classroom language used by their teachers (Aryal, 2003). Therefore, it is suggested to recruit teachers from ethnic minority groups.
- Supply trained teacher and provide on the job training for those who are not well trained along with providing opportunities for those who are under qualified. The benchmark qualification for schooling system be raised because education or training raises the productivity of teachers by imparting useful knowledge and skills (Becker, 1964) and better-educated

teachers can be trained for specific jobs more quickly at a lower cost (Thurow, 1975). Appropriate academic qualification is equally important for teachers because education enhances an individual's ability to successfully deal with disequilibrium in changing socio-economic conditions (Schultz, 1975) and education which includes training improves productivity (Levin and Kelley, 1994 cited in Saxton, 2000).

- School environment as barrier to girls schooling: The lack of female teachers has been identified as one of the main causes of girls' low enrolment and attendance (FAO & UNESCO 2005; ILO 1998 cited in UN Millennium Project, 2005). According to EFA Global Monitoring Report 2008 sexual violence, insecure school environment and inadequate sanitation disproportionately affect girls' self-esteem, participation and retention (UNESCO, 2008). Textbooks, curricula and teacher attitudes continue to reinforce stereotypes on gender roles in society (ibid, P. 5). At present, only few percent of primary school teachers (34.5%) are female, 4.2 percent are from Dalit and 23.4 are from Janajati (DoE, 2009) in Nepal, particularly the case is critical in rural areas. Therefore, the number of female teachers from Dalit, Janajati, and ethnic minorities should be increased.

Conclusion

Government of Nepal reaffirms its commitment to equal opportunity in education under international human rights conventions and is obligated to act on that commitment. Efforts are geared toward this destination but could not reach as per its intention. Marginalization is being matter at different levels. Having the opportunity for meaningful education is a basic right of the children and a condition for advancing social justice. Restricted opportunity in education is one of the most powerful mechanisms for transmitting poverty across generation. Factors contributing to lack of educational opportunity are poverty, gender, ethnicity, geographic location, disability, race and other factors. Identifying such factors and concentrating efforts towards providing equal opportunities in education is a great challenge for Nepal.

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Provision of open and distance education: opportunity for Nepal

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Open and distance education system in the world has been gaining popularity and legitimacy over the years. Such growing recognition has also helped the system to expand. Though it is expanded in general, but it is uneven between the developed and developing countries. The uneven expansion largely depends upon the economic wealth of a nation and commitment towards developing equitable education system. Developed countries have been receiving more benefits from such education system as compared to the developing countries. In developed countries, the expansion is closely linked to the development of a strong knowledge economy whereas the motives in developing countries are to provide basic education and literacy to large number of poor people (Gulati, 2008). The benefits of open and distance education are different in school education and higher education. Open and distance education system is able to cater the demands of a large number of learners in higher education. However, this system in school education hardly could address the needs of the large number of people seeking school education and continuing education.

This paper deals with the provision and management of open and distance education system in global as well as national context. One of the purposes of this paper is to highlight the importance of open and distance education system because developing countries can get large scale benefits by expanding such system in their countries. It also reviews the existing policy provisions and practices of open and distance education in Nepal and the challenges associated with the system. Finally, it suggests some measures for the development, expansion and strengthening of the open and distance education system in Nepal.

Open and distance education

Defining open and distance education is not easy, it is a term with no universally agreed definition. Open education sometimes indicates open entry and access to learning opportunities, which will focus on the removal of barriers to learning opportunities (UNESCO, 1997). Distance education also is concerned with openness and flexibility. It focuses on the possibility of communication between participants in the learning process across time and space. Open and distance education denotes the process of education

that focuses on opening access and opportunities for all learners and usually contrasted with the face-face to mode of education. It provides an opportunity for learners who have been facing constraints of time, place, and pace of learning by offering flexibility to learning opportunities.

Different scholars have seen open and distance education differently in terms of a program, system and approaches. It is a system where teacher and learner are physically separated and it bridges the physical gaps through the means of the printed and written words, the telephone, computer conferencing or teleconferencing (Mugridge, 1991). In line with this idea, Holmberg (1977) also considers open education as a system of education which does not operate through traditional conventions restricted in terms of admission, attendance, and subject combination. In this way, open and distance education is considered as an approach that focuses on opening access to education and training provision, freeing learners from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners (UNESCO, 2002). This means that it provides educational opportunities needed to anyone, anytime and anywhere. It also delivers the useful learning opportunities at convenient place and time for learners, irrespective of institution providing the learning opportunity (Kaufman, Watkins & Guerra, 2000). Furthermore, Alaezi (2005) also sees open and distance education as educational patterns, approaches and strategies that allow learner to learn. It is a situation that frees one from barriers in respect of time and space, age and previous educational qualification. It does not require entry qualification and age limit, no regard to sex, race, tribe, state of origin etc.

Peter (1973) defines open and distance education as a method of imparting knowledge, skills and attitudes by the extensive use of technical media to instruct large numbers of students at the same time wherever they live. It provides increased educational opportunities to a larger population in different situations and needs. Therefore, an industrialized form of teaching and learning is possible in open and distance education learning system. Also, to view distance learning as an industrialized form of instruction means that it involves careful planning, preparation and organization to have both technical equipment and quality teachers to work with (Osuji, 2007).

In this way, open and distance education offers opportunities in situations where traditional education has difficulty in operation. Both interested students and employees with distance problems can benefit because it is more flexible in terms of time and can be delivered anywhere. The other major characteristics of open and distance education system are as follows:

- Separation of learner and teacher in time and space that allow two-way communication between themselves.
- Availability of programs to learners at their chosen locations.
- Demand learner-centered modality and allow students to combine with work.
- Flexibility in the use of multimedia devices and entry requirements for increased access and equity.
- Openness with regards to access, duration, age, sex, goals and knowledge delivery technique.

Importance of open and distance education

Despite several global proclamations and commitments, developing countries have been facing several challenges to meet the goals of Education for All and Millennium Development Goals (MDGs). These goals are unlikely to be a reality in these developing countries (UNESCO, 2011). Several factors are responsible to create such scenario. Two important aspects such as, the fiscal ability and willingness of the government, and flexibility in education system are crucial. Fiscal constraint is the major problem because most of the governments have demonstrated unwillingness to allocate adequate funds for education (Edirisingha, 1999). Likewise, the prevailing education system does not cater the need of all children living in different circumstances. This indicates the inflexibility in the existing education system (Edirisingha, 1999).

One of the best options to expand the education system in developing countries could be the adoption of alternative provisions for ensuring basic education to all school age children. The alternative provision offers the following benefits.

- It can offer equivalence courses for young people and adults outside conventional school environments.
- It can help schools to raise the quality of instruction in schools through the use of carefully designed instructional media (printed materials, audio-visual materials and interactive materials).
- It can support the community development through effective communication by using the mass media for education and extension work in literacy, health, nutrition, family planning and agriculture.
- It can also provide support in teacher training and education, school management and inspection, and training of adult educators and practitioners.

As explained earlier, the open and distance education model stresses the need for flexibility to eliminate barriers to education, such as age, geographic location, time constraints, and economic situation. By nature, open and

distance education combine the principles of open and flexible learning with distance education methodology and promote information and communication technologies. Hence, it is a system that offers flexibility allowing learners' decision-making at choosing their own learning times (Conrad, 2009).

The needs of millions of people, who are not within the formal structure and aspire for education and training, can get chance from open and distance education system. Through the increasing influence of educational technologies, education and training systems all over the world, Nepal can also adopt new models of teaching and learning suitable to its context. By bringing open and distance learning system to the center of the educational systems, Nepal can offer different programs to meet the learning needs of the out-of school children and interested learners. This will help to accomplish the national commitment of attaining the goals of Education for All (EFA) and Millennium Development Goals (MDGs) in a real sense.

Open and distance education is useful not only educating out of school youths and adults, it is equally important for students who are in schools and colleges who can supplement their knowledge through openand distance learning (Conrad, 2009). Similarly, many schools in rural and remote areas of Nepal that are deprived of quality instruction may benefit from the open and distance learning materials and services in order to improve their quality of education. Students in very remote parts of Nepal can have access to the lessons delivered by competent teachers from Kathmandu.

Hence, open and distance education can be a major enabling force to improving access, equity & quality in education, especially in school education in Nepal. It will certainly help to increase the access to schooling facilities even in the remote parts of the country. The students and teachers of urban and accessible areas can also get benefits from this system because it offers different strategies of teachings and materials.

Existing policy provisions in Nepal

The Interim Constitution 2007 recognizes education as a fundamental right to all children irrespective of where they are born and live, and where they belong to. This indicates that the State has the prime responsibility to ensure schooling opportunity (at least basic education) for all school age children. In this way, the Constitution directs the government to take necessary measures for realizing the goals of education for all and Millennium Development Goals. Three Year Interim Plan (2007-2010) had emphasized the development and expansion of alternative provisions of education program in school education (NPC, 2007). The approach paper of Three Year Plan (2010-2013) also

continues the agenda set during the previous Interim Plan (2007-2010). Likewise, School Sector Reform Plan 2009/10-2013/14 put emphasis on the alternative provision in school education, which includes three different programs (MOE, 2009): (i) alternative schooling in early grades of primary education, (ii) open education in lower secondary level (Grades 6-8); and (iii) open education in secondary level (Grades 9-10).

In Nepal, the term distance education is only used to train teachers of school education. In higher education, the provision of open education is made in the Three Year Interim Plan (2007-2010). This plan had emphasized for the development of Open University in the country. The approach paper of Three Year Plan (2010-2013) has also provided policy guidance to establish and run the Open University in the country (NPC, 2010). As a followup of this policy, Government of Nepal has allocated budget to open university for this fiscal year 2010/11 (MOF, 2010).

The policy provison of open and distance education is also included in Education Regulations 2002. By realizing the importance of the open and distance education in the country, MOE has developed guidelines and directives based on the Regulations and has implemented felxible, open and distance education program in the country.

Status of open and distance education in Nepal

The concept of open school is new in the context of Nepal. In order to cater the needs of the primary school age targeted groups, alternative flexible schooling in primary education and the provision of open education in lower secondary and secondary education being made available in limited areas. Despite its great relevance and need, open education in school education system is yet to be fully developed. The situation is different in the case of distance education. Distance education has covered only limited areas such as teacher training program. The School Sector Reform Plan (2009/10-2013/14) aims to develop the integrated system of alternative education system in country which includes flexible schooling, mobile schooling, home based learning system, open and distance education. However, it is yet to be realized in practice. The practices carried out at present are as follows:

Primary education

In primary level, flexible schools are run under the alternative schooling program. Such schools offer education to targeted children in flexible time, venue and learning styles. The duration of the program is three years. All the learning outcomes of different subjects of primary education to be learned in five years duration are condensed into three years

duration for the flexible schooling program. Such programs are run in a suitable location identified by community and a facilitator is acting as a resource person for these children. Likewise, religious institutions are also offering formal primary education in informal and flexible setting. The graduates of such institutions may/can join in the equivalence classes of the regular formal system of primary education (NEFC, 2009).

Lower secondary education

In lower secondary education, two years' courses are made available for students who complete Grade 5 from the formal education system or alternative flexible schooling. The duration of the program is for two years which is divided into level 1 and level 2. Level 1 and level 2 covers the entire but condensed curriculum and curricular materials of Grades 6-8 of formal education system. Altogether 37 classes/centers/schools are running such program covering both the levels. Every day, two hours sessions are organized to teach and facilitate students' learning. Such programs are run in the formal schools and teachers working in formal schools are being made responsible to run extra classes for those students. Some additional incentives are provided to teachers, head teachers and support staff for the additional tasks. Each class/centre receives block grants support from district education offices for the purchasing of materials, stationery, and lump sum grants for textbooks. The purpose of providing such lump sum block grants is to manage the library in the school form where students can borrow textbooks (DOE, 2009).

Secondary education

For secondary level, there is a provision of open education. Students who complete Grade 8 from the formal system or open education of lower secondary level can join this program and can complete secondary education within two years of duration. At present, altogether 85 classes/centers/schools are run open secondary education program. Every day two hours sessions are being organized. Such programs are run in the formal schools and teachers working in formal schools are made responsible to run the extra classes for these students. Some additional incentives are also provided to teachers, head teachers and support staff for their extra works. Each class/centre receives block grants support from district education offices for the purchasing of materials, stationery, and textbooks (lump sum block grants) for managing library (DOE, 2009).

Guidelines approved by the Government of Nepal provide direction for open education in lower secondary and secondary levels. And there are also clauses and provisions in the Education Regulations to run open education classes. Non-Formal Education Center at the center is responsible to manage all activities related to open education at the lower

secondary level whereas National Center for Educational Development (NCED) has been taking care of all the technical aspects of open education at the secondary level. Department of Education is responsible to release budget to schools through District Education Offices which are being made responsible at the district level to monitor the functioning and control the quality of education. Schools are ultimately responsible for runing classes and ensuring benefits to the students (DOE, 2009). Till now, the facilities of open schools are available in limited areas with limited access to many more people. Resource constraints are the main barriers to expand such facilities to remote areas of the country. The existing classes are located in the urban areas only catering the need of very few children.

Higher secondary education

No provisions of open education are available in higher secondary through some discussions were made before on ways of introducing this system at the level.

Higher education

No provisions of open education are available in higher education. Only the provision of private education is available.

Issues and challenges

From the past experience, it is noted that conventional education systems in Nepal does not have the capacity to provide education (school education, tertiary education and lifelong education) to the targeted population. Inadequate infrastructure, inflexibility in time and reading/course materials, inadequate funding, and insufficient technical support are major constraints to expand the open and distance education to the targeted population in Nepal. The issues and challenges persisting in open and distance education in Nepal are grouped as follows:

1. Development of integrated policy. Absence of clear policy on open and distance education, its expansion and funding modality affect the overall development of open and distance education in Nepal. This has also affected the planning for expanding open and distance education in Nepal. Right now, existing effort is inadequate to provide basic education in an equitable manner to all children through formal schooling system. People living in the rural areas do not have chances to participate in formal schooling system. And the students who have been participating in the ongoing programs are unable to bear the indirect costs of schooling. Therefore, there is a need to develop and implement alternative provisions for ensuring basic education to all and continuing education for youth and adults.
2. Relevancy of the ongoing program: Critics argue that the ongoing program is a miniature of a formal schooling system.

The present concern on making it informal and flexible requires much more discussion with the experts and stakeholders. How can the children from disadvantaged communities and areas get benefit from the provision of open and distance schooling facilities without compromising the quality should be the major concern of the program.

3. Management and operational issues: The alternative and open education system in the country is managed by different offices where lack of coordination and management stands as a challenge . The absence of dedicated office and staff personnel for the management of open and distance education has jeopardized planning and management of open and distance education system in the country. This also affected the expansion and strengthening of the open and distance education system including curriculum and curricular material development , production, and technical support to the implementing agencies, schools and teachers.

4. Improving the quality of teaching and learning: The country is facing low efficiency and unsatisfactory quality of education even in the formal education system. This could be much worse in the case of open schooling system if a careful review is carried out. Absence of sufficient training to teachers, head teachers and members of school management committee has an effect on the smooth functioning of the ongoing programs. The existing supervision and monitoring system lacks technical support to teachers and school manager, which has resulted in low quality delivery of services.

5. Infrastructure and networking: Poor networking among the institutions and inadequate infrastructure in the communication system has produced multiple barriers to the open and distance education system. The inadequate or unreliable communications systems do not provide adequate support for the expansion and extension of the open education system. Such situation can limit the access for the population living in the rural and remote areas.

In addition to these, the questions of equity, quality of distance teaching and learning, linkage with the formal system, linkage with the community development are also equally important issues which should be taken into account while planning for the expansion and strengthening of the open and distance education system (Smith, 1988).

Lessons for Nepal

The open and distance education system can be used for a wide range of purposes such as general education, teacher training, vocational and continuing education, non-formal

education, community development and higher education. By considering such benefits, the urgent need is to develop clear policy, plan for expansion and implementation arrangements.

To implement the open and distance education system in a full-fledged manner, there is a strong need to address the issues of inaccessibility and ineffectiveness of the education system. Otherwise, it may damage the credibility of the program. Prior to its adoption in large scale in the country, the sustainability issue needs to be carefully evaluated. This includes proper planning on modality, institutional arrangements, funding requirements and funding agencies.

There is also a need to analyze the sub-systems within the open and distance learning system. It is helpful to understand the conditions necessary for successful implementation (Edirisingha, 1999). The different sub-system includes (i) material sub-system (design, production and distribution), (ii) logistic sub-system (personnel, finance and marketing), (iii) regulatory sub-system (planning, managing and decision making) and (v) learning sub-system (media, tutoring and assessment).

In addition, the following are the critical factors that demand serious considertion for the expansion and development of open and distance education system in Nepal (Sharma, 2010).

1. There is a need to develop an appropriate system and practices of valuing open learning to make sure that it is recognized on the basis of knowledge or the basis of competence. Such system provides ways and means of certifying informal and non-formal learning, which carries the same recognition as formal education.
2. A system is required which provides information, guidance and counseling to potential learners about open and distance education. Potential learners should have information about open learning opportunities and how and where such opportunities are available. How such services are to be made available to general public is equally important.
3. It demands huge investment in the initial stage, which is a daunting task. The investment is not only about money, of course, but also about time available for learning. Investment decision concerning the allocation of significant portion of education budget has to be diverted for the development and expansion of open learning opportunities, testing and assessment services.
4. The issue is not only money but also learning time. Working population wishing to engage in open learning or wishing to pick up training and education in wider sense needs the time to do so. It is not

enough to assume that they will learn in their spare time, because that will probably not work. Several flexible schemes are to be worked out to give workers the possibility of progress in learning and become successful to acquire more education. Another challenging question is that who will pay for the cost of education, the government, employers or the individual? The answer is probably that all three together have to work out something to facilitate open learning opportunity for out of school youths and working population.

5. The issue to be resolved concerning open schooling and lifelong learning context is the proximity between learners and learning opportunities. Developing learning centers accessible to all who aspire open learning should be a major concern. One of the possibilities is to develop community learning centers as venue for open learning. But this will require trained facilitators, sound infrastructure, learning material including in print and electronic, space for group learning and self-learning, access to web-based materials etc. This all require investment in terms of money, technology and expertise.

6. Special second chance schools could be another possibility. They could be developed within existing schools and other educational institutions. Youths and adults of the age 16 and above would take part in such schools and open learning modes of delivery and learning can be applied. But properly developed learning materials are needed which require well trained material developers, facilitators to guide learners with adequate supporting materials. Computer assisted learning and web-based learning would be excellent learning support services. Extensive capacity development is required before launching open learning and lifelong learning scheme. It should not be the sort of second chance where somebody, who has fallen out of previous education for whatever reason, gets one more chance to have the opportunity to pick up the educational road and to do what is necessary to have a better career.

7. Acquiring basic skills is an important point in the open education or lifelong learning theme. Attention should also be given that quite a large percentage of our population still has great difficulties in reading, writing and arithmetic. The focus should be to develop those basic foundational knowledge and skills which are needed to progress in learning along with social skills which are extremely important for further life. Similarly, the new information and communication technologies that are becoming almost as important as writing

in the learning process and in the work place are to be considered as basic skills.

8. The most important point to be considered in the open and distance education is innovative teaching methods, innovative pedagogy and teachers/ educators who effectively link them with the learning content. This has not only to do with introducing computers in classrooms. It has to do with creating the software for those computers and to create such software that could facilitate interactive play among students, curricula and teachers and handle learning process and their learning materials in a more intelligent manner. But that also requires that the teachers and material developers are capable of handling those new contents and those new technologies.

Conclusion

Open and distance education is to give people a sense of purpose by giving them a level of education which prepares them not only for a job but also makes them complete human beings in terms of their health, and participation in society, and democracy. It also has something to do with our competitiveness, very much an economic point of view. But competitiveness and the personal development side are closely linked to each other. Therefore, these ingredients are to be included in open learning materials and course delivery.

Connecting and integrating various modes of learning is required for the development of open and distance education in school education. For lifelong learning, using open and distance education could be the effective means. There is a need to design bridges and ladders so that learners can freely move horizontally and vertically within and across the sub-sectors of education.

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Secondary school mathematics and training curriculum

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1. Context

Curriculum Development Center (CDC) is a responsible institution to design and develop curriculum forschool level. For this, CDC has to define intentions of the curriculum based on learner, society and national needs assessment, explosion of knowledge and technology. Based on set intentions, curriculum is designed by selecting contents, establishing sequence and continuity, validating contents. Similarly, instructional design and development task is a part of curriculum development. It translates intentions into behavior and action. An assessment is assumed to be an important part of curriculum development. It determines whether intentions have been attained through instruction. The development of curriculum entails consultation with stakeholders and expert, teachers, teacher educators, and testing officials.

Teacher is the main responsible person for the successful implementation of school education. For this, teachering should be developed as a respectable and prestigious profession. Teacher training is made mandatory for school education. NCED is a responsible institution to design and develop teacher training policy and program. Now training modality has been shifted into continuous teacher professional development (TPD) through Resource Centers. School Sector Reform plan (2009 - 015) has proposed to upgrade the minimum qualification of teachers for secondary level, and they will have master's degree level or equivalent degree in respective subjects. For continued support to the teacher, school based teacher support program will be implemented through action oriented program. Teacher education should be restructured so as to make them capable to handle multiple subjects. CDC and NCED should have collaboration during development of school and training curriculum. Teacher training curriculum should be developed to achieve goals and intentions of school curriculam. For this, teacher training curriculum and school level curriculum should have the interlinkage for effective teaching and learning. To ensure linkage between the two curriculums, there should be linkage among policies, programs and institutional arrangement of teachers and school curriculum development and

implementation should be managed both at the centre level and school level. There are different institutions for curriculum, training, and assessment at centre and local levels. To establish linkage among these institutions, there shouldbe working\functional linkage between NCED and CDC, CDC and OCE at the central level. Similarly, functional linkage is felt necessary with and within training centre, district education office and schools to make the implementation of school curriculum effective. This sort of linkage can bring synergy and change in the entire education system.

2. School level curriculum

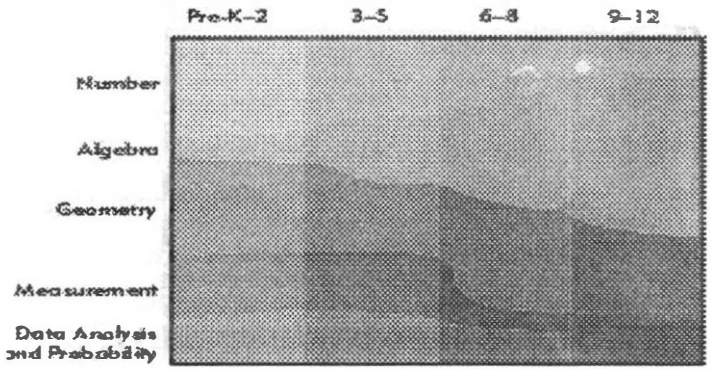
National Council of teachers of Mathematics (NCTM) says that mathematics curriculum development requires standards. These standards can be divided into two parts, content and process standards.

Content standards cover number and operations, measurement, geometry, algebra, data and analysis and probability. Similarly, process standards are important to ensure the skills to be offered to the students. These are problem solving, reasoning and proof, communication, connections, representations

Distribution of contents of mathematics eucation is varied from content to content and level to levels

In Nepal, secondary school mathematics curriculum is divided into eight areas. They are set, arithmetic, mensuration, algebra, geometry, trigonometry, statistics, and probability. In comparison to other countries mathematics curriculum, our mathematics curriculum is found comparatively sound in organization of contents but poor in organization of process skills.

National curriculum Framework (NCF) has provisioned that the school curriculum (9-12) will be of single stream. Education of this level will be categorized into two streams,



The Content Standards should receive different emphases across the grade bands.

Table 1 : Secondary School level Curriculum structure in Nepal

S.N.	Subjects	Weightages	Full marks
1	Nepali	5	100
2	Mathematics	5	100
3	English	5	100
4	Science	5	100
5	Social studies	5	100
6	Health , Population and environment	4	100
7	Optional I	5	100
8	Optional II	5	100

general and vocational/ technical, which is now revised as soft skills. The maim learning area of general education will be such as language, science, mathematics, social sciences, occupation, trade, vocation and additional feasible subjects. Under vocational/technical stream, agriculture, forestry, engineering and medicine will be the study area.

3. Mathematics teacher curriculum

International practices in teacher training

Professional development of teachers in mathematics is expected to develop teacher competence in following areas.

1. Attitude, it focuses on appreciation, interest, confidence.
2. Concepts: It focuses on numerical, geometrical, algebraic, statistical and other elements
3. Process :it focuses on deductive reasoning, inductive reasoning ,Heuristics method
4. Skills : In mathematics teacher , the following skills are required to deliver mathematical content and knowledge to the students effectively
   - Estimation and
   - approximation
   - Mental calculation
   - Communication
     - Use of mathematical tool
     - Arithmetic manipulation
     - Algebraic manipulation
     - Handling data
5. Metacognition skill: Monitoring one's own thinking

Many scholars have divided the teacher knowledge domain. Schwab (1978) divided teacher knowledge into (a) content knowledge, (b) substantive knowledge, (c) syntactic knowledge, and (d) beliefs. Grossman (1990) first divided teacher knowledge into (a) subject-matter knowledge, (b) general pedagogical knowledge, (c) pedagogical content knowledge, and (d) knowledge of context and later (2001) into (a) knowledge of content, (b) knowledge of learners and learning, (c) knowledge of general pedagogy, (d) knowledge of curriculum, (e) knowledge of context, and (f)knowledge of self. Shulman (1986) first divided teacher knowledge into (a) content knowledge, (b) pedagogical content knowledge, and (c) curricular knowledge and later (1987) into (a) content knowledge, (b) general pedagogical knowledge, (c) curriculum knowledge, (d) pedagogical content knowledge, (e) knowledge of learners and their characteristics, (f) knowledge of educational context, and (g) knowledge of educational ends. More recently, Ball and various colleagues (2005) divided teacher knowledge into two main categories, namely, (a) subject matter knowledge and (b) pedagogical content knowledge.

National practice of mathematics teacher training curriculum

NCED(2004) has developed ten month secondary school mathematics training curriculum structure with contents coverage. Competency based curriculum is developed in line with the three broader aims for developing the secondary teachers with additional content knowledge , application skills and attitudinal changes in them. It consists of three modules. The first and third modules both consist of two segments of training centre based training (face to face) followed by school based training. Second module is based on distance based learning. Major contents of three modules are presented as follows.

Module 1 :

1. **Curriculum development** : it covers new math movements ,back to basic movement, curriculum standards movements, study of the existing mathematical curriculum , text book and teacher guides analysis, selective criteria TB , TG and other references materials
2. **Learning theories**: It covers Piaget's cognitive development, Bruners, Discovery, Vanhielens cognitive level in understanding geometrical idea, Constructivist approach, Games theory as learning theories for mathematics teaching and learning.

3. **Concept formation**: It includes inductive reasoning approach, Discovery , Acquisition of information , Algorithm and strategies of teaching as teaching and learning approaches in mathematics .

4. **Developing communication skills :** It has communication skills ,mathematical message, technical expressions, teaching and learning process, Teaching and learning strategies , Discovery of a relationships ,Teaching problem solving ,Four fundamental aspects of T/L as contents to develop communication skills to the teachers .

5. **Instructional materials:** It covers concept of mathematics library, collection, construct, store and use of materials, use of calculator and computer skills.

6. **Student assessment:** It has to cover specification grid, item set and analysis, use of result .

7. **Instructional plan:** It has to cover behavioral objectives, Lesson plan

Module 2 :

This module provides content knowledge. It is run through the distance mode. This module consists of set , arithmetic , algebra, geometry, trigonometry , measurement , statistics and probability, vectors , matrix, relation and function, transformation, linear programming as contents of mathematics training .

Module 3:

This is the last module of the training . This module offers generic skills to the teachers. These general skills are divided into following major contents.

- Class room diversities
- Educational approaches to diversities management
- Educational and instructional planning
- Interactive teaching learning process
- Inter and intra personal dealings
- Students evaluations
- Classroom research

4. Effect of training mathematics teacher International practices

Mathematics education is being offered based on constructivism approaches. Constructivism is expected to enhance the following skills:

- Problem Solving and Reasoning
- Deep Understanding and Reflective Thinking
- Critical and Analytical Thinking
- Investigation through Exploring, Conjecturing,
- Examining, and Testing.

Mathematical creativity

It is used to develop ability to analyze a given problem in many ways, observe patterns, see likenesses and differences, and on the basis of what has worked in similar situations decide on a method of attack in an unfamiliar situation.

It includes following steps to initiate creativity in mathematics teaching and learning

- Divergent and convergent thinking
- Problem finding and problem solving
- Self-expression
- Intrinsic motivation
- A questioning attitude
- Self-confidence

How can mathematical creativity be organized in mathematics teaching?

It demands threes things, they are a) creative math classroom (varied materials for students to explore, provide an avenue for students to showcase their creative outputs) b) creative teacher (designing creative activities, teaching creatively, enthusiastic, uses of varied strategies ,uses technology), c)creative student (creative math thinker, assessing creativity)

Why make math creative and interesting? It moves from concrete concepts to abstract ideas, and it relies heavily on information permanence (i.e. retaining previous knowledge as a foundation for new information). It's frustrating for teachers and students alike when they realize that they had not really learned what they thought they had. The struggle for students to not only learn but also retain mathematical information is one of the biggest challenges educators face. The aims of creativity in mathematics teaching are as follows:

1. Self-perception of creative ability
2. Attitude towards mathematics
3. Mathematical creativity
4. Math Achievement

5. Problems related instructional strategies

Basically, the effect of training curriculum and school curriculum can be seen in the SLC result. Analysing SLC result of 2065, we can see the following status:

Table 2 : Average marks of SLC performance of students

S.N	Name of subjects	Average marks	S.N	Name of subjects	Average marks
1	English	32 to 44	7	Opt I , Education	45 to 59
2	Mathematics	32 to 44	8	Opt I , Agriculture	45 to 59
3	Science	32 to 44	9	Opt II, Office management	60 to 79
4	Nepali	45 to 59	10	Opt II computer science	80+
5	Social studies	45 to 59	11	Opt Math	60 to 79
6.	Health, Population and environment	60 to 79			

Source : OCE 065

English, Math, Science result in the SLC is found weaker then other subjects. Average marks secured by students are found in these three subjects. Effect of teacher training is not found significant. Most of the teachers in mathematics of government schools, seemed very weak in content knowledge. Training course on mathematics did not address the content needs of the teacher. In rural area, there are not sufficient teachers in science, mathematics and English in the schools. Non subject teachers taught these subjects in the rural schools. So, the result of SLC in rural areas is found weak rather than in urban schools. The teacher is not getting training on Optional I and Optional II subjects. But SLC results of these subjects are good rather than in core subjects. In Computer subjects, result is better than other subjects, the reason of good result in this subject is that it is taught in urban and especially it is taught in private schools.

Table3: Result analysis of 2065

S.N.	Level	Percent
1	National level	64.34
2	Community schools	63.64
3	Private Schools	90.83
4	Private students	39.38

Above table shows that SLC pass percentage is not more than 70%. It means contribution of training to SLC is not significant. Although there are others factors that influence the SLC result, result of community schools (63.34%) is weak / less compared to private school's result (90.83%). Government school teachers are getting different sorts of training and other facilities rather than private school teachers.

SLC study, 2005 suggested to develop basic courses in mathematics and science subjects. Mathematics and science curricula are heavily content loaded. Much failure in SLC is due to the poor performance of students in these two subjects. Therefore, the study recommended that basic science and basic mathematics curriculum be developed by removing certain portions of the existing curricula that are directly relevant to those who pursue further studies in these subjects.

Teaching leaning environment has happened to be more instruction oriented rather than learning oriented. Some other problems that influence the implementation of training skills and school level curriculum are listed as following:

1. Schools do not run according to operational calendar
2. Management and retention of qualified and competent teachers and head teachers
3. Lack of adequate instructional material , inadequate mobilization of local level resources and nominal use of available materials

4. School community relationship not strong and supportive
5. Teacher training is focused more on theory rather than practical activities.
6. Lacking tri polar (teachers, students and guardians) interaction in teaching
7. Lack of interaction and mutual cooperation among teachers
8. Less importance given to assessment , monitoring , innovation , creativity and research work
9. Emphasis is not given to interactive, explorative and innovative materials in teaching learning process.

Traditional professional development approaches adopted as Ruddock (1998) says, that professional development of teachers was conducted (a) by outside experts, (b) in a limited amount of time, (c) without regard to the importance of teacher beliefs, (d) without consideration for modem theories of leaming, and most importantly, (e) without a clear focus on teacher knowledge. Wrong perception toward mathematics education is also another course. Mathematical talent is most often measured by speed and accuracy of a student's computational skills, but, creativity requires divergent thinking. It is thus made to be a difficult subject. It however, requires a lot of effort and time.

6. Ways for future

From national and international practices of curriculum development in school and training, we should consider that curriculum development process is a participative and inclusive process. The following areas should be improved for effective design development and implementation of the curriculum for mathematics teachers and students:

1. Functional collaboration should be established with NCED ,CDC and OCE and other professional institutions
2. Institutional and individual capacity of professional institutions should be developed.
3. Institutional linkage with national and international arena should be established
4. Research and innovational activity should be developed in curriculum implementation,
5. Functional collaboration at the local level should be established with DEO and other professional institutions for effective use of curriculum
6. Impact of training and curriculum should be linked with individual and school level performance
7. Continuous professional development program should be given priority in the government policy and programs
8. Financial and technical support should be continued at the national and local level for effective implementation of the curriculum

9. Emphasis should be given to interactive, explorative and innovative materials in teaching and student learning process.
10. Establishing tri polar (teachers, students and guardians) interaction in teaching is necessary.
11. Importance should be given to assessment , monitoring , innovation , creativityand researchwork
12. Subject wise teacher management and more incentive to teachers who work in remote area should be developed and managed.

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Teacher education for 21st century

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Abstract:

Teachers play crucial roles in delivering the quality of teaching. They must be competent, professionally sound and they have to have the knowledge and skills related to 21st century learning skills, and pedagogical skills, and also the skills related to planning, curriculum and instruction, assessment and evaluation. Besides, knowledge and skills related to leadership qualities and effective teaching and learning are other crucial areas along with teachers competency. Teacher education is only one dimension that can address them and enable all the teachers to be capable enough in delivering the quality of teaching and learning in a multi-dimensional socio-cultural classroom setting. Therefore, 21st century teacher education has to address some of the fundamental dimensions so that teachers would be professionally sound and also could cater the diverse teaching learning needs of all children. More important aspect is the commitment with regard to teacher education. The government should be committed in managing sufficient budgets and designing and implementing the training programs. The teachers must be committed in developing professionalism in themselves and also in using their professional skills and knowledge in everyday pedagogical discourse. The school leader must be committed in creating conducive environment for quality teaching. Likewise, children should be committed to take active role in everyday teaching learning process. Therefore, teacher education for 21st century must address all these dimensions and deliver training to the teachers to make them professionally sound in their teaching learning activities.

Context

Teacher education is the most prioritized area in education system of Nepal, because huge amount of money has already been invested in this field through in-service training to the school teachers. Various modes of training were implemented. Almost 98 percent of primary school teachers were trained and leadership and management trainings to the teachers and the school heads were heavily conducted. Despite these efforts, the

challenges of planning and management of teachers, issues of resolving social inequality in teacher management and also creating social equity in the classroom, issue of internal efficiency of teachers and the assurance of quality education and the issue of the relevance of the teacher education to deliver the quality teaching learning process in the changed context are there even today with regard to teacher education.

Teachers are the single most important factor in student learning in schools. Students who have access to highly qualified teachers have academic, behavioral achievement regardless of other factors. Teachers are thus, the key players in any education system. Teachers to be highly qualified must be well prepared, especially in improving the quality of education. Teacher education can make the quality and effectiveness of educational experience and it can contribute to wider personal development of young people. Teachers' roles and professionalism change according to the change in time, technology, information and knowledge. To cope with the changing demands of teaching learning, teacher should be effective, reflective and inquiring. In fact, according to the global challenges and demand, we need to improve the quality of education and develop education standards that go with global standards. For education to improve, all the teachers must have a global perspective, they must be well prepared and provided with ongoing professional development and appropriate support. All teachers have to fulfill the standards of a professional teacher.

Competent teacher

In general, the competent teacher should have, and continually:

- develop knowledge and skills in learning technologies to be able to appropriately and responsibly use tools, resources, processes, and systems to retrieve, assess and evaluate information from various media.
- use the knowledge and skills to assist learners in solving problems, communicating clearly, making informed decisions, and in constructing new knowledge, products, or systems in diverse, engaged learning environments.
- have mastery about basic computer/ technology operations and concept, with an ability to apply technology in instruction, apply concepts and skills in making decisions concerning the social, ethical, and human issues related to computer and technology. The professional teacher should understand the changes in information technologies, their effects on workplace and society, their potential to address lifelong learning and workplace needs, and the consequences of misuse.

- be able to use telecommunications and information-access resources to support instruction.

School leader

School leaders should be supportive, active and dynamic in order to developing the teachers' professionalism to enable teachers to cope with the 21st century learning demands. In this context cradler (2002) has clearly mentioned the following roles of the school leaderships:

1. School leaders can support on-site, just in-time learning by tailoring professional development to the perceived needs and curriculum goals and objectives of individual teachers (Cradler & Cradler (1995).
2. School leaders can allocate resources for at least four networked and internet-connected computers in each classroom (Becker, 1999).
3. School leaders need to model the use of technology in their work in order to encourage and reinforce the classroom infusion of technology by teachers (CEO Forum, 1999).
4. School leaders need to support technology policies that provide teachers' easy access to technology resources and professional development opportunities (Zhao et al., 2002).
5. School leaders can enable teachers to observe practices in other district and states and to make recommendations for new practices based on their observation

21st Century is teaching learning

Twenty first century teaching must be effective. To have effective teaching, teachers should possess several characteristics. More importantly an effective teacher or planner of any teacher education system must understand the concept of effective teaching and learning. Scheerens (2010) has highlighted some of the key features and or characteristics of an effective teachers:

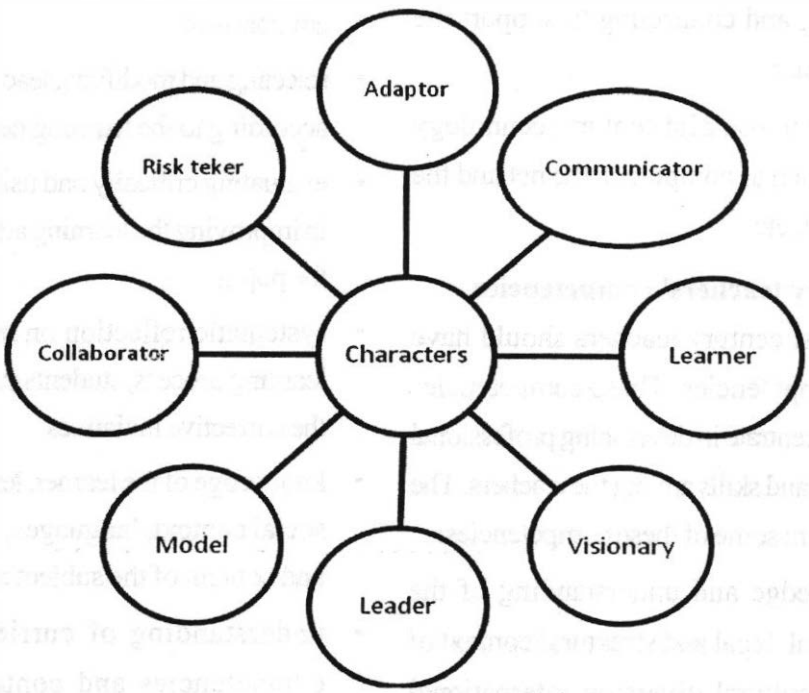
1. **Professionalism**: for effective teachers, they should have professionalism in teaching and learning. To be a professional, he/she must have the characters of: commitment- to do everything possible for each student and enable all students to be successful; confidence-belief in one's ability to be effective and to take on challenges; trustworthiness-being consistent and fair; keeping one's word and respect- belief that all persons matter and deserve respect. then only teacher can work as professional teachers
2. **Thinking and reasoning**: teachers must be analytical and critical, hence, he/she should have the analytical and critical thinking competencies. To be analytical-

h/she has the capability to think logically, break things down, and recognize cause and effect. Likewise, to be critical he/she should have the ability to see patterns and connections.

3. **Expectations:** teachers should posit the ability and behaviour of high expectation from the students, schools and also from the mistress. They have to have drive for improvement-energy for setting and meeting challenging targets, for students and the school. Likewise, they must have the character of information seeking-intellectual curiosity. and they should also be taking initiatives so that a series of interventions would be possible to achieve the better result from the school.
4. **Leadership**: to be an effective teacher, h/she must have leadership capacity. Flexibility, accountability and passion for learning are some of the key features of teacher leader. Ability to adapt to the needs of a suitable change tactics helps them to be flexible. Likewise, to hold the responsibility and make all the colleagues accountable in teaching learning and to support students in their learning and help them become confident and independent learner are the basic competencies under accountability and passion for learning respectively.

Teachers' characters for the 21st century

To copewiththe 21st century teaching learning challenges, teachers should posit a host of characteristics of:



Teacher education therefore, should prepare the teachers in such a way that the teachers should:

- understand the importance of 21st century skills and how to best integrate them into daily instruction.
- be able to collaborate with all participants through creating a culture of sharing and discussions about the teaching learning and pedagogical practices
- construct their own learning communities and use it for the development of their professionalism
- be able to tap the expertise within a school or school community or school district
- use a variety of tools and techniques such as coaching, mentoring, team teaching, guiding and counseling to support the colleagues
- be able to use 21st century technology tools such as computers, the net and the internet, etc

21st century teachers' competencies

Twenty first century teachers should have certain competencies. These competencies should concentrate in developing professional knolwedge and skills among the teachers. The following are some of these competencies:

- knowledge and understanding of the political, legal and structural context of socio-cultural diversity; international frameworks and understanding of the key principles of teaching learning
- different dimensions of diversity, e.g. ethnicity, gender, special needs and understanding their implications in everyday pedagogical practices
- the range of teaching approaches, methods and materials for responding to diversity of learners needs; skills of inquiry into different socio-cultural, educational, pedagogical and even leadership issues
- reflection on one's own identity, engagement, duties, responsibilities and accountabilities
- addressing diversity in curriculum and instructional management; creating and using a multi-dimensional participatory, inclusive, safe and child-friendly learning environment
- selecting and modifying teaching methods according to the learning needs of pupils
- evaluating critically and using the results in improving the learning achievement of the pupils
- systematic reflection on own teaching learning process, students evaluation and the corrective initiatives
- knolwedge of the learner, learning styles, social context, languages, pedagogical and content of the subject matters
- understanding of curricular goals, competencies and contents, skills,

mastery of subjct matters, teaching and learning, assessment and its tools and techniques

- skills of identifying the students learning needs, probelsm, pace of learning, using ICT in teaching learning process, carrying out research and innovation in teaching learning process and using them for the betterment of pedagogical practices

From the above mentioned competencies it can be argued that confident, self-directed, active, professionally sound person can serve as a teacher in the 21st century. Thus, he/she should be self aware about teaching and learning, self-manage pedagogical practices, socially aware, and manage the relationships by being responsible in making decisions related to teaching learning. Hence, information and communication skills, civic literacy, global awareness and cross- cultural skills, critical and inventive thinking, mastery over the curricular contents, learning from the sharing and collaboration are some of the key learning areas that 21st century teacher education has to address properly. The teachers therefore, should be professionally engaged by being active members in their profession and being reflective to improve their professional expertise. Likewise, teachers must have good professional knowledge by knowing their students, their learning styles, content of teaching and also the teaching technique. More importantly, they should have the mastery over the professional practice through planning, programming, assessing and reporting for effective teaching. Creating and maintaining safe and challenging learning environment and using a range of teaching practices, and resources to engage students in effective learning are the other competencies. Hence, teacher education should address these competencies with a due importance.

Dimensions of teacher education

It is obvious that teacher education must be comprehensive. It should cover various dimensions of teaching and learning i.e. *purposes* (standards and several teaching points), *students engagements* (engagement strategies, intellectual work, discussion and talk), *curriculum and pedagogy* (curriculum, teaching approaches, scaffolding etc), *assessment for student's learning* (assessment and adjustment), *classroom environment and culture* (physical, routine and culture. The following matrix is one of the way forward styles in redesigning teacher education.

Effective teaching

Effective teaching is the basis of successful learning. Effective teaching identifies and builds on prior knowledge, makes real-life connections, develops deep understanding , links theories into the practices, and monitors students' progress and reflects on learning. Effective teaching is the indicator of the 21st

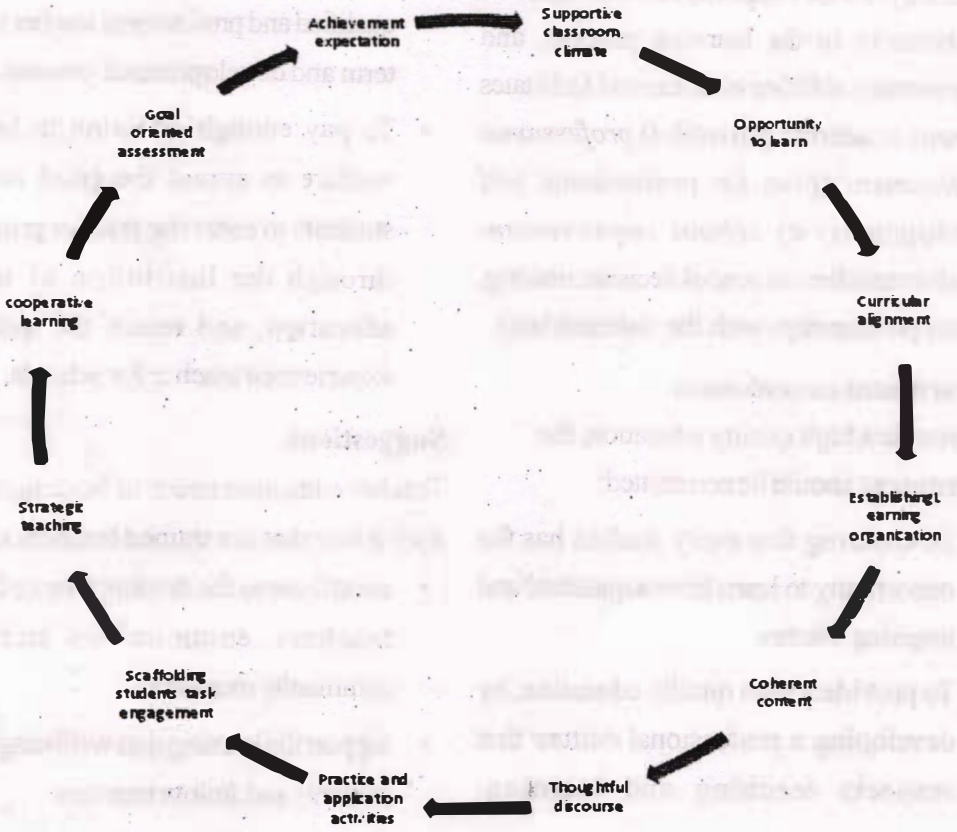
Way forward style

Essential skills and knowledge of the 21st century teacher	Ways for applying skills and knowledge
understands how different people learn and applies knowledge	• knows individual child's learning style • applies current and relevant theories of learning • creates lessons that facilitate students' learning • creates learning environments that help diverse students learn effectively
creates engaging and effective learning experiences for individuals and groups.	• establishes rapport with a variety of learners • demonstrates expertise in the subject area • helps learners understand the material • supports learners make sense of information and experience and • promoted learners to apply their learning.
uses the variety of teaching learning strategies	• develops and uses a range of teaching/learning strategies • assesses the strengths/weaknesses of a variety of teaching/learning strategies • use the teaching/learning strategy appropriate to the learning activity and learners involved • evaluates the effectiveness of the respective teaching/learning strategy
evaluates learning using a variety of valid and reliable tools and techniques	• develops and uses evaluation tools and techniques • assesses the strengths/weaknesses of a variety of evaluation tools and techniques • establishes and communicates evaluation criteria and • ensures that learners receive specific, constructive feedback regarding their progress
works independently and adapt learning materials to help different learners achieve learning goals.	• matches learning materials to the needs, interests and abilities of learners. • assesses and select appropriate learning materials. • creates learning materials (print, electronic, audio-visual) that help learners achieve learning outcomes.
uses technology to enhance productivity and help students learn	• selects the technological tool most appropriate to the task. • uses technology to facilitate teaching learning, to enhance the presentation of information, to produce learning materials and to access, select, collect, organize and display information • assists learners to use technology as a tool to support their learning
designs and develops effective curriculum	• identifies a curriculum planning process. • uses principles of curriculum design to develop courses. • contributes to program planning and review. • develops a coherent curriculum and implement them according to needs, interests and abilities of the learner

century teaching learning process. Teachers, teaching, and the teacher education must be effective. Teachers should focus to educate all children, provide individual treatment to cater the individual learning differences, give students necessary knowledge and skills to enable them to become independent learner. This is possible through effective teaching. These are some of the important elements related to effective teaching. The teacher, the learner, the classroom, the curriculum, material and instruction and the administration. Effective teaching has, thus, its indicators.

According to Brophy (2001) there are 12 principles of effective teaching: From Brophy's strategies, it can be argued that teacher education should focus in preparing teachers of high quality who will be capable enough for the effective teaching. Importantly, an effective teacher must follow the strategic teaching processes in the pedagogical discourse. In this context, Scheerens (2007) has further suggested three broad teaching strategies i.e. proactive strategies (opportunity to learn, adequate learning task, use of technology), interactive

Principles of effective teaching:



strategies (active learning time, independent teaching, adaptivity, active teaching), retroactive strategies (motivation, monitoring and assessment, instructional feedback). These dimensions have clearly pinpointed that there should be paradigm shift in teacher education. At this juncture, one should understand the domains or teaching. Mainly they are: a) *planning* (plan effectively for instruction) b) *management* (maintain an environment conducive to learning, maximizes available ti ne for instruction, and learners' behaviour to provide productive learning opportunities) c) *instruction* (delivers instruction effectively, presents appropriate contents, provides opportunities for students involvement in the learning process, and demonstrates abilities to assess and facilitates students academic growth) d) *professional development* (plan for professional self development) e) *school improvement* (involves teachers in school decision making, creates partnerships with the stakeholders).

Government commitment

To provide a high quality education, the Government should be committed:

- To ensuring that every student has the opportunity to learn from a qualified and inspiring teacher.
- To provide a high quality education, by developing a professional culture that respects teaching and learning; professional staff are supported in their effort to continually improve their effectiveness in promoting student learning; school sites are well maintained; school leaders build and maintain effective partnerships with parents, community groups, and local business, and instructional materials are current and aligned with the academic content standards.
- To provide adequate funding to develop the quality of human resource by providing enough expenditure for education development.
- To promote recognition that becoming a qualified and professional teacher is a long term and developmental process.
- To pay enough attention to teachers welfare to attract the good potential students to enter the teacher profession through the institution of teacher education, and retain the qualified, experienced teacher for schools.

Suggestions

Teacher education needs to be designed in such a way that our trained teachers should:

- contribute to the development of school teachers, communities and other community members
- support the learning and wellbeing of both students and fellow teachers

- develop and maintain positive relationships with other professionals, students and parents
- provide effective learning for students of various background
- share responsibility
- act with dignity, courtesy and empathy in their relationships with all
- understand and fulfill their legal and ethical responsibilities as defined by the rules and regulations
- reflect regularly on and evaluate critically their professional knowledge, practices and also the effectiveness of their teaching
- work collaboratively with other colleagues
- discuss contemporary issues related to teaching learning
- Initiate research and development activities to improve professional practice
- identify their own professional learning needs and plan for and engage in professional development activities including self development.
- develop organizational, technological and administrative skills to manage their everyday duties effectively
- acknowledge and engage critically
- clarify educational priorities including teaching learning
- know the learning capabilities of their students
- be responsive to the social, cultural, historical and religious backgrounds of the students and value them, their diversity as well as the pace of learning
- develop an understanding and respect for their students as individuals and also as partner in teaching learning process
- be sensitive to students' social needs and learning styles
- know the importance of working with and communicating regularly with students' families
- know the importance of prior knowledge and language for learning
- know how to engage their students in active learning.
- know how learning environments, program design, use of materials and resources, assessment and the pedagogical activities impact on learning
- have a sound, critical understanding of the content, processes and skills
- articulate the key features and relevance of their content to their students
- know the methodologies, resources and technologies that support learning of the content, processes
- have knowledge of the national curriculum, educational policies, rules

and regulations, materials and programs associated with everyday teaching learning

- use the knowledge of students, content and pedagogy to establish clear and achievable learning goals
- plan and document the use of a range of activities, resources and materials to make student's learning meaningful
- monitor student engagement in learning
- maintain records of their learning progress and report regularly to parents
- assess student learning effectively and provide feedback to them
- promote sense of belonging in teaching learning process
- build and maintain a positive learning environment for all
- foster individual as well as group dynamics in the classroom
- encourage students to take responsibility for their own learning
- use and manage the materials, technologies, resources and physical space of the learning environment
- create a stimulating and safe learning space in the classroom
- establish and maintain clear and consistent high expectations for all students
- communicate effectively with students to make their learning effective
- provide and manage opportunities for students to explore ideas and develop knowledge and skills by themselves
- encourage discussion and group activities to generate new knowledge
- use and manage a range of teaching and learning strategies and technologies
- provide meaningful, constructive and regular feedback to students

Reflection

Teachers have to be pro-active in their academic and also their social role. They have to carry a major responsibility for reforming the future society. Teacher education must prepare teachers to work in multi-cultural societies and supporting the children of diverse socio-cultural background in their learning process. Teacher education should identify and provide knowledge and skills to the teachers specifically in the areas of professional development, knowing the student, learning and teaching process, monitoring and evaluation of learning and development, school-family and society relationships, knowledge of curriculum and content, skills of using ICT in teaching learning process. Likewise, continuum of teacher professional development, promoting professional values, making teaching profession as an attractive one, qualification for teaching, supporting teachers, school leadership, initial training, induction training, in-service training are the

other strategies that 21st century teacher education has to provide the teachers with.

Knowledge and understanding of the political, legal and structural context of socio-cultural diversity, international framework and understanding of the key principles of teaching learning, different dimensions of diversity, e.g. ethnicity, gender, special needs and understanding their implications in everyday pedagogical practices, the range of teaching approaches, methods and materials for responding to diversity of learners needs, skills of inquiry into different socio-cultural, educational, pedagogical and even leadership issues, reflection on one's own identity, engagement, duties, responsibilities and accountabilities, addressing diversity in curriculum and instructional management, creating and using a multi-dimensional participatory, inclusive, safe and child-friendly learning environment; selecting and modifying teaching methods according to the learning needs of pupils, evaluating critically and using the results in improving the learning achievement of the pupils; systematic reflection on own teaching learning process, students evaluation and the corrective initiatives are the major competency areas that 21st century teacher education need to address urgently.

Additionally, active role of teachers is required both in terms of taking on personal responsibility for their professional development and for planning, evaluating and reflecting on their work (Lindblad et al, 2002). Likewise, enterprising self, aspiring to autonomy, striving for fulfillment of the goals, recognizing responsibility, and choice (Rose, 1998) also help in developing their teaching competencies. Similarly, mastering different demands (Weinert, 1999), developing key competences for democratic culture and social cohesion, modern educational aids and instructional design (Collins & White, 2001) are the other competencies that teachers have to use in the delivery of teaching learning process. Therefore, competencies in knowledge and skills (Lerner 2003), competencies in human relationship abilities, such as cooperation, which require teachers to be helpful, deferential, empathic, and open are some of the important competencies that the teacher education today has to address with due importance.

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Open/distance learning in India

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Abstract

The present thrust on ICT based educational programmes in India is understandable, in the sense of pressing technology to achieve quicker results that the conventional approaches could not yield even in 21st century. However, technology, though neutral in its potential, is never independent of the nature of ownership. Globalisation being a fundamentally market driven phenomenon, any uncritical approach to ICT is riddled with surprises, risks and many unpredictable social consequences. Precisely in this context, the universities and academia all over the world have a social role to play. This role can be played more effectively and meaningfully only when we get engaged in finding the right solutions through linkage of pedagogy and technology, without losing sight of quality of programmes and services. The educational and sociological implications of globalised ODL are too obvious to be enumerated here.

Introduction

The spread of information and communication technology (ICT) has revolutionized the access to education in general and the Distance Open Learning (DOL) in particular. ICT's role in the expansion of DOL need not be overemphasized. It is common knowledge that every Distance Teaching Institution is fast adapting itself to technology based teaching and learning in order to keep abreast of the changes taking place in educational technology. In this sense, it is difficult to think of DOL without ICT. However, the use and the effectiveness of technology will depend on the pedagogic principles that guide the users and the quality of information or content that is transmitted to students through ICT.

The key factor that puts ICT on top of the list of strategies of delivery of DOL programmes is the interactivity of ICT. Because of the fastness and the range of methods of transmitting and transacting the content with a variety of learners with different learning needs and preferences, ICT is often seen as a solution to all the hitherto unsolved problems of access and feedback in DOL. Theoretically, ICT can break every physical barrier to access to education, and it can reach anybody with any learning need in any part of the globe, and possibly even beyond. However, this potential of ICT should not be misconstrued or

misunderstood as if ICT in itself can solve all the educational problems in a given situation.

The key to the success of technology is the pedagogy combined with the quality: quality of decision making with regard to choice of technology, and the quality of content and its presentation. Technical sophistication and other merits of technology will have little effect on the learner, if the use of ICT is not rational, and the content is not of acceptable quality.

One of the recent surveys on the spread of information communication Technology (ICT) the world over says that in the year 2000 there were 230 million active adult internet users in the world, of which North America alone had 98 million; Europe 70 million; Asia Pacific and Latin American 10 million; Africa and the Middle East together about 4 million (Arun Mahizhnan, 2001). The same survey says that within Asia, the following was the internet penetration in 1999 in the 11 Asian countries considered to be technology savvy:

While citing the World Bank prediction that 'most of the developing world will be left behind, locked into vicious circles of poverty and instability as the gap between rich and poor widens again' (Ibid 73), the author of the survey looks at the promising projections of the growing digital future of Asia, and concludes that:

Internet penetration in Asia by country, 1999 (Millions)

Country	Adult Population	Internet Users	Percentage of Internet Users
Singapore	2.66	1.06	39.92
Hong Kong	5.34	.075	14.06
Japan	102.64	10.3	10.44
Taiwan	16.09	1.8	11.19
South Korea	34.2	0.9	2.63
Malaysia	12.58	0.16	1.27
China	869.93	2.47	0.28
Philippines	44.69	0.12	0.27
Thailand	42.72	0.11	0.26
India	598.88	0.27	0.05
Vietnam	46.25	0.01	0.02

Source: Media Asia, Vol. 28, No. 2, p. 73.

By this time, the number of Internet users would have crossed 370 million mark. However, the situation in terms of equity of access and success among the nations would not have changed much, if we go by the previous history of technology growth. Within India, there is a lot of hype as well as genuine pride in the growth of ICT industry. Recognizing the complex and uneven technological-economic growth of India, Arvind Singhal and Everett Rogers (2001) observe that India has more information workers than Japan, and the same number as the US. However, if we look at the share of India in terms of internet users globally, it is a paltry 0.05 per cent only. Perhaps the vast untapped potential market in India may be the envy of any IT industry in the world, rather than the soft-ware professionalism of the country with a billion people, 50 percent of which are still illiterate. The overall spread of communication technologies across the different regions of the globe also shows the glaring gaps that divide the haves and the have-nots.

If we look at the spread of somewhat old communication media within India, the equity issue still haunts us in spite of the fact that the millions of Radio and TV have made India a hub of the media competitors. Still only a limited number of Indian homes have access to TV and telephone, let alone access to computers. We have to look at the access as well as success of the ICT in the field of education in a country like India which defies all generalisations about its economy, democracy, education and the rest of its socio-economic and cultural activities within a spectrum of the best communication specialist with the best technology at one end and the cave man who is yet to use the simplest technology on the other.

ICT and Indian education sector

The radio and television have been playing an important role in the formal as well as the informal educational programmes since long. Of late, a number of open universities and correspondence/distance education directorates located in the conventional universities have started using ICT in a big way. The Indira Gandhi National Open University (IGNOU) has been identified as the nodal agency by the Ministry of Human Resource Development (MHRD), Government of India, to implement country wide dedicated educational channels of Gyan Darshan (TV) and Gyan Vani (Radio) with appropriate local infrastructure throughout the country. The 10th plan budget allocation for strengthening the ICT component in the Distance Open Learning (DOL) system is Rs. 300 crore, which alone accounts for 33 percent of the total allocation for DOL for the 10th plan period. IGNOU's own Electronic Mode Production Centre(EMPC), developed with special assistance from Japan to the tune

of Rs. 80 crore has the potential to take care of the audio-video production of the entire system of DOL in the country and also has the capacity to meet the requirements of even some NGOs and private organizations. Between 1986 and 2001, EMPC has produced 1300 audios and 1250 videos to back up the various programmes and courses of IGNOU.

In the sphere of web-based and on-line education, India has started off well. Killedar (2001) reports:

ODES (Open Distance Education System) of India can not afford to ignore the internet. Quality and efficiency of academic and administrative services of ODES will be significantly better, when compared to its present status. With rapid growth of the internet, more and more students will come to ODES and will expect the university to make use of 'their' new communication tools, i.e. the internet. ODES of India repeatedly plans and executes the introduction of the internet up to face the challenges of the new millennium.

Pulist (2001), on the other hand, tells a somewhat different story:

There is a great potential for online programmes in India. The new generation is quite eager to take online courses. It is so because of the fact that it is the latest development in the distance and open education furthering towards more learner-centred learning. It gives ample scope of flexibility and autonomy which is quite in consonance with the preoccupation and heterogeneous characteristics of today's learners. However, before an institution comes up to the expectation of the learners and vice-versa, there are certain gray areas which need immediate attention and critical issues which warrant prompt solution.

However, the general trend to use ICT seems to be on the rise, although the enrolment for programmes like BCA and MCA of IGNOU for the year 2002 indicate a decline, perhaps because of the international glut of IT industry after 11 September, 2001.

The Southern Indian States like Karnataka, Andhra Pradesh, Tamil Naduand Kerala have taken up ICT to remarkable heights, while the states of Maharashtra and Delhi have done equally well in this respect. Some States like Haryana, Madhya Pradesh, Rajasthan and West Bengal are fast moving towards ICT friendly policies and investment. As recently as January 2002, the chief minister of the state of Kerala announced a plan to make every school in the state fully equipped to provide computer access to the pupils of the state.

Granting that every state and practically every institution in India shows keen interest in harnessing ICT for meeting their various needs, certain fundamental questions have to

be first resolved, in order that ICT is really used by people instead of allowing ICT giants to use the people for earning profit or even to survive in the competitive market constantly tossed by the storm of globalization. If the collapseof the Enron giant inthe energy sector is any indication, we must be prepared for the sudden fall and collapse of many moremines, includingthose busy selling the ICT products in the global market. If we have to take advantage of ICT or for that matter, any technology, wemust keep in viewthe context and purpose.

Here itis important to remember that ICT does not mean just the internet or the computer, it includes the whole range of communication technology starting from radio, telephone etc to the latest satellite based telecommunication and the computer technology. There are a few prerequisites, which cannot be ignored for the success of ICT, whatever be the combination of the media. Betty Collis and Jef Moonen (2001) draw our attention to four key components of flexible learning in a digital world: Institution, Implementation, Pedagogy and Technology.

Institutional polices, of course, play the key role in the implementation of every technology. However, to shape the policies, we need to understand the complex dynamics of technology - pedagogy relationship, an issue that has made many a scientist as well as a pedagogue to rethink and review the whole gamut of technology based educational practices (Peters, 2000). An year long virtual seminar conducted by the university of Illinois (2000) and another virtual global workshop conducted by the German open university and the oldenberg university (1999) amply demonstrate that it is not a simple possession of the ICT hardware or even the ability to operate the machines that will contribute to effective ICT based flexible learning, but the ability of the teachers and the learners to organize their teaching and learning respectively, to use ICT as the most efficient interactivetool or media,to accessthe relevant as well as quality information and knowledge necessary to master a particular field or discipline. Above all, to drive such knowledge, skills, and understanding that the freedom/ flexibility of ICT, a facility one cannot possibly get under other situations, it must be guided by clear policies and sound pedagogy.

The level of discourse on ICT in the technologically advanced west is necessarily on a higher and more sophisticated plane. But that need not scare us, if we know for what purpose, and with what objectives we use ICT in our situation. Commenting on the general technology - media situation prevalent in the developing world, Ramanjam notes:

To a large extent, institutions in the developing countries may succeed in acquiring the necessary technology.... But the actual practice may be entirely counterproductive. Apart from

establishing the real need for technology, it is also necessary to clearly define the objectives to be achieved through technology. Both the needs and objectives must be clear to the teaching staff and the media personnel (Ramanujam, 2002:61).

With the necessary modifications, the above observation holds good in the case of institutions that rush headlong into the ICT gamble without the necessary preparation. If our attempt is to reach more number of students in less time through ICT, and if the justification is cost effectiveness besides quality, then, the learning outcome of the students must be used as the yardstick to measure the effectiveness of the ICT based courses and programmes. And the best way to measure the learning outcome is to see how the students perform, what do they really learn, how much, with what efforts etc, and as an ultimate test, to see how the graduates are received by the job market and the society as a whole. If the graduates with high scores are not even called for interviews by reputed institutions, firms etc, then the institution that turns out unusable graduates on a mass scale stands exposed and it wall face, sooner or later, the trial of the people's court. Such a social disgrace and academic failure will soon be followed by the institutional demise. There are a number of safeguards against the above mentioned possible risks. Some of the safeguards are presented below.

Quality concerns and quality assurance

In the eye of the so called 'globalisation' storm, educational institutions must be prepared for sudden surprises and attack of all sorts. The best possible safeguard is to have quality as the anchor of the institutional ship. It is easier to 'talk' about quality than assure it. The general abstract understanding about quality in industrial terms will not be of much use to educational practices. We have to translate the general concepts into specific, concrete actions in the given specific situations. In the context of ICT and DOL in India, we have to consider, among others, the following issues, if we place emphasis on quality:

- Institutional philosophy vis-'a- vis ICT and DOL
- Infrastructure for effective implementation of the policies
- Pedagogical base that can be created only through quality of teachers
- Adequate training and appropriate attitude to use technology

If any of them is missing in the overall scheme of ICT based DOL, the programmes are bound to meet with difficulties or costly failures. Let us focus on each of the above in some concrete details.

Institutional philosophy

Why dose an institution go for ICT? Is it because of sheer fascination for ICT or the anxiety to be' modern' in order to stay in

business? Or, is it because of the wish to attain economies of scale in the long run and increase the access to educational programs through ICT? Unless the institution concerned is clear about its aim and objectives, there will be an inevitable mess up in the choice and use of technology. It is equally important to make sure that the clientele are also ready to accept the institutional policies, strategies and conditions to learn. Without technology strategies we are likely to fill in line with the community of politicians who make policy statements as required by the profession with little concern for their implementation. As Terry Evans and Daryl Nation (2001) observe:

Indeed, all politicians seem to have a proposal for some form of 'e-learning' initiative in their electoral polities file. The prospects of offering genuinely global forms of education, based on the new ICTs has constantly exercised the minds of university readers, politicians and policy makers, and some members of the public. There is no shortage of programs and proposals articulated in terms of the 'g-word'-global, the 'e-world'-electronic or the 'v-world'-virtual. Nevertheless we are a long way from any extensive provision of university education on a global scale.

Infrastructure facilities

The ability of institutions to develop adequate infrastructure facilities will ultimately decide the success of policy implementation. Buildings, space design factors etc to install the equipment, its maintenance and the personnel to use the technology the right- all this will impact the implementation of any technology policy. It is common knowledge that in most developing countries, institutions acquire some sort of hardware without looking at the needs of those who are to use it, or without considering the compatibility of the new hardware with the one already in place. Mere 'buying' of technology will not become a policy, because any unprofessional decision at some level will be enough to buy technology. In such a case technology will become a disabling rather than an enabling tool. The technology dream may actually turn into a nightmare, and the sleek equipment will act like a silent monster, eating up the meager resources and also rendering everyone ineffective.

Pedagogical base and the role of teachers

Except in the upcoming virtual universities/ colleges, there is little evidence to show that majority of teachers anywhere in the world are actually enthusiastic about using and experimenting with technologies in their profession. Even in the most successful DOL institutions like the Open University, U.K and the Fern Universitat, Germany it is only a handful of academics who are seriously engaged in evolving a distinct pedagogy for technology (Hawckridge, 1995; Peters,

2001). Others are mere 'users' of technology at the most, or they may simply ignore it and be quite comfortable with their lecture method, or writing lesson for the print medium. It is a fact that 90 per cent of the content is offered through the print medium even by the best among the open universities.

In the developing countries we are faced with peculiar multiple challenges such as limited access to technology, lack of training to use it, poor communication skills etc. Beside lack of enthusiasm for technology, academics in the developing countries suffer from poor institutional arrangement to develop the necessary skills in the academics to effectively communicate through ICT, to work in teams, to critically review their own practices and to change their practices according to the changing needs of institution and society. Though it is largely a social cultural and economic problem, in the institutional contexts where technology is already available it is primarily a problem of management.

At the time of recruitment of teachers and other staff, often non- professional considerations dominate the decision making process. The thinking and the decision of the chief executive officers may even be dictated to them by internal and external pressures which result in the selection of the mediocre candidates and the rejection of the best candidates. In such situations neither the well-meaning heads of institutions nor the professionally competent minority of academic can bring in a desired change in the organizational behaviour. Assuming that the staff are reasonably competent we can think of a pedagogy- technology like that can be established though appropriate training and staff development.

Attitudinal change through training

Implementation of good ICT policies becomes easy if the organization has a definite training policy. Betty and Jef Moonen (2001) emphasize a just- in time approach for staff engagement in such situation, as the above. They say, the staff engagement is necessary because "many times the focus is directly on the technology rather than the pedagogy and strategy of managing the technology in education". However it is not always possible to have leaders who recognize the importance of both the skills to handle technology and also to think about its pedagogical implications. Discussing the problems with online learning, Stewart Hase and Allan Ellis (2001) point out:

In many respects it (online learning) will probably always be 'work in progress' given the rapid rate at which technology is progressing. Nonetheless, it is interesting to note that the same problems confront any institutional delivery of education. The first of these is the dominance of teacher- centred

approaches that needs to be challenged if the best of what technology offers is to be realized. The second of these is the requirement for the alignment of the needs of all stakeholders in the design and delivery of courses. Progress in both these areas falls short of the potential for learner managed learning that online technology offers. The challenge is to change existing educational paradigms currently used in universities.

Conclusion

The present thrust on ICT based educational programmes in India is understandable, in the sense of pressing in technology to achieve quicker results that the conventional approaches could not yield even after 55 years of political independence. However, technology, though neutral in its potential, is never independent of the nature of ownership. Globalisation being a fundamentally market driven phenomenon, any uncritical approach to ICT is riddled with surprises, risks and many unpredictable social consequences. Precisely in this context, the universities and academia all over the world have a social role to play. This role can be played more effectively and meaningfully only when we get engaged in finding the right solutions through linkage of pedagogy and technology, without losing sight of quality of programmes and services.

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