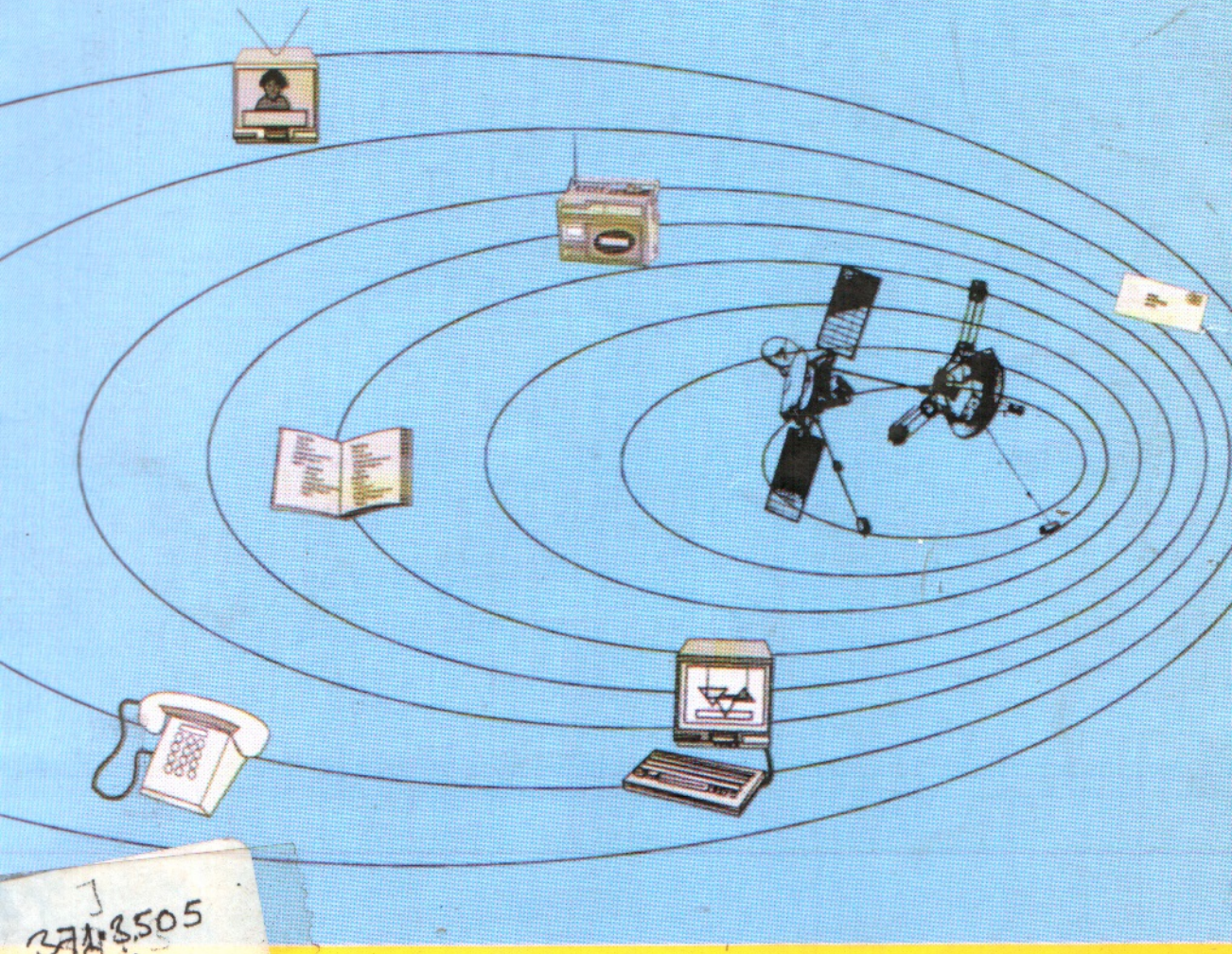
दूर शिक्षा

DISTANCE EDUCATION



२०५८

दूर शिक्षा

DISTANCE EDUCATION

प्रधान सम्पादक

अर्जुनबहादुर भण्डारी

सम्पादकहरू

जगन्नाथ अवा सुनिता मालाकार

द्रोण दाहाल हरि गौतम

श्री ५ को सरकार

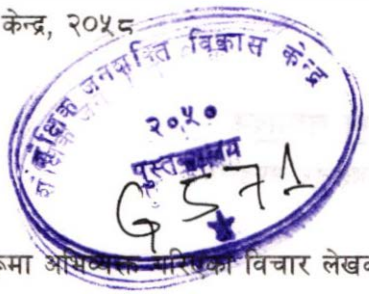
शिक्षा तथा खेलकुद मन्त्रालय

दूर शिक्षा केन्द्र

सानोठिमी, भक्तपुर

२०५८

प्रकाशक
श्री ५ को सरकार
शिक्षा तथा खेलकुद मन्त्रालय
दूर शिक्षा केन्द्र
सानोठिमी, भक्तपुर



(लेख रचनाहरूमा अभिव्यक्त भएका विचार लेखकहरूका निजी विचार हुन् ।)

आवरण पृष्ठ डिजाइन
- सुमन बज्राचार्य

टाइप सेटिङ तथा डिजाइन
- रिजिता मानन्धर
- अनितकुमार क्षेत्री

मुद्रक

श्री ५ को सरकार
आमोद प्रसाद उपाध्याय
शिक्षा तथा खेलकुद मन्त्री
निजी सचिवालय

फोन नं. ४११४९९
४१४६९०

२०५८।१।२५

शुभ कामना ।

दूर शिक्षा केन्द्रले "दूर शिक्षा" नामक पत्रिकाको शुभारम्भ गर्न लागेको थाहा पाउँदा मलाई खुशी लागेको छ । प्रजातन्त्रको पुनःस्थापनापश्चात् शैक्षिक क्षेत्रका विविधि फाँटहरुमा नयाँ विहानीको शुभारम्भ भएको यस अवसरमा गुणस्तरीय शिक्षा प्रदान गर्न सवैको साझा प्रयास हुनु वाञ्छनीय भएको छ । विश्वले सूचना प्रविधिमा गरेका विकासलाई हाम्रो राष्ट्रिय विकासका लागि पनि प्रयोग गर्न सकिन्छ । हिमाल, पहाड र तराई जस्ता विषम भू-बनोट रहेको हाम्रो देशमा विभिन्न भागमा छरिएर रहेका प्राथमिक विद्यालयका शिक्षकहरुलाई तालिमका लागि रेडियो शिक्षाले पहिलेदेखि नै महत्वपूर्ण स्थान ओगटेको कुरा सर्वविदितै छ । विद्यालय र विश्वविद्यालयमा गई अध्ययन गर्न अनुकूल नभएको तर अध्ययनको तिब्र इच्छा भएका जिज्ञासु वर्गलाई दूर शिक्षाको माध्यमबाट अध्ययनको अवसर प्रदान गर्न सकिन्छ । दूर शिक्षाका लागि रेडियो, टेलिभिजन, टेलिफोन, पत्राचार, मुद्रित सामाग्री, इमेल, इन्टरनेट आदिलाई माध्यमको रुपमा लिन सकिन्छ । यस्ता आधारहरुको विकास भइसकेको हाम्रो देशको परिप्रेक्ष्यमा पनि दूर शिक्षाका माध्यमले खुला अध्ययन अध्यापन प्रक्रियाको प्रारम्भ गरी शिक्षक तालिम, निरक्षरता उन्मूलन र क्रमशः विद्यालय तथा विश्वविद्यालयले प्रदान गर्ने प्राज्ञिक शिक्षा तर्फ पनि दूर शिक्षा प्रणालीलाई उन्मुख गराउन सकिनेछ ।

२१ औं शताब्दीको परिवेशमा दुर शिक्षाको भूमिका दिनानुदिन गहन हुदै गएको छ । यस पत्रिकाले दूर शिक्षा क्षेत्रमा देश तथा विदेशमा हासिल गरेका नविनतम् सूचना तथा अनुभवहरुलाई पाठकहरु समक्ष प्रवाहित गर्न सफल हुनेछ भन्ने आशा राख्दै प्रकाशनको सफलताको लागि हार्दिक शुभकामना व्यक्त गर्दछु ।

(आमोद प्रसाद उपाध्याय)
शिक्षा तथा खेलकूद मन्त्री

श्री ५ को सरकार
माननीय शिक्षा तथा खेलकुद राज्य मन्त्री
दिलेन्द्र प्रसाद बडू
निजी सचिवालय

फोन नं. { मन्त्रालय: ४१२८०४
मन्त्री निवास: ५२२८५१
५२७२५५

केशरमहल काठमाडौं
नेपाल ।

पत्र संख्या:–
च. नं.:–

मितिः–...०५८।१।१३.....

निजी सचिवालय
केशरमहल, काठमाण्डौं, नेपाल

विषयः–

शुभ - कामना

दूर शिक्षा केन्द्रले दुर शिक्षा र यससंग सम्बन्धित विषयमा रचनाहरु समावेश गरी पत्रिका प्रकाशन गर्न लागेको सुन्दा मलाई खुसी लागेको छ ।

पठनपाठन प्रक्रियामा एक्काइसौं शताब्दीमा विश्वले अपनाएको नवीनतम प्रविधिलाई अवलम्बन गरी शिक्षालाई जीवनको आवश्यकता पूरा गर्ने माध्यमको रुपमा लिनु अत्यावश्यक भएको छ । हाम्रो राष्ट्रका लागि र अझ अन्तरराष्ट्रिय बजारका लागि नै आवश्यक हुने दक्ष र सक्षम मानवीय स्रोतको विकास हामीले प्रदान गर्ने शिक्षाबाट गर्नु सक्नु पर्दछ जुन आजको प्रमुख आवश्यकता हो ।

समर्पित शिक्षाबाट नै सुयोग्य विद्यार्थी उत्पादन हुने भएकाले शिक्षकलाई कसरी आफनो पेसाप्रति लगनशील तथा स्वाभिमानी गराउन सकिन्छ । यसतर्फ सबैले प्रयास गर्नु अत्यावश्यक ठानिएको छ । विद्यालय, महाविद्यालय र विश्वविद्यालयबाट प्रदान गरिने गुणस्तरीय शिक्षाले योग्य, लगनशील एवं मर्यादित जनशक्तिको विकास गर्न सक्तछ । शिक्षण पेसामा रहेका जनशक्तिलाई प्रदान गरिने तालिम र उपलब्ध गराइने शैक्षिक सामग्रीहरुले शिक्षकको ज्ञान, सीप र अभिवृद्धिलाई ताजा र अद्यावधिक राख्न टेवा दिन्छ । शिक्षक वर्गको क्षमतालाई सुदृढ गर्न सकिएको खण्डमा गुणस्तरीय र समाजोपयोगी जनशक्ति प्राप्त गर्न सकिनेछ । गुणस्तरीय जनशक्तिबाटै राष्ट्रको चौतर्फी विकास सम्भव हुनेछ । यस पृष्ठभूमिमा यस्ता प्रकाशनहरुको ठूलो महत्व रहन्छ । एकातर्फ अधिकभन्दा अधिक जनतालाई शिक्षा प्रदान गरी साक्षर बनाउनु परेको छ भने अर्कोतर्फ हामीले प्रदान गरेको शिक्षा गुणस्तरीय र रोजगारी मूलक हुनुपरेको छ । यसका लागि तालिम प्राप्त र सुशिक्षित शिक्षक वर्ग नितान्त आवश्यक हुन्छ । ती शिक्षकलाई समयसापेक्ष र अद्यावधिक शैक्षिक सूचना उपलब्ध गराउनु पनि उत्तिकै आवश्यक हुन जान्छ । यो क्रममा यस पत्रिकाले यथेष्ट योगदान पुर्‍याउनेछ भन्ने आशा राख्दै यो पत्रिका पाठकलाई उपयोगी बन्न सकोस् भन्ने हार्दिक शुभेच्छा व्यक्त गर्दछु ।

.....
(दिलेन्द्र प्रसाद बडू)
शिक्षा तथा खेलकूद राज्यमन्त्री

शिक्षा तथा खेलकूद राज्यमन्त्री

श्री ५ को सरकार

शिक्षा तथा खेलकूद मन्त्रालय

(..... शाखा)

फोन नं. ४११०७४, ४१२०१३, ४१८७८३, ४१८७८४

पत्र संख्या:-

चलानी नं.:-

केशरमहल,
काठमाडौं, नेपाल ।

मिति: ..... २०५८।११।१४

विषय:- शुभकामना ।

दूर शिक्षा केन्द्रले प्रथमपटक "दूर शिक्षा" नामक पत्रिका प्रकाशन गर्न लागेको सुन्दा मलाई खुशी लागेको छ । यस्ता प्रकाशनहरुले केन्द्रीयस्तरमा सम्पन्न गरेका कार्यक्रम तथा राष्ट्रले अवलम्बन गरेका नीतिहरुलाई क्षेत्र, जिल्ला र गाउँसम्म पुऱ्याउने हुँदा दूरवर्ती क्षेत्रमा रहेका पाठक यसबाट लाभान्वित हुन पाउनेछन् । यस पत्रिकामा समावेश भएका गहकिला रचनाहरुले दूर शिक्षाको अवधारणा, वस्तुस्थिति तथा देशविदेशमा भएका दूर शिक्षा सम्बन्धी प्रविधि एवं सूचनालाई ग्रामीणस्तरसम्म प्रवाहित गर्ने भएकाले यसको ठूलो महत्व रहेको सर्वविदित छ । सूचना प्रविधिमा विश्वले प्राप्त गरेको जानकारीलाई शिक्षाको क्षेत्रमा प्रयोग कसरी गर्न सकिन्छ र हाम्रो जस्तो डाँडाकाँडा र विषम भू-धरातलले बनेको देशमा ज्ञान विज्ञानलाई संप्रेषण गर्ने माध्यमका रुपमा दूर शिक्षालाई कसरी प्रयोग गर्न सकिन्छ भन्नेतर्फ सबै चनाखो हुने बेला आएको छ । दूर शिक्षा सम्बन्धमा देश विदेशमा भएको विकास तथा अनुभवलाई यस पत्रिकामा रहेका रचनाहरुले पाठकसमक्ष पुऱ्याउन सफल हुनेछन् भन्ने मैले आशा लिएको छु ।

अन्तमा पाठकका जिज्ञासा पूरा गर्न यो पत्रिका सफल रहोस् भन्दै हार्दिक शुभकामना व्यक्त गर्न चाहन्छु ।

(लवकुमार देवकोटा)
सचिव

सम्पादकीय

सूचना प्रविधिमा भएको विकासले पूरा विश्व नै एउटा समाजमा परिणत हुन भएको छ । संसारको कुनै पनि भागमा घटेको महत्त्वपूर्ण घटनालाई टेलिभिजनको पर्दामा आफ्नै कोठाबाट जानकारी लिन सकिन्छ । अर्को गोलार्द्धमा बस्ने व्यक्तिलाई आफ्नै कोठामा रहेको टेलिफोनमा भेट्न सकिन्छ, संसारको कुनै पनि भागमा आफूलाई उपयुक्त हुने नोकरी खाली छ कि छैन भनी इन्टरनेटबाट तत्काल थाहा पाउन सकिन्छ । क्यानाडाको पुस्तकालयको पुस्तक आफ्नै कोठाको कम्प्युटरमा उपलब्ध हुन सक्छ, लन्डनको परीक्षा आफ्नै कोठामा बसी दिन सकिन्छ । कुनै बिरामीले विश्वको उत्कृष्ट चिकित्सकको सल्लाह लिन चाह्यो भने ऊ बाहिर कतै जानुपर्दैन । सूचना प्रविधिको विकासले नै यो सम्भव हुन सकेको हो ।

सूचना प्रविधिको विकासबाट मनुष्यको जीवनपद्धतिमा आमूल परिवर्तन हुन सकेको हो । जतिजति नयाँ प्रविधिको विकास हुन्छ त्यतित्यति आत्मसात् गरेको खण्डमा समाज विकासको मार्गमा द्रुतगतिले अगाडि बढ्न सक्छ, तर ढिलो गरी अङ्गीकार गर्ने प्रवृत्तिले राष्ट्र, समाज र जनतालाई अन्य देशको तुलनामा सधैं पछाडि पार्दछ ।

हाम्रो देशमा अनेक कारणले पछाडि परेका क्षेत्रहरू छन् जसलाई सूचना प्रविधिको प्रयोग गरी अगाडि ल्याउन सकिन्छ । मुख्य सहर र बस्तीहरूमा यातायात, बिजुली, टेलिफोन, टेलिभिजन जस्ता आधारभूत कुराबाट पर्याप्त सुविधा पुऱ्याइएको छ । देशको कुनै पनि भूभाग रेडियोको सुविधाबाट वञ्चित रहेको छैन । दूर शिक्षाका लागि आवश्यक हुने न्यूनतम आधारहरू देशका प्रायः सबै ठाउँमा उपलब्ध भएको यस अवस्थामा शिक्षाको महत्त्वपूर्ण माध्यमको रूपमा दूर शिक्षालाई अपनाउनुपर्ने आवश्यकता देखिएको छ ।

प्राथमिक शिक्षक तालिममा मात्र सीमित शिक्षक तालिमलाई निम्न माध्यमिक र माध्यमिक शिक्षक तालिममा पनि प्रयोग गर्न सकियो भने सबै शिक्षकलाई सीप र तालिम दिई पठनपाठनमा आवश्यक सुधार ल्याउन सकिनेछ । विषम धरातल रहेको हाम्रो देशमा एकातर्फ अध्ययन गर्ने क्याम्पस र विश्व विद्यालयको पहुँच सबैलाई सजिलै उपलब्ध हुन सकेको छैन भने अर्कोतर्फ विभिन्न कारणले बीचैमा अध्ययन छोड्ने वा अध्ययनको मौका उपलब्ध हुन नसकेका इच्छुक व्यक्तिलाई वैकल्पिक अध्ययनको सुविधा उपलब्ध गराउन खुला विद्यालय तथा विश्व विद्यालयको व्यवस्था गर्न सकिने देखिन्छ । यसका लागि दूर शिक्षाको क्षेत्र र दायरालाई क्रमशः विस्तार गर्दै लैजानु अत्यावश्यक भएको छ ।

दूर शिक्षाका माध्यमले औपचारिक तथा अनौपचारिक शिक्षाको विस्तार गरी गुणस्तरीय शिक्षातर्फ अभिमुख हुन सकिन्छ । शिक्षक तालिम, अनौपचारिक शिक्षा, नागरिक सचेतता वृद्धि र जीवनोपयोगी सीपको विस्तारमा यसले ठूलो भूमिका खेल्न सक्छ । सूचना प्रविधिको विकासलाई दूर शिक्षाका माध्यमले राष्ट्रिय विकासमा प्रयोग गर्न सकिएको खण्डमा साधन स्रोतको मितव्ययी प्रयोग र समयको प्रशस्त बचावट हुने कुरामा द्विमत रहँदैन ।

दूर शिक्षा केन्द्रले वार्षिक रूपमा प्रकाशन गर्ने उद्देश्य राखी "दूर शिक्षा" नामले पत्रिका प्रकाशन गर्न यस वर्षबाट आरम्भ गरिएको हो । यसमा सकेसम्म स्तरीय लेख रचना समावेश गर्न सकियोस् र पत्रिका पाठकलाई उपयोगी बनोस् भनी प्रशस्त प्रयास गरिएको छ । यसरी प्रयास गरिँदा पनि कतै कमी भएका हुन सक्छन् । तिनीहरूप्रति विज्ञ एवं सचेत पाठकवर्गको सकारात्मक दृष्टि रहनेछ भन्ने आशा एवं विश्वास राखिएको छ ।

विषय सूची

प्राथमिक तहमा नेपाली भाषा शिक्षणका समस्या र समाधानको दिशा

– डा. हेमाङ्गराज अधिकारी*

नेपाली भाषा नेपालको राष्ट्रभाषा र सरकारी कामकाजको भाषा मात्र नभएर यो नेपालका विभिन्न भाषाभाषीको आपसी सम्पर्कको माध्यम पनि हो। अझ भिन्नभिन्न भाषाभाषीहरूका बीच विचार आदानप्रदानको माध्यम मात्र नभएर एउटै जाति वा समुदायका भिन्नभिन्न मातृभाषी (जातीय मातृभाषा बोल्ने र नेपाली मातृभाषा बोल्नेहरू) का बीचको पनि आपसी सम्पर्कको माध्यम भएकाले यो एउटै जातिभित्रको आन्तरिक सम्प्रेषणको प्रभावशाली माध्यम पनि बनेको देखिन्छ। साथै यो भाषा अन्य मातृभाषा हुने अधिकांश नेपालीहरूको दोस्रो भाषाको रूपमा दैनिक व्यवहारमा प्रचलित छ। तसर्थ नेपाली भाषाले नेपालको राष्ट्रिय र स्थानीय गतिविधिका आमसञ्चारमा पाएको भूमिकालाई निर्वाह गर्न सक्षम बनाउन प्राथमिक कक्षादेखि नै बालबालिकाहरूलाई यसको शिक्षणमा जोड दिएको स्पष्ट हुन्छ। यस तहमा विभिन्न पृष्ठभूमिका बालबालिकाहरूलाई नेपाली शिक्षण गर्दा आइपर्ने केही प्रमुख समस्या वा चुनौतीहरूका विषयमा यहाँ चर्चा गरिन्छ।

१. अक्षर चिनारीसम्बन्धी समस्या

अक्षर चिनारी प्राथमिक तहको नेपाली शिक्षणको एउटा महत्त्वपूर्ण पक्ष हो। लेख्य भाषामा प्रवेश गर्ने पहिलो खुट्किलो यही अक्षर चिनारी नै हो। नेपाली भाषा देवनागरी लिपिमा लेखिन्छ। देवनागरीका लिपि चिन्हहरूबाट नेपाली भाषाको लेख्य वर्णमाला बनेको छ। वस्तुत : नेपालीको लेख्य वर्णमाला परम्परागत संस्कृत वर्णमालामा आधारित छ। तसर्थ नेपाली लेख्य वर्णमालामा कतिपय यस्ता लिपि चिन्हहरू पनि छन् जुन उच्चार्य वर्णमालामा फेला पर्दैनन्। लेख्य भाषा सिक्दा यस्ता अतिरिक्त लिपि चिन्हहरू पनि सिक्नुपर्ने हुनाले वर्णमालाका अक्षर चिनारी र लेखनमा थप समस्या आइपर्छ। उच्चारणमा जुन वर्णहरूको अस्तित्व छैन, तिनको पनि कतिपय स्थितिमा लिखित भाषामा प्रतिनिधित्व हुने हुँदा बालबालिकालाई उच्चारण र लेखनका बीच तालमेल पहिल्याउन कठिनाइ हुन्छ। जस्तै, नेपालीको उच्चारणमा एउटा मात्र स भए पनि लेख्य भाषामा चाहिँ श, ष, स तीनवटा लिपि चिन्ह छन्। यस्तै य, व, ण, ञ को भिन्न भिन्न स्थितिमा भिन्नाभिन्नै उच्चारण भएको पाइन्छ। फेरि एकातिर स्वर वर्णहरूलाई बुझाउने लिपि चिन्हहरू बेग्लै छन् भने अर्कातिर व्यञ्जनसँग मात्रा जनाउँदा तिनका चिन्हहरू अर्कै आकार प्रकारका देखा पर्छन्। कतिपय वर्णको आकृति समान (घ/ध, म/भ) जस्तो हुनाले पनि बालबालिकालाई यिनमा भिन्नताको ख्याल राख्न गाह्रो हुन्छ। साथै एउटै सग्लो लेख्य वर्ण कतै अजन्त र कतै हलन्त उच्चारण हुने हुन्छ। जस्तै, राम, नरम, मल, कमल, यी शब्दहरूमा शब्दको अन्त्य, अगाडि र बीचमा आएको एउटै म वर्ण स्वाभाविक सस्वरपठनमा पहिला दुई शब्दमा हलन्त र पछिल्ला दुई शब्दमा अजन्त उच्चारण हुन्छ। अझ संयुक्त अक्षरको लेखनमा वर्णहरू जोड्नेमोड्ने विभिन्नताले बालबालिकालाई अक्षर चिनारी एवं अक्षर लेखनमा निकै कठिनाइ हुन्छ। तसर्थ अक्षरलेखन गराउँदा लिपिचिन्ह, उच्चारणविन्यास र वर्णविन्यासको प्रकृति र प्रवृत्तिलाई समेत ख्याल राख्नु आवश्यक छ।

२. शुद्ध उच्चारण सिकाउने समस्या

प्राथमिक तहमा नेपाली सिकाउँदा सामना गर्नुपर्ने समस्याहरूमा वर्ण एवं शब्दहरूको शुद्ध उच्चारण सिकाउनु पनि हो। स्तरीय नेपालीमा आउने केही वर्णहरूलाई बालबालिकाहरू उच्चारण गर्न निकै कठिन मान्छन्। यिनमा ट वर्गका वर्णहरू तथा य, व, वर्णका साथै विशेष गरेर शब्दान्त र शब्दमध्यमा आउने महाप्राण

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* प्राध्यापक, शिक्षाशास्त्र संकाय, त्रि.वि.वि.

वर्णहरू पर्दछन् । अझ वर्णहरू संयुक्त अक्षरका रूपमा हुँदा यिनको उच्चारणमा कठिनाइ थपिन्छ । यसका साथै दोस्रो भाषाका रूपमा नेपाली सिक्ने बालबालिकाहरूका लागि उनीहरूका मातृभाषामा नभएका र नेपालीमा चाहिँ भएका वर्णहरू सिकाउने समस्या हुन्छ । यी समस्याहरू मातृभाषाको प्रकृतिअनुसार फरकफरक हुन्छन् । जस्तै, तामाङ, शेर्पा आदि मातृभाषीहरूलाई अ को उच्चारण सिकाउन कठिन हुन्छ । यस्तै यिनीहरूलाई सघोष महाप्राण वर्ण : घ, झ, ढ, ध, भ को उच्चारण सिकाउन कठिन हुन्छ । नेवारीभाषी र विशेष गरेर मध्यपश्चिमाञ्चलका मगरभाषी र थारूभाषी बालबालिकाहरूका लागि पनि नेपालीका ट वर्गका वर्णहरूको उच्चारणमा कठिनाइ देखिन्छ । यसरी विभिन्न मातृभाषीहरूका लागि समस्यापूर्ण वर्णहरू र स्तरिय उच्चारणका लागि कठिन मानिने वर्णहरूको ख्याल गरी शिक्षण गर्नुपर्ने हुन्छ ।

३. स्तरीय बोली सिकाउने समस्या

प्राथमिक तहको कक्षा एकमा आएका बालबालिका विभिन्न भाषिक पृष्ठभूमिका हुन्छन् । कोहीको मातृभाषा नेपाली हुन्छ, कोही अरू नै मातृभाषाका हुन्छन् । नेपाली मातृभाषीहरू पनि भौगोलिक, सामाजिक, सांस्कृतिक, जातीय एवं पारिवारिक दृष्टिले विभिन्न पृष्ठभूमिका हुन्छन् अर्थात् यिनले बोल्ने नेपाली भाषामा पनि प्रशस्त विविधता हुन सक्छ । यसरी प्राथमिक तहमा प्रवेश गर्ने कतिपय बालबालिकाहरूलाई नेपालीभन्दा भिन्नै मातृभाषाको पृष्ठभूमि एवं विविधतालाई ख्याल राखी प्राथमिक तहमा नेपाली शिक्षण गर्नु निकै चुनौतीपूर्ण हुन जान्छ । एकातिर यिनीहरू भरखरै घरपरिवारको परिवेशबाट विद्यालयको वातावरणमा प्रवेश गरेका हुनाले अपरिचित वातावरणले गर्दा अन्योलमा हुन्छन् भने अर्कातिर घरपरिवारमा प्रयोग गरेको नेपालीको भाषिक भेद र विद्यालयको परिवेशमा प्रयोग हुने भाषिक भेदका बीचको भिन्नताले यिनीहरूलाई थप द्विधामा पार्न सक्छ । अझ बालबालिकाहरूको घरको भाषा र विद्यालयको शैक्षिक गतिविधिको माध्यम भाषा फरक भएमा यिनीहरूलाई विद्यालयमा अनुकूल हुन ठूलो चुनौती आइपर्छ । तसर्थ यस किसिमका बालबालिकाहरूका लागि अलग्गै किसिमको शिक्षण प्रणाली अपनाउनुपर्ने हुन्छ ।

प्राथमिक तहका बालबालिकाहरूका लागि स्तरीय नेपाली सिकाउने सिलसिलामा विशेष गरेर उच्चारण, वाक्यगठन, औपचारिक शैली र हिज्जे (वर्णविन्यास) का कुरा बढी समस्यापूर्ण मानिन्छन् । वाक्यगठनमा वचन, लिङ्ग, पुरुष र आदरको सङ्गति समस्याको विशेष क्षेत्र हो । यस्तै क्रियाका काल, करण-अकरण, पक्ष, भाव आदिका दृष्टिले हुने वाक्यढाँचाका कुरा पनि समस्यापूर्ण हुन्छन् । स्तरीय वा औपचारिक भाषा घरपरिवारमा प्रयोग हुने मौखिक भेदभन्दा कतिपय स्थितिमा लेख्य भेदको निकट रहेकाले बालबालिकाहरूले नेपाली भाषा फरक रूपमा सिक्नुपर्ने हुन्छ । साथै नेपालीमा मौखिक भाषाको उच्चारणविन्यासभन्दा कतिपय दृष्टिले लेख्यविन्यास (हिज्जे) फरक भएकाले पनि यसको भिन्नतालाई ख्याल गरी शिक्षण गर्नु आवश्यक हुन्छ ।

४. पाठ्यक्रमजनित समस्या

प्राथमिक तहको नेपाली पाठ्यक्रम २०४९ मा नेपाली भाषासम्बन्धी उद्देश्यहरूलाई सिकाइउपलब्धिका रूपमा उल्लेख गरिएको छ । यी सिकाइउपलब्धिहरूलाई मुख्यत: भाषिक सीप, कार्यमूलक व्याकरण र शब्दभण्डारसँग सम्बद्ध पारी समावेश गरिएका छन् । तर भाषिक सीप विकासका क्षेत्रअन्तर्गत राखिएका कक्षा एकदेखि पाँचसम्मका सिकाइउपलब्धिहरूको कक्षागत विस्तृत विवरण दिँदा चाहिँ व्याकरणका सैद्धान्तिक पाठ्यवस्तुहरूको सविस्तार विवरण जटिल पारिभाषिक शब्दहरूका साथ समावेश गरिएको र तीमध्ये विशेष गरेर शब्दवर्ग र वाक्यतत्त्वसम्बन्धी अधिकाँश पाठ्यवस्तुको परिभाषा समेतको अपेक्षा गरिएकाले प्राथमिक तहको नेपाली पाठ्यक्रम अनावश्यक रूपमा जटिल बनेको देखिन्छ । फलस्वरूप यस पाठ्यक्रममा आधारित प्राथमिक शिक्षक तालिमका लागि निर्माण गरिएका प्याकेज, पाठ्यक्रम र तत्सम्बन्धी तालिम निर्देशिका एवं अन्य सामग्रीहरू पनि यिनै अस्पष्टता र अन्योलबाट आक्रान्त देखिएका छन् । भाषिक सीपका सुनाइ, बोलाइ, पढाइ र लेखाइलाई बढी केन्द्रित गरेर प्रशिक्षण सामग्री संयोजन गर्नुपर्नेमा उक्त सामग्रीहरूका अधिकांश भाग

व्याकरणका पाठ्यवस्तुहरूको स्पष्टीकरण दिन र तिनको शिक्षणका तरिकाहरू बताउनमा केन्द्रित छन् । यसो हुनुमा मुख्यतः प्राथमिक तहको नेपाली भाषा पाठ्यक्रम २०४९ मा व्याकरणका पाठ्यवस्तुहरूका सैद्धान्तिक पक्षहरूको लामो सूची नै जिम्मेवार रहेको देखिन्छ तापनि उक्त पाठ्यक्रममा उल्लिखित प्रमुख सिकाइउपलब्धिहरूले निर्देशन गरेका भाषिक सीप र प्रयोग पक्षहरूलाई गौण बनाउनुमा तालिम प्याकेज तयारिमा संलग्न पक्षले प्राथमिक पाठ्यक्रमका सिकाइउपलब्धिहरूको मूल भावनाप्रति ध्यान नदिई स्थूल रूपमा पाठ्यवस्तुहरूलाई मात्र महत्त्वपूर्ण ठानेकाले पनि समस्या अझ अन्योलपूर्ण बनेको देखिन्छ । यसरी पाठ्यक्रमगत अन्योलले गर्दा प्राथमिक तहको प्रशिक्षण कार्यक्रम र शिक्षणसमेत अत्यधिक मात्रामा व्याकरणमुखी भई बालबालिकाहरूलाई नेपाली भाषाका आधारभूत भाषिक सीप हासिल गराउनबाट विमुख हुन थालेको देखा पर्छ । तसर्थ यसउपर तत्काल ध्यान पुऱ्याउनु जरूरी छ ।

५. पाठ्यपुस्तकसम्बन्धी समस्या

पाठ्यक्रममा भएका अस्पष्टता र अन्योलबाट पाठ्यपुस्तकहरू पनि प्रभावित देखिन्छन् । पाठ्यक्रममा विधा, विषयवस्तु, पाठसङ्ख्या र तिनको विविधताबारे केही संकेत नभएकाले यिनको निर्धारण पाठ्यपुस्तकका लेखकहरूकै वैयक्तिक तजबिजमा छोडिएजस्तो आभास हुन्छ । यसकारण पनि प्राथमिक तहमा नेपाली भाषामा क्षमता विकास गर्न तयार गरिएका पाठ्यपुस्तकहरूमा विषयवस्तुगत र विधाका पाठहरूमा अपेक्षित विविधता र स्तरअनुकूलताको कमी रहेको हुन सक्छ । प्राथमिक पाठ्यक्रममा कार्यमूलक व्याकरण भनी दिइएको व्याकरणका सैद्धान्तिक पाठ्यवस्तुहरूको लामो सूचीले उक्त तहका धेरैजसो पाठ्यपुस्तकका पाठहरूमा व्याकरणसम्बन्धी सन्दर्भविहीन अभ्यासहरू भरमार देखिएका छन् । यसरी यस तहका भाषाका पाठ्यपुस्तकहरू पाठ्यक्रमले निर्देश गरेका भाषासम्बन्धी सिकाइउपलब्धिहरू वा भाषिक सीपगत उद्देश्यहरूतर्फ बढी सचेत भई पाठ्यसामग्री, पाठ र सोहीअनुरूपका नमुना अभ्यासहरू संयोजन गर्न सक्षम देखिँदैनन् । सरकारी स्तरमा निस्किएका यी पाठ्यपुस्तकहरूको प्रभाव निजी स्तरमा लेखिएका उक्त तहका सन्दर्भपुस्तकहरूमा पनि परेको पाइन्छ । प्राथमिक कक्षाका बालबालिकाहरूको आवश्यकता र स्तरअनुरूप भाषिक सीपहरूको विकास गर्नका लागि उल्लिखित कमीहरूलाई ध्यान दिई पाठ्यपुस्तक परिष्कार गर्नु जरूरी देखिन्छ ।

६. शिक्षकको योग्यता र प्रशिक्षणसम्बन्धी समस्या

प्राथमिक तहमा शिक्षण गर्ने शिक्षकहरूको योग्यतालाई हालको व्यवस्थामा प्रवेशिका परीक्षाको उत्तीर्णतामा सीमित गरिएको छ । एकातिर यिनीहरू नेपाली भाषाको स्तरीय प्रयोगको क्षमताका दृष्टिले निकै कमजोर देखिन्छन् भने अर्कोतिर यिनीहरूमध्ये धेरैजसोले अझै पनि प्रशिक्षण लिएका छैनन् । यस्तो स्थितिमा प्राथमिक तहको नेपाली शिक्षण यसै पनि प्रभावकारी हुन सकेको छैन । अझ नेपालको बहुभाषिक स्थिति र नेपाली भाषामा विभिन्न स्थानीय र सामाजिक भाषिकाको विविधता प्रचलित रहेको परिप्रेक्ष्यमा यसको शिक्षण चुनौतीपूर्ण हुनु स्वाभाविक छ । यस चुनौतीलाई सामना गर्न प्राथमिक शिक्षकहरूमा विषयगत थप दक्षता र प्रशिक्षणगत विशेष शैक्षणिक कुशलताको पनि आवश्यकता पर्ने हुन्छ । यी कुरालाई ध्यान दिँदा शिक्षकहरूको विषयगत योग्यता र प्रशिक्षणबाट प्राप्त हुने दक्षता बढाउनुपर्ने त छँदैछ, साथै प्राथमिक तहका नेपाली भाषाका पाठ्यक्रम र पाठ्यपुस्तकहरू पनि भाषिक सीप एवं दक्षताका लागि उपयुक्त र युक्तियुक्त हुनु जरूरी देखिन्छ । यसो भएमा मात्र नेपाली भाषाका पाठ्यक्रम तथा पाठ्यपुस्तकसम्बन्धी अभिमुखीकरण गोष्ठी र प्रशिक्षण कार्यक्रमहरूले सही बाटो देखाउन मदत गर्नेछन् । तत्र अपेक्षित सफलता प्राप्त गर्न निकै कठिनाइ पर्ने देखिन्छ ।

बालबालिकाको संज्ञानात्मक विकाससँग भाषाविकासको प्रत्यक्ष सम्बन्ध रहेको पाइन्छ। प्रारम्भिक उमेरमा भाषाविकासले उनीहरूको संज्ञान विकासमा ठूलो प्रभाव पारेको हुन्छ। त्यसै हुनाले बालबालिकाहरूमा प्रारम्भिक शिक्षा मातृभाषामा दिनु प्रभावकारी मानिन्छ। नेपाली भाषा नेपालका आधामन्दा बढी जनसङ्ख्याको मातृभाषा भएकाले उनीहरूका लागि प्रारम्भिक कक्षादेखि नै नेपाली भाषा सिकाउनु उपयुक्त देखिन्छ। नेपालका अधिकांश अन्य मातृभाषी बालबालिकाहरूका लागि कतिपय कारणहरूले आफ्नो मातृभाषामा प्रारम्भिक कक्षाहरूमा शिक्षा दिन सक्ने स्थिति बनिनसकेको हालको परिस्थिति छ। यस किसिमको अवस्थामा नेपाली भाषा उनीहरूको समवातावरणीय भाषा भएकाले यसको शिक्षण ती बालबालिकाहरूको संज्ञानात्मक विकासका दृष्टिले पनि महत्त्वपूर्ण बनेको देखिन्छ। प्रारम्भिक कक्षामा कुनै विदेशी भाषाका माध्यमबाट दिइएको शिक्षामन्दा स्वदेशी सामाजिक वातावरणलाई प्रतिबिम्बित गर्ने भाषाका माध्यमबाट दिइएको शिक्षा बढी अडिलो र दिगो समेत हुन्छ। यी कुराप्रति ध्यान दिन नसक्नाले पनि कलिला बालबालिकाको संज्ञानात्मक विकासमा प्रतिकूल असर पर्न थालेको भेटिन्छ। फलस्वरूप उनीहरूको बौद्धिक क्षमता र सृजनात्मक क्षमताको विकास पनि प्रभावित भएको आभास मिल्छ।

८. दोस्रो भाषाशिक्षणसम्बन्धी समस्या

प्राथमिक तहमा नेपाली भाषा सिक्ने बालबालिकाहरूमध्ये झन्डै आधाजसो नेपाली मातृभाषा नहुनेहरू हुन्छन्। उनीहरूमध्ये कतिपयले विद्यालयमा आएर मात्र नेपाली भाषा सुन्ने मौका पाएका हुन सक्छन्। त्यस स्थितिमा विद्यालयको भाषा र बालबालिकाको घरको भाषा पूर्णत : भिन्न हुने हुँदा विद्यालयका सिकाइशिक्षणका कार्यकलापहरू नेपाली भाषाका माध्यमबाट मात्र हुन नसक्नु स्वाभाविक छ। अन्य मातृभाषाको मात्र अनुभव भएका बालबालिकालाई नेपाली सिकाउने चुनौतीको सामना गर्न उनीहरूलाई दोस्रो भाषाका रूपमा नेपाली सिकाउने तौरतरिका अपनाउनुपर्ने हुन्छ। नेपाली भाषा केही जान्ने र बुझ्नेहरूका लागि र बिलकुलै नजान्ने र नबुझ्नेहरूका लागि एउटै कक्षा र एउटै समूहमा सिकाउन खोज्नु उपयुक्त हुँदैन। अझ यस्ता बालबालिकाहरू कक्षामा अधिकांश सङ्ख्यामा भएमा त यसलाई अलग्गै ढंगले समाधान गर्ने प्रयास हुनुपर्छ।

९. शिक्षण सामग्रीहरूको उपयोगसम्बन्धी समस्या

प्राथमिक तहका बालबालिकाहरू चञ्चल स्वभावका हुन्छन्। उनीहरू एउटै वस्तु वा घटना आदिमा धेरै बेरसम्म ध्यान दिइरहन सक्दैनन्। फेरि भाषा शिक्षणमा शिक्षकको लम्बेतान बर्णन वा व्याख्या उचित मानिँदैन। बालबालिकामा भाषा सिकाइका लागि जतिसक्दो अधिकाधिक शिक्षण कार्यकलाप र तिनको विविधीकरणमा जोड दिनुपर्छ। त्यसबाट मात्र सिकाइ प्रभावकारी हुन सक्छ। बालबालिकाहरूको सिकाइ प्रभावकारी रूपमा घटित गराउनका लागि पाठ्यपुस्तकमा मात्र भर नपरी विविध किसिमका शिक्षण सामग्रीको उपयोगमा जोड दिनुपर्छ जसले गर्दा कक्षामा भाषिक अभ्याससम्बन्धी कार्यकलापमा विविधता बढाउन सजिलो हुन्छ। तर प्रचलित परिपाटी पाठ्यपुस्तकमुखी र अझ यसको विषयवस्तुमुखी भएकाले शिक्षण सामग्रीहरूको निर्माण, संयोजन र प्रयोगतर्फ ध्यान गएको देखिँदैन। फलस्वरूप बालबालिकामा सिकाइ सम्पन्न नभएर शिक्षकले विषयवस्तुको शिक्षण मात्र गराएको देखिएको छ। यसरी भाषिक सीपहरू र अन्य विविध पाठ्यवस्तुहरूको प्रकृतिअनुरूपका शिक्षण सामग्रीहरूको समुचित उपयोगका अभावले पनि नेपाली भाषाको शिक्षण समस्याग्रस्त रहेको पाइन्छ।

१०. बालसाहित्यको उपयोगसम्बन्धी समस्या

नेपाली भाषामा बालसाहित्यसम्बन्धी पुस्तकहरू निकै कम मात्रामा उपलब्ध छन्। तिनमध्ये पनि धेरैजसो प्रारम्भिक कक्षाका लागि उपयोगी हुने खालका कमै देखिएका छन्। अर्कातिर प्राथमिक विद्यालयहरूको सिकाइशिक्षणमा बालसाहित्यका सामग्रीहरूको उपयोग गर्ने प्रचलनको विकास भइसकेको छैन। भाषा पाठ्यपुस्तकहरूमा मात्र सीमित रहेर बालबालिकाहरूमा सुनाइ, बोलाइ, पढाइ र लेखाइसम्बन्धी विभिन्न सीप

तथा क्षमताहरूको अपेक्षित विकास गर्न सकिँदैन । उनीहरूको रूचि र प्रतिभालाई प्रस्फुटन गराउन सके मात्र भाषामा क्षमता वृद्धि गर्न र विविधीकरण गर्न उपयुक्त आधारभूमि प्राप्त हुन सक्छ । यसका लागि कथा, चित्रकथा, बालगीत, कविता आदि विभिन्न विधासँग सम्बन्धित स्तरअनुकूल सामग्रीहरूको सृजना र उपयोगमा ध्यान दिनु आवश्यक छ । यस किसिमका बालसाहित्यसम्बन्धी सामग्रीहरूको उपयोगबाट विशेष गरेर बालबालिकाहरूमा पठनबोध र शब्दभण्डार क्षमता बढ्नुका साथै तत्सम्बन्धी विषयवस्तुहरूको चर्चाबाट सुनाइ र बोलाइ सीपको विकासमा पनि निकै मदत मिल्न सक्छ । बालगीत र कविता गाउन लगाउनाले उनीहरूको उच्चारणमा परिष्कार गर्न सकिन्छ । यसरी समग्रमा बालसाहित्यको उपयोगले बालबालिकाहरूमा पठन अभिरूचि बढ्ने हुनाले भाषिक क्षमताको विकास गर्नमा समेत दीर्घकालीन महत्त्व राख्दछ ।

दुई तर्फी नियमितता : दूर शिक्षामा स्नातकोत्तर तहको आवश्यकता

- डा. विद्यानाथ कोइराला*

शिक्षा हेर्ने आँखा

संरचनावादी (structural functionalist) हरूले शिक्षालयको जग राखे। सामाजिक भलाइ (social good) का विषयवस्तुहरू पढाएर र उनीहरूले शिक्षालयताई सामाजिक संरचनाको परम्परालाई निरन्तरता दिने संस्था बनाए। नव-संरचनावादीहरू (neo-structuralists) ले त्यही शिक्षालयलाई समाज सुधारको रूपमा हेरे। अर्थात संरचनावादीहरूको आँखामा शिक्षालयले दुईटा काम गरिरह्यो। पहिलो, सामाजिक भलाइ र दोश्रो, समाज सुधार। तर समालोचनावादीहरू (critical theorists) ले संरचानावादीका उक्त विश्वासमा प्रश्न गरे - "सामाजिक भलाइ" गर्दा धनी र शक्तिशालीको मात्र भलाइ गरेनौं र ? गरीब र शक्तिहीनताई पाखा (sidelined) पारेनौं र ? "समाज सुधार" गर्दा पुरानै पूँजीवादी चारित्रिक समाजको पुनर्जन्म (reproduction) भएन र? केहीताई होचो र केहीलाई अग्लो बनाइ रहेनौ र ? अहिले पनि यी प्रश्नहरू सान्दर्भिक छन्।

आँखाको तेश्रो सिर्जना

संरचानावादी र समालोचनावादी दुबैको चिन्तनले तेश्रो आँखा बन्यो। संरचनावादीको तल पार्ने (downward extension) आँखा र समालोचनावादीको तलकाहरूलाई सामाजिक न्याय दिने आँखा। यी दुबै थरीका आँखाको संयुक्त नाम हो खुला शिक्षालय (open schooling)। बेलायतले यसको सुरुआत गऱ्यो। अहिले यो प्रणाली दुई स्वरूपमा विकसित भएको छ। पहिलो स्वरूपले छुट्टै संरचना लिएको छ। खुला विद्यालय, खुला विश्वविद्यालय र दूर शिक्षा कार्यक्रम यसका नाम हुन्। दोश्रो स्वरूपले पनि औपचारिक शिक्षालयको संरचनामा स्थान पाएको छ। विस्तार शाखा, विस्तार कार्यक्रम र खुला शिक्षण शाखा यसका नाम हुन्।

खुला शिक्षालयको नेपाली आँखा

नेपाली शिक्षा सदैव संरचनावादीको खेलौना रहयो। समालोचनावादीको सोच त्यहाँ अटाएन। यदाकदा गरिएका सोचहरूले पनि संस्कारित (acculterated) हुनुपऱ्यो। संरचनावादीको सीमामा नै हाम्रो खुला शिक्षालयको सोच बन्यो। दूर शिक्षा कार्यक्रम आउनुअघिका "खुला शिक्षालयहरू" को आ-आफ्नै स्वरूप रहयो। दूर शिक्षाले त्यसमा औपचारिक पठन-पाठन जोड्यो। "खुल्छ कि ?" भनिएको विश्वविद्यालयले चाहिं विस्तार कार्यक्रममा औपचारिक पठन-पाठन कार्यक्रम र अनुसन्धान कार्यक्रम चलाउने सोच राखेको छ। यसरी दूर शिक्षाको नेपाली आँखा विस्तारित हुँदै गएको छ।

नेपाली आँखाले जन्माएको प्रश्न

हामीले आफ्नो सिर्जनामा गर्व गर्ने बानी हटाइसक्यौं। आफ्नै चिन्तनको सोच समावेश गर्न छाडिसक्यौं। अहिले चिन्तन र डलर एउटै भएको छ। त्यसैले हाम्रो बोली हाम्रै लागि विदेशीले बोलिदिनुपर्छ। यसरी हाम्रो आँखाले हामीलाई नै प्रश्न गरेको छ। त्यो प्रश्न हो- के देखेको कुरो बोल्न सक्छौं र ? उदाहरण लिऊँ त्रिभुवन विश्वविद्यालयको। त्यहाँको शिक्षा शास्त्रमा एम.एड. गर्नेहरू देशभरि कार्यरत छन्। कार्यालयमा पनि नियमित हाजिर छन्। विश्वविद्यालयमा पनि नियमित विद्यार्थी मानिएका छन्। यो स्थितिको जिम्मेवार को ? दूर शिक्षाको चिन्तनले भन्छ "हामी शिक्षाका ठेक्केदारहरू"। पढ्न नभ्याउनेहरूलाई किन त्यहाँ नियमित बनाएको ? किन तिनीहरूलाई दूर शिक्षाको कोर्स नदिएको ? किन त्रि.वि. सँगै भित्तेर शिक्षाशास्त्रको कोर्सलाई विस्तार कार्यक्रममा

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* सहप्राध्यापक, शिक्षा शास्त्र संकाय, त्रि.वि.वि

नबदलेको त ? के हानि नोक्सानी थियो र ? विद्यार्थीहरूलाई नियमित हुनु थिएन - पास गर्नु थियो। शिक्षक चाहिँदैनथे, नोट कापी र नेपालीमा लेखिएका किताबहरू भए पुग्थ्यो। यसका लागि त्रि.वि. कै शिक्षकहरू पनि तयार थिए। तर यस्तो प्रश्नमा हामी बोलेनौं । झूठ काम गरिरहयौं । तर झूठ गर्यौं अब त सच्याऔं भन्न पनि सकेनौं ।

किन अनुत्तरित छौं ?

पियरे बोर्ज्यूले सांस्कृतिक सम्पति (cultural capital) चिनाए। सामाजिक सम्पति (social capital) पनि चिनाए। दुबै सम्पतिहरू कसरी शिक्षामा प्रत्युत्पत्ति (reproduce) भइरहन्छन् भन्ने कुरा बताए। उनको बनाइ छ - राष्ट्र (state) मिलेको छ, संस्कृति मिलेको छ, किताब (artifact) मिलेको छ, इतिहास मिलेको छ, कानून मिलेको छ, राजनीति मिलेको छ, अर्थतन्त्र मिलेको छ; त्यो मिलिभगत जान (deliberate) मा आउँछ। अनजान (unconscious) मा आउँछ। परिणामत: हामी अनुत्तरित हुन्छौं । बोर्ज्यूले अझ थप लेखेका छन्। उनी भन्छन् "हाम्रा सामाजिक र सांस्कृतिक सम्पतिहरू बदल्न (convertible) सकिन्छन्। त्यही बदतिने गुण (convertibility) ले गर्दा हामी संस्कृति बेचेर पैसा कमाउछौं। हाजिर नहुने विद्यार्थीलाई नियमित भनेर प्रमाणपत्र बेच्छौं । हाजिरै नभएर पनि नियमित भएको विद्यार्थीको प्रमाणपत्र किन्छौं । त्यही बदल्ने र बदतिने सम्पति (सामाजिक एवं संस्कृतिक) बोकेर झूठो काम गरिरहेका छौं । यस्ता झूठहरूलाई ज्ञान लिने अधिकार छ र ? ज्ञान दिने अधिकार छ र ? यी दुबै प्रश्नमा हामी अनुत्तरित हुन्छौं। जान अनजानमा परिवर्त्य (convertible) सम्पति बोकेर त्यसैको दास हुन्छौं" ।

उत्तर, लगानी सम्मत हुन्छ त ?

हाम्रो लगानी प्रक्रियाले भन्छ हामीले "भूत विद्यार्थीमा" लगानी गर्यौं । त्यही "भूत" को नाम बेचेर प्रति एकाइ रकम माग्यौं । "भूतले" अर्के फाइदा लियो। त्यो हो हार्यो देखाएर नियमितताको दावी। थोरै रकम तिरेर पैसा तिरे भन्ने दावी। त्यही "भूतको" आधारमा शिक्षक भर्ना गर्यौं। त्यसैले लगानीले हाम्रो उत्तर दिइरहयो, E मा लगानी गर्यौं भने P फल्छ भन्ने उत्तर। P मा लगानी गर्यौं भने S बढछ र थपै थप आम्दानी हुन्छ। यसरी हामीले लगानी गर्ने आर्थिक स्रोत प्रक्रियालाई गिज्याइ रहयौं। "भूत विद्यार्थी" मा लगानी गर्दा पनि फाइदै गरेका (for profitable return) छौं र सकारात्मक उपादेयता (positive value) नै छ भनिरहयौं। यसरी उच्च शिक्षाका लगानीकर्ता हामीहरूले आत्मरति बोकिरहयौं। हाम्रो शैक्षिक लगानीको उद्देश्य नाफा (economic factor) कमाउन हो। हाम्रो शैक्षिक लगानी सकारात्मक उपादेयता (axiological factor) को लागि हो। यस अर्थमा हाम्रा "भूत विद्यार्थी" हरूले हाम्रा अर्थवेत्ताहरूलाई लठ्याइरहे। हाम्रा शिक्षाविद्हरूलाई गिज्याइरहे। हाम्रो कर्मचारी तन्त्रलाई कागजीबाघ बनाइरहे। आफूले चाहिँ "भूतीय भ्रष्टाचार"लाई सदाचारमा बदल्ने संरचना बचाइरहे।

"भूत विद्यार्थी" हरूले स्थूल चिन्तकहरू (macro–thinkers) लाई मात्र ढाँटिनन्। सूक्ष्म चिन्तकहरू (micro-thinkers) लाई पनि छक्याए। गिन्टिसले सन १९७१ मा सोचेको प्रवृति सिद्धान्त (attitude theory) बाट हाम्रो लगानी हेर्यौं । उनले भने "हाम्रो लगानीले कमाउने प्रवृति (earning attitude) बढाँउछ"। तर हाम्रा "भूत विद्यार्थी" ले निराशा कमाउन थाले। त्रि.वि. ले गरेको लगानीको प्रतिफल "भूत विद्यार्थी" ले निराशा र आक्रोसबाट तिरे। झूठ बोलेर तिरे। झूठ लेखेर तिरे। यसरी "लगानीको कमाउने प्रवृति सिद्धान्त" जन्माउने गिन्टिसलाई हाम्रा "भूत विद्यार्थीहरू" ले फेल ख्वाइदिए।

गिन्टिस त असफल भए भए; हाम्रा "भूत विद्यार्थीहरू" ले तौवम्यान र वाल्स (Taubman and Wales) को सन् १९७३ को छनोट सिद्धान्त (screening theory) लाई पनि उल्ट्याइ दिए। यो सिद्धान्तले भन्थ्यो गतिला विद्यार्थीमा उच्च शिक्षाले लगानी गर्छ। तर स्थिति त्यो रहेन। परीक्षाले "भूत" र नियमित विद्यार्थी छुट्याउँछ भनिन्थ्यो त्यो कुरा पनि मिलेन। प्रतिस्पर्धात्मक कार्यमा लगानी गरेन्छ भनिन्थ्यो त्यो पनि झूठै भयो। यस अर्थमा हाम्रा भूत विद्यार्थीले तौवम्यान र वाल्सलाई झूठो बनाइ रहे। हाम्रा त्रि. वि. का अधिकारीहरूलाई पुड्माङ बनाइ रहे।

"लगानीले काममा प्रतिस्पर्धा जन्माउँछ" थुरो र लुकास (Thurow & Lucas) ले सन १९७२ देखि यसो भन्दै आए। तर हाम्रा भूत विद्यार्थीहरूले काममा प्रतिस्पर्धा गरेनन्। अरु शिक्षाले काम दिनुपर्छ भन्ने मान्यता बोकिरहे। विश्वविद्यालयलाई बेरोजगार उत्पादन गर्ने कारखाना हो भन्ने प्रमाणित गरिरहे। बिचरो निर्जीव संस्थाले दोष पाइरह्यो। लाचार अधिकारीहरूले खप्की खाइरहे। अबुझ लगानीकर्ताहरूले दाँत किच्याउँदै रकम छुट्याइरहे। यस अर्थमा हाम्रा भूत विद्यार्थीहरूले थुरो र लुकासलाई नेपाली धर्तीमा असफल बनाइरहे।

कार्नोहले सन १९७७ मा अर्के चिन्तन दिए। उनले भने शिक्षामा लगानी गरे श्रम बजारको रुद्रघण्टी खुल्छ। त्यसैले उनले आफ्नो सिद्धान्तको नाम राखे "श्रम बजारको पृथक्कीकरणको सिद्धान्त" (segmentation of the labor market theory)। तर हाम्रा भूत विद्यार्थीहरूले कार्नोइको यो सिद्धान्तलाई लत्याइ दिए। न उनीहरूले श्रम बजारको पृथक्कीकरणको प्रक्रिया बुझे, न त्यसमा खेती गर्ने चिन्तन नै बोके, न त बजारको रुद्रघण्टी नै खोले। उनीहरूले त बजार र पढाइका बीचको नाता नै देखेनन्।

त्रि.वि. ले दुईटा विश्वासले भूत विद्यार्थीमा लगानी गरेको छ। पहिलो विश्वासको आधार हो मानव पूँजीको निर्माण गर्ने र दोस्रो विश्वासको आधार हो पुच्छ्रे लगानी (residual) गर्ने। यी दुबै विश्वासलाई भूत विद्यार्थीको गराइले लत्याइसक्यो। झट लगानी फट आम्दानीको मनाइले मान्यता पाइसक्यो। वस्तुत: बैंकिंग कारोबारको वित्तीय चिन्तनले भूत विद्यार्थी माथिको लगानीलाई ब्रेकम्मा सावित गरिसक्यो।

भूत विद्यार्थीलाई विकल्प के त ?

भूत विद्यार्थीहरूले त्रि.वि. लाई मूक भाषामा चुनौती दिए। त्यो चुनौती हो- हामी जाँचमुखी हौं। प्राध्यापकहरू हो। हाम्रो टाउको नखोल। हामी प्रमाण-पत्रमुखी हौं। कर्मचारीहरू हो। हामीलाई जहाँ बसे पनि प्रमाण-पत्र देऊ। हामी पढन चाहनेहरू हौं। शिक्षाविदहरू हो। हामीलाई आफ्नै थलोमा बसेर पढ्ने व्यवस्था मिलाई देऊ। हामी मानवीय लगानीका पक्षधरहरू हौं। लगानीकर्ताहरू हो। हामीलाई वैकल्पिक बाटो देऊ। भूत विद्यार्थीहरूको यो चुनौतीले अरुलाई पनि बाटो खोल्यो। अरुले पनि ज्ञानको विष्फोटन (knowledge explosion) बाट फाइदा लिने भए। अनुसन्धानले ल्याएको विस्फोटन, विकासले ल्याएको विस्फोटन र यान्त्रिकीकरणले ल्याएको विस्फोटन। यसरी जाँच पासगर्ने भूत विद्यार्थी र थप ज्ञान खोज्ने आजीवन शिक्षार्थी (lifelong learners) दुबैले विकल्प खोजे। यसलाई मानवीय सम्पदाको घिसावट (human capital depreciation) सिद्धान्तका अनुयायीहरूले समर्थन गरे। यसैले कम्प्यूटरको आइ.वी.यम. कम्पनीले आफ्नो आयको ७-८% शिक्षामा लगानी गऱ्यो। विश्व बैंकजस्तो साहूकार संस्थाले २५% लगानी सामाजिक सेवामा खर्च गर्ने नीति लियो। यस्तो नीतिबाट ज्ञानका भोकाहरूले फाइदा लिने संयन्त्र (mechanism) खोजे। चिन्तनमा क्रान्तिकारिता बोक्नेहरूले वैकल्पिक शैक्षिक संयन्त्र खोजे। विकासवादी (evolutionary) प्रक्रियाका पक्षधरहरूले विकल्प खोजे। यस अर्थमा जीवन्त जगत (lived context) मा रमाउनेले पनि विकल्प खोजे। आरामदायी कुर्सीका समालोचकहरू (arm-chair critics) ले पनि वैकल्पिक शैक्षिक संयन्त्र खोजे।

उक्त खलफलले एउटै कुरो भनिरहयो। त्यो हो- दूर शिक्षामा विस्तारित कार्यक्रमको आवश्यकता छ। भूत विद्यार्थीलाई यो कार्यक्रम चाहिन्छ। आजीवन शिक्षार्थीलाई यो कार्यक्रम जरुरी छ। विष्फोटित ज्ञान टिप्न खोज्नेलाई यो कार्यक्रम अनिवार्य भएको छ। थप ज्ञान खोज्नेलाई विस्तारित दूर शिक्षाको कार्यक्रम चाहिएको छ। मानवीय सम्पदाको घिसिएको दिमाग उजिल्याँउन यो कार्यक्रम चाहिन्छ। समग्र अर्थमा भन्ने हो भने भूत विद्यार्थीले जानेर पनि नजानेर पनि एउटा बाटो दिएका छन्, सबैलाई काम लाग्ने बाटो, त्यो बाटो नै अहिलेको विकल्प हो। कमजोहरूको विकल्प, वेफुर्सदिताको विकल्प, ज्ञानपिपासुको विकल्प, अद्यावधिक बन्न चाहनेको विकल्प, भूत, विद्यार्थीको विकल्प।

गर्ने के त ?

दूर शिक्षा केन्द्रले शिक्षाको स्नातकोत्तर तह चलाउने कुरा सुन्दा अपत्यारिलो लाग्छ । तर काम सजिलो छ । यसका लागि दूर शिक्षा केन्द्रले पाठ्यपुस्तक बनाए पुग्छ । शिक्षाशास्त्रमा भर्ना हुने पाहुना विद्यार्थी (guest students) लाई दूर शिक्षा केन्द्रमा भर्ना गरिदिए पुग्छ । शिक्षाशास्त्रका डीन र त्रि.वि. का उच्च पदाधिकारीहरूसँग कुरो मिलाइदिए पुग्छ । प्रमाणपत्र दिने कुरो, भर्ना गर्ने कुरो, पाहुना विद्यार्थीलाई पाहुनाकै (guest-like) रूपमा निरन्तरता दिने कुरो, अनियमित हुने पठन-पाठनलाई अनियमित ढंगमै औपचारिकता दिने कुरो र त्रि.वि.का शिक्षकलाई केही समय काजमा दूर शिक्षामा ल्याउने कुरो; यति गर्ने हो भने दूर शिक्षा केन्द्रले झूठो पढ्ने र झूठो पढाउने दुवैको कल्याण गर्छ । त्रि.वि. र दूर शिक्षा केन्द्र दुबैतिरको पढाइ नियमित हुन्छ । पहिलोमा नियमित औपचारिक शिक्षाको नियमितता । दोस्रोमा अनियमित ढंगबाट औपचारिक शिक्षाको नियमितता ।

दूर शिक्षा केन्द्रको कार्यमा विविधीकरणको आवश्यकता

- डा. श्रीरामप्रसाद लामिछाने

परिचय

समयको प्रवाहका साथै परिवर्तनको क्रम अघि बढ्दै जान्छ जसले नयाँ आवश्यकताहरू उब्जाउने गर्दछ । यस्ता आवश्यकता परिपूर्ति गर्न र चूनौतीहरू सामना गर्न मानवीय पक्षको विकास र परिमार्जन नितान्त आवश्यक हुन्छ । वास्तवमा शिक्षा एक यस्तै सशक्त माध्यम हो जसबाट मानवीय क्षमताको विकास हुन्छ । त्यसैले शिक्षाको पहुँचभित्र सबैलाई समेट्न शिक्षा विस्तारको महत्त्वलाई प्राथमिकता दिइने गरिन्छ । यसका निम्ति विविध शैक्षिक उपायहरू अवलम्बन गरेको पाइन्छ, जसमध्ये दूर शिक्षा एक महत्त्वपूर्ण उपाय हो । विश्वको सन्दर्भमा दूर शिक्षाको कुरा गर्दा यसको प्रयोग र उपयोग पश्चिमी मुलुकहरूमा धेरै पहिले भएको हो । दक्षिण एसियाली क्षेत्रका अरु मुलुकहरूले पनि दूर शिक्षाको उपयोगका क्रममा निकै फड्को मारिसकेका छन् । नेपालमा पनि दूर शिक्षाको स्थान केही दशकदेखि सुरक्षित रही आएको छ तर यसको प्रभावकारी विस्तार र विकास भने हुन सकेको छैन ।

दूर शिक्षाको महत्त्वलाई भने बढ्दो रूपमा स्वीकार गर्न थालिएको छ जसका खास कारणहरू छन् । मुख्यत: यस शैक्षिक उपायले शिक्षाको पहुँचमा हुने कमीलाई निवारण गर्न खास योगदान पुऱ्याउँछ । हाम्रो सन्दर्भमा भौगोलिक कठिनाइका कारण शिक्षाको पहुँचमा भएको समस्या धेरै हदसम्म समाधान गर्न दूर शिक्षाको अस्तित्त्वलाई नकार्न सकिँदैन । सामाजिक, आर्थिक कठिनाइका कारण कक्षाकोठामा उपस्थित भई पठनपाठन गर्न क्षमता राख्न नसक्ने जनसमूहका निम्ति पनि शैक्षिक अवसरको खाँचो पूरा गर्नमा दूर शिक्षाको भूमिका सार्थक रहेको पाइन्छ । कक्षा कोठाको शिक्षण प्रक्रियाबाट विमुख भई पठनपाठन कार्य अवरुद्ध गर्ने अवस्थाबाट छुट्कारा पाउन दूर शिक्षा एक वैकल्पिक माध्यम भएको छ । दूर शिक्षाको क्षमता पक्षमा दरिलोपन कायम गर्न सकिएमा शैक्षिक ह्रासलाई न्यूनीकरण गर्न र शिक्षा विकासका सूचकहरूलाई परिमार्जन गर्न यसले ठोस योगदान प्रदान गर्दछ । वास्तवमा दूर शिक्षा कार्यक्रमले प्रजातान्त्रिक सुदृढीकरणका निम्ति उर्जाको रूपमा सार्थक भूमिका निर्वाह गर्न सक्दछ ।

नेपालमा दूर शिक्षा

हामीकहाँ दूर शिक्षाको सुरुवात त्रिभुवन विश्वविद्यालयको शिक्षा संकायबाट भएको हो । यसको संगठित रूपमा संचालन सन् १९७८ मा श्री ५ को सरकार शिक्षा मन्त्रालयअन्तर्गत रेडियो शिक्षा शिक्षक तालिम आयोजनाको स्थापनापश्चात् भयो । सन् १९९४ मा दूर शिक्षा केन्द्रको स्थापना भएपछि यस केन्द्रले अंगीकार गरेका प्रमुख उद्देश्यहरू यस प्रकार छन् :-

- प्राथमिक तहको पठनपाठन कार्यलाई बढी प्रभावकारी बनाउन शिक्षक तालिम कार्यक्रमद्वारा प्राथमिक शिक्षकहरूलाई तालिम प्रदान गर्ने;
- विभिन्न समुदायमा उपलब्धिमूलक शैक्षिक कार्यक्रम लागू गर्न आवश्यकतामा आधारित अनौपचारिक शिक्षा कार्यक्रम प्रसार गर्ने;
- शिक्षा प्राप्तीमा चासो राख्ने सुविधाविहीन तथा सामाजिक र आर्थिक रूपले कमजोर वर्गका जनसमुदायलाई विद्यालय तह एवं उच्च शिक्षाको अवसर दूर शिक्षा प्रणालीद्वारा उपलब्ध गराउने;

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* सदस्य-सचिव, उच्च माध्यमिक शिक्षा परिषद्

उपरोक्त उद्देश्यहरू परिपूर्ति गर्नका लागि दूर शिक्षाको संरचनाभित्र कार्यक्रम शाखा, परीक्षा तथा अनुगमन शाखा, उत्पादन शाखा र प्रशासन शाखा संलग्न छन् ।

दूर शिक्षा केन्द्रसे शिक्षाका विभिन्न वैकल्पिक कार्यक्रमहरू संचालन गर्ने विचार लिए तापनि यसको मुख्य जोड भने प्राथमिक विद्यालयका शिक्षकहरूलाई दिइने तालिम पक्षमा मात्र सीमित रहेको छ ।

यस केन्द्रसे दूर शिक्षाका नाममा संचालन गर्ने गरेको प्राथमिक शिक्षक तालिम कार्यक्रमले हामीकहाँ कम से कम दूर शिक्षाको अस्तित्व बोध गराएको छ । तालिम प्राप्त शिक्षकको अभाव न्यून गर्न यस कार्यक्रमले केही हदसम्म सघाउ पुऱ्याएको छ । कार्यक्रम संचालनका निम्ति जनशक्ति तयार गरिएको छ, संरचनात्मक संगठन तयार गरिएको छ र भौतिक रूपले पनि दूर शिक्षा केन्द्रको अवस्था असन्तोषजनक रहेको छैन । यसो भए तापनि परिवर्तनको क्रम निरन्तर रूपले अगाडि बढिरहेको अवस्थामा तथा समग्र शैक्षिक प्रणालीको परिमार्जन र सुधार गर्ने प्रयास भइरहेको अवस्थामा दूर शिक्षाको महत्त्व समेतलाई ध्यानमा राखी यसका सम्पूर्ण पक्षमा समय सापेक्ष सुधार एवं सुदृढीकरण भने नितान्त आवश्यक भएको छ ।

सुधारका लागि प्रयास

१. नीतिगत पक्ष

दूर शिक्षाको बढ्दो प्रभावकारिता र उपयोगिताका सन्दर्भमा अन्तर्राष्ट्रिय शैक्षिक जगतले उठाएका प्रयासहरू विस्तारित र अर्थपूर्ण देखिएका छन् । नयाँ प्रविधि, नयाँ उपकरण र नयाँ कार्यक्रमको विकास गर्दै दूर शिक्षाका माध्यमबाट प्रभावकारी एवं गुणस्तरयुक्त शिक्षाको अवसर पर्याप्त मात्रामा उपलब्ध गराउन विकसित र विकासोन्मुख मुलुकहरू उद्यत रहेका छन् । ती मुलुकहरूले यस क्षेत्रमा जसरी सफलता हासिल गरेका छन् त्यसका निम्ति तिनीहरूले वरण गरेका नीति कारकतत्त्वका रूपमा रहेका पाइन्छन् । प्रतिबद्धतायुक्त र ठोस रूपमा प्रस्तुत गरिएका नीतिबाट कार्यक्रमको प्रभावकारी विकास र कार्यान्वयन समेतमा गहकिलो प्रभाव पर्न जाने कुरा निश्चित छ । दोधारे, हलुका, फितलो एवं हिचकिचाहट भावमा तयार गरिएका नीति भएको अवस्थामा कार्यक्रममार्फत कुनै किसिमले पनि सकारात्मक प्रभाव पर्न जाँदैन । यसर्थ नेपालको सन्दर्भमा पनि हालसम्म तयार गरिएका नीतिले केवल यथास्थितिलाई निरन्तरता दिने कार्य मात्र गरेको छ । विशेष रूपमा दूर शिक्षाका बारेमा नीतिव्यवस्था गरिएको पाइँदैन । त्यसैले यस क्षेत्रमा अन्तर्राष्ट्रिय शैक्षिक जगतले के कस्ता नीति अंगीकार गरेर दूर शिक्षाको क्षेत्रमा उदाहरणीय विकास गरेको छ, सो सम्बन्धमा अध्ययन गरी ठोस रूपमा नीति तर्जुमा र कार्यान्वयन गर्नु वाञ्छनीय देखिन्छ ।

२. कार्यक्रम पक्ष

दूर शिक्षाका क्षेत्रभित्र समाहित हुन सक्ने विषयवस्तु विविध छन् । चेतना जागरण, प्राविधिक एवं व्यावसायिक शिक्षा, साक्षरता, वैकल्पिक औपचारिक शिक्षा आदि दूर शिक्षा पद्धतिद्वारा प्रदान गरिने कार्यक्रमका केही उदाहरणहरू हुन् । वास्तवमा दूर शिक्षाभित्र समाहित हुन सक्ने कार्यक्रमहरू यस प्रकारका हुन सक्छन् ।

- विद्यालय एवं उच्चस्तरीय औपचारिक शिक्षा
- अल्पकालीन एवं दीर्घकालीन प्रशिक्षण कार्यक्रम
- प्राविधिक एवं व्यावसायिक सीपमूलक तालिम
- महिला सशक्तीकरण एवं चेतना जागरण
- साक्षरताविस्तार सीप एवं सूचनामूलक स्वास्थ्य कार्यक्रम
- नागरिक समाजका निम्ति वातावरण संरक्षणसँग सम्बन्धित ज्ञान एवं सूचनामूलक कार्यक्रम
- अनुसन्धानबारे आधारभूत जानकारीसम्बन्धी कार्यक्रम

- कृषि विकासका निम्ति उत्पादनशीलता अभिवृद्धि कार्यक्रम
- साक्षरोपरान्त शिक्षा कार्यक्रम (निरन्तर शिक्षा कार्यक्रम)

सामाजिक, आर्थिक, सांस्कृतिक, राजनैतिक र वातावरणीय सरोकारका विषयका साथै मानवीय सम्बन्ध, लैङ्गिक समानता जस्ता मानवीय जीवनयापनमा गुणात्मक रूपले प्रभाव पार्ने पक्षहरूमा दूर शिक्षा कार्यक्रमले महत्त्वपूर्ण योगदान पुऱ्याएका उदाहरणहरू पनि जानकारीमा आएका छन् ।

दूर शिक्षा केन्द्रले अंगीकार गरेका उद्देश्यलाई हेर्दा प्राथमिक शिक्षक तालिमबाहेक अनौपचारिक शिक्षा कार्यक्रमलाई समेटेको देखिन्छ । तर कार्यगत पक्षमा हेर्दा प्राथमिक शिक्षक तालिम कार्यक्रम नै मुख्य रूपमा रहेको छ । दूर शिक्षाले निभाउन सक्ने महत्तम भूमिकाका सन्दर्भमा दूर शिक्षा केन्द्रको भूमिका ज्यादै सीमित रूपमा रहेको छ । यसको भूमिकालाई विस्तार गर्नुपर्ने खाँचोप्रति ध्यान जानु एकदमै आवश्यक भएको छ ।

३. कार्यान्वयन पक्ष

कार्यक्रमहरू कार्यान्वयन नभएसम्म तिनबाट कुनै सार्थक उपलब्धि प्राप्त हुन सक्दैन । तसर्थ कार्यान्वयन पक्षलाई यथार्थता दिनु जरुरी हुन्छ । यस सन्दर्भमा कार्यान्वयनका निम्ति आवश्यक पर्ने विभिन्न पक्षहरू जस्तै संगठनात्मक संरचना, जनशक्तिको व्यवस्था, आर्थिक व्यवस्था, भौतिक व्यवस्था आदि मुख्य हुन् । दूर शिक्षाको माध्यमद्वारा संचालन गरिने विविध कार्यक्रमका निम्ति माथि लेखिएअनुसार सबल व्यवस्थापनको जरुरी छ ।

३.१संगठनात्मक संरचना

कार्यक्रमको विविधता र विस्तारित रूपको सन्दर्भमा संगठनात्मक संरचनाको ढाँचा निम्नअनुसार तयार गरिनु आवश्यक देखिन्छ ।

यस लेखको अन्तमा दिइएको संगठनात्मक ढाँचाले दूर शिक्षाको विकासमा आवश्यक पर्ने प्राय: सम्पूर्ण संरचनात्मक आवश्यकतालाई समेटेको छ । सुदृढ रूपको संरचनाबाट सबलीकृत रूपले कार्यक्रम कार्यान्वयन हुन सक्ने सन्दर्भमा प्रस्तुत संरचना उपयुक्त देखिन्छ । तथापि कार्यान्वयनका सिलसिलामा उब्जने कमी र समस्याहरूका आधारमा संरचनात्मक ढाँचामा सुधार र परिमार्जन गर्नु पनि ज्यादै आवश्यक हुन्छ । दूर शिक्षा केन्द्रमा व्यवस्था गरिएको हाल विद्यमान संरचनालाई हेर्दा उपयुक्त रूपमा रहेको पाईदैन । यसमा समाहित उद्देश्यभित्र अनौपचारिक शिक्षा परेको भएता पनि यस शिक्षाअन्तर्गत् पूर्ण रूपका कार्यक्रम विकास गर्ने र संचालन गर्ने अवस्था यस केन्द्रमा रहेको छैन । अनौपचारिक शिक्षालाई प्राथमिक शिक्षक तालिमका प्रसंगमा मात्र इंगित गरिएको पाइन्छ ।

३.२जनशक्तिको व्यवस्था

कार्यक्रमको विविधता र विस्तारित रूपअनुसार जनशक्तिको आवश्यक मात्रामा व्यवस्था गर्नु वाञ्छनीय हुन्छ । संरचनात्मक ढाँचाले चाहेअनुसार दक्ष र योग्य जनशक्तिको व्यवस्थाबाट उपयुक्त र प्रभावकारी कार्यक्रमको विकास एवं कार्यान्वयन हुनसक्छ । जनशक्तिको व्यवस्था सम्बन्धित क्षेत्रका विज्ञहरूबाट सिफारिश गरेअनुसार गर्नु आवश्यक हुन्छ । अनुचित र अविवेकपूर्ण हस्तक्षेपबाट प्रभावित भई अदक्ष र कोरा जनशक्तिको चयन भएमा संस्थाको दुर्गति प्राय: निश्चित नै हुन्छ । उपयुक्त जनशक्तिको चयनपश्चात् सम्बन्धित क्षेत्रमा अभिमुख गर्न र कार्यदक्षता अभिवृद्धि गर्न सेवाकालीन तालिम आवश्यक पर्दछ । कार्य सम्पादनतर्फ जनशक्तिको योगदान कस्तो रहेको छ, त्यसको अनुगमन र सोबाट प्राप्त नतीजाहरूका आधारमा सुधारमुखी जनशक्ति विकास कार्यक्रम संचालन हुनु पनि त्यत्तिकै आवश्यक हुन्छ ।

दूर शिक्षा केन्द्रको वर्तमान अवस्थामा केवल प्राथमिक शिक्षक तालिमका निम्ति मात्र आवश्यक जनशक्ति उपलब्ध छ । त्यो जनशक्तिको कार्यदक्षता असन्तोषजनक छैन । तर जनशक्तिको उत्पादनशीलता अभिवृद्धिका

निम्ति आवश्यक पर्ने जनशक्ति विकास र परिमार्जनको व्यवस्था रहेको पाईदैन । साथै दूर शिक्षा केन्द्रको भूमिकालाई यस लेखमा प्रस्तुत गरिएको संरचनाअनुसार विस्तार गर्ने हो भने आवश्यक जनशक्तिको व्यवस्थाका निम्ति ठोस कार्यक्रमको आवश्यकता पर्छ ।

३.३ आर्थिक व्यवस्था

विस्तारित दूर शिक्षा कार्यक्रमका निम्ति वाञ्छित मात्रामा आर्थिक व्यवस्था हुनु जरुरी छ । दूर शिक्षा केन्द्रलाई नयाँ संरचनात्मक प्रारूपमा ढाल्ने हो भने यसका निम्ति सरकारी क्षेत्रबाट हुने आन्तरिक लगानी उल्लेख्य रूपमा बढाइनु उत्तिकै जरुरी छ । बाह्य लगानीका अवसरताई पनि सक्रिय रूपमा परिचालन गर्नेतर्फ पनि जोड दिनु आवश्यक छ । बाह्य लगानीका निम्ति दातृ संस्थाहरूबाट प्राप्त हुने अनुदानतर्फ विशेष ध्यान दिनु आवश्यक हुन्छ । ऋण-अनुदानतर्फ जोड दिनु उपयुक्त देखिँदैन । यसका अतिरिक्त नयाँ रूपमा स्थापित भएको संस्थाका कार्यगत पक्षको योगदानबाट उत्पादन गरिने सामग्री, कार्यक्रमप्रति जनसमुदायको बढ्दो अभिरुची एवं संलग्नताबाट पनि आर्थिक उपलब्धि प्राप्त गर्ने अवसर देखा पर्दछ । यसले पनि लगानीका निम्ति राहत प्रदान गर्दछ ।

३.४ भौतिक सुविधा

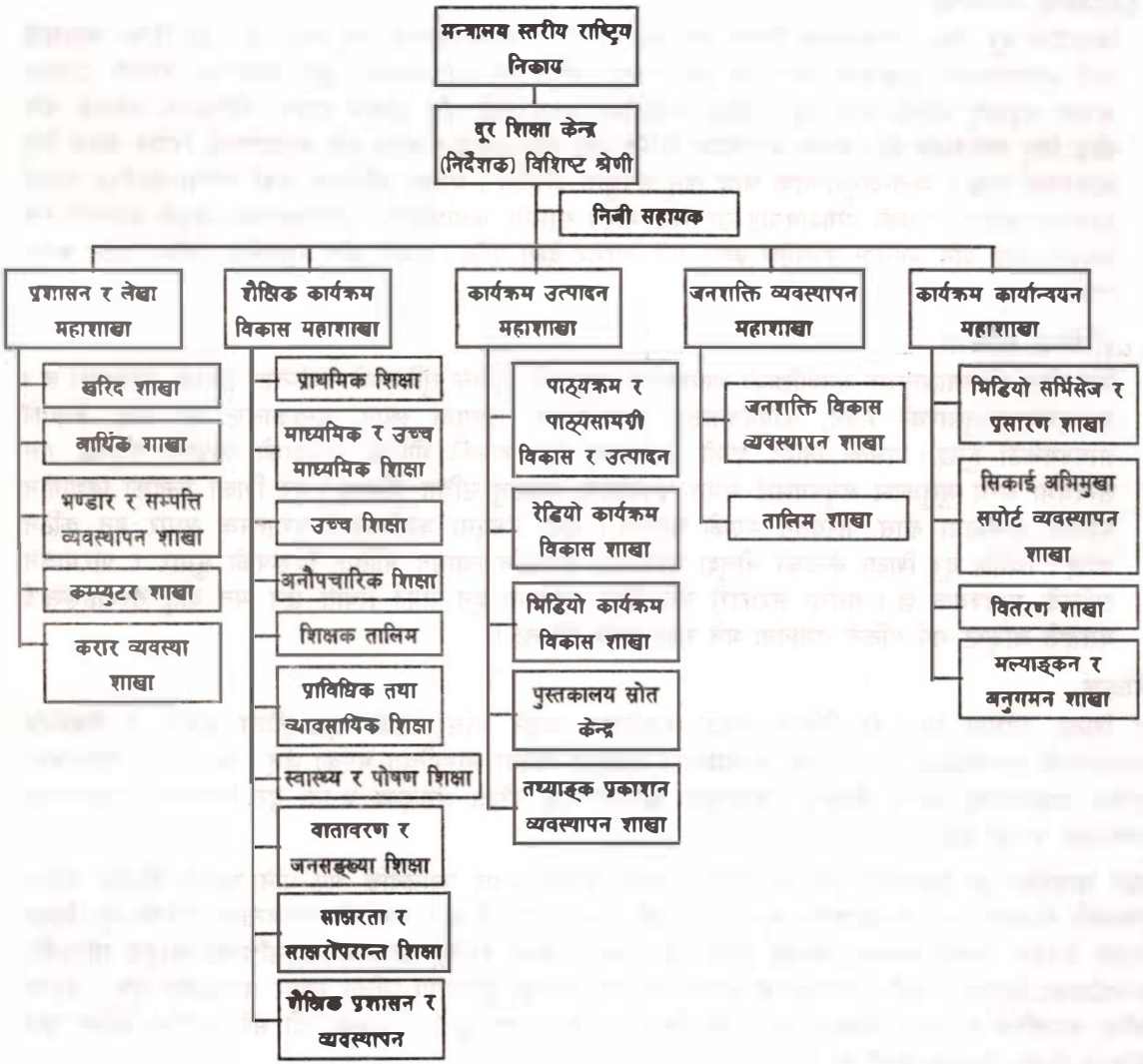
विस्तारित संरचनाअनुसार जनशक्तिको व्यवस्थाका साथसाथै भौतिक सुविधाको पर्याप्तता उत्तिकै महत्त्वपूर्ण छ । आवश्यकताअनुसारको भवन, कार्यकक्षहरू, उपकरणहरू, उपयुक्त स्थान, पुस्तकालय एवं स्रोत केन्द्रको आवश्यकता हुन्छ । यसका निम्ति कस्तो किसिमको कुन रूपको भौतिक सुविधाको व्यवस्था गर्नुपर्छ, यस सन्दर्भमा अन्य मुलुकका अनुभवलाई समेत उपयोगमा ल्याउनु उचित देखिन्छ । दूर शिक्षा केन्द्रको विद्यमान भौतिक सुविधामा खास परिवर्तन भएको पाईदैन । यसो नभएमा कार्यक्रममा गुणात्मक सुधार हुन कठिन पर्दछ । त्यसैले दूर शिक्षा केन्द्रको मौजुदा स्वरूपमा परिवर्तन ल्याउन भौतिक स्वरूपको सुधार र परिमार्जन त्यत्तिकै आवश्यक छ । यसमा सरकारी लगानीको संभावना हुन सक्ने स्थिति छैन भने दातृ संस्थाहरूलाई यसतर्फ आकृष्ट गर्न सकिने संभावना भने रहन सक्ने देखिन्छ ।

निष्कर्ष

दूर शिक्षा वर्तमान विश्वको शैक्षिक क्षेत्रमा वैकल्पिक रूपले अघि बढेको छ । नौला प्रविधि र वैज्ञानिक उपायहरूको उपयोगद्वारा दूर शिक्षाको माध्यमबाट असङ्ख्य जनता लाभान्वित भएका छन् । खास गरेर सामाजिक, आर्थिक कठिनाइका कारण शैक्षिक अवसरबाट वञ्चित हुनु परेका असङ्ख्य जनता दूर शिक्षाकाे योगदानबाट लाभान्वित भएका छन् ।

हाम्रो सन्दर्भमा दूर शिक्षाबारे भन्नुपर्दा यसको प्रवेश करिब अढाई दशकदेखि भए पनि यसको विकास दक्षिण एसियाली क्षेत्रका अन्य मुलुकहरूका तुलनामा ज्यादै पछाडि परेको छ । सरकारी क्षेत्रअन्तर्गत रहेको दूर शिक्षा केन्द्रले जेनतेन आफ्नो अस्तित्व कायम परेको छ । दूर शिक्षाका निम्ति संरचनात्मक ढाँचामा व्यापक परिवर्तन, जनशक्तिको विकास, आर्थिक व्यवस्थाको चाँजोपाँजो एवं भौतिक सुविधामा उचित सुधार वाञ्छनीय छन् । यसका निम्ति आन्तरिक र बाह्य आर्थिक स्रोत परिचालन गर्नु आवश्यक हुन्छ । अन्तमा, यी सबै कार्यका निम्ति ठोस नीतिगत निर्णय नितान्त जरुरी छ ।

प्रस्तावित संगठनात्मक ढाँचाको तालिका



शिक्षाको राष्ट्रिय लक्ष्य पूर्तिमा दूर शिक्षाको भूमिका

- डा. माधव भट्टराई*

शिक्षा के हो ?

"शिक्षा" बाजको दुनियाँमा अत्यन्त प्रचलित र अत्यन्त अपेक्षित शब्द हो। के धनी, के गरीब, के पुरूष, के महिला, सबैका लागि शिक्षा आवश्यक छ। अशिक्षित व्यक्ति, अशिक्षित जाति र अशिक्षित समाजको परिकल्पनासम्म पनि सभ्य र विकसित समाजमा कहाली लाग्दो अनुभव हुन्छ।

हाम्रो सन्दर्भमा विचार गर्दा, यहाँ वर्गका वर्ग अशिक्षित र गाउँका गाउँ निरक्षर छन्। विद्यालय जानुपर्ने नानीहरूमध्ये अझै पनि झन्डै एकतिहाइ जतिले त विद्यालयको अनुहार पनि देखेका छैनन्। महिला जनसङ्ख्याको करीब ७०% लाई अझ पनि निरक्षरताको अन्धकारले ढाकेको छ। महिलाहरूको कल्याण गर्ने संस्थाहरूले समेत महिलाहरूको शिक्षा र सीप प्राप्त गर्ने खाँचोप्रति कमै मात्रमा आवाज उठाउने गरेका छन्। कुरा ठूला गर्ने तर काम गर्ने बेलामा पछि सर्ने सायद यहाँको रोगै भएको छ। त्यसैले विदेशीहरूले हाम्रा देशको शिक्षाको स्थिति अवलोकन गर्दा अनौठो मान्ने गरेका छन्।

शिक्षाको अर्थ सिकाइ हो। "विद्या" शब्दको तात्पर्य शिक्षा शब्दले बुझाउँदैन किनभने विद्या शब्दको अर्थ हुन्छ ज्ञान। यस प्रकार शिक्षा र विद्यामा के फरक छ भने शिक्षाले जीवनका बाह्य पक्षतर्फ र विद्याले आन्तरिक सद्गुणको विकासतर्फ संकेत गरेको पाइन्छ। यसबाट शिक्षा र विद्या शब्द बीचको अन्तर स्पष्ट हुन्छ।

शिक्षाको उद्देश्य

देशको शिक्षा प्रणालीका प्रत्येक योजना र प्रतिवेदन तयार गर्दा पटक-पटक शिक्षाको उद्देश्यबारे चर्चा गरिएको छ। राष्ट्रिय शिक्षा आयोगको प्रतिवेदन २०४९ ले पनि राष्ट्रिय उद्देश्यहरूका सम्बन्धमा यस प्रकारका सुझाव दिएको छ :

१. प्रत्येक व्यक्तिमा अन्तर्निहित प्रतिभा र व्यक्तित्व विकासको संभावना प्रस्फुटित गर्न सहयोग गर्ने।
२. प्रत्येक व्यक्तिमा सार्वभौम मानवीय मूल्यका साथै राष्ट्रिय तथा सामाजिक मान्यता र आस्थाहरूको संवर्द्धन गरी स्वस्थ सामाजिक जीवनको विकासका निम्ति सहयोग गर्ने।
३. व्यक्तिको सामाजिकीकरणमा सहयोग गर्दै सामाजिक एकता सुदृढ बनाउने।
४. राष्ट्रिय तथा अन्तर्राष्ट्रिय परिवेशमा आफ्नो पहिचान कायम राख्दै व्यक्तिलाई आधुनिक युगमा सामञ्जस्यपूर्ण जीवन यापनका निमित्त सहयोग गर्ने।
५. समाजको आधुनिकीकरणमा सहयोग गरी देश निर्माणका निम्ति मानव साधनको विकास गर्ने।
६. प्राकृतिक वातावरण र राष्ट्रिय सम्पदाको संरक्षण र सदुपयोग गर्न सहयोग गर्ने।
७. समाजमा पछि परेका व्यक्तिहरूलाई राष्ट्रिय मूलधारमा समाहित गर्न सहयोग गर्ने।

यसबाट व्यक्तिमा अन्तर्निहित प्रतिभाको विकास, राष्ट्रियता र सामाजिक एकताको सुदृढीकरण, सामाजिक मान्यताको संरक्षण र संवर्द्धन, युगानुकूल जीवन निर्वाहका लागि समाजको आधुनिकीकरणमा योगदान, वातावरण संरक्षण र समाजमा पछि परेकाको समुत्थान गर्ने लक्ष्य शिक्षाले राखेको छर्लङ्ग हुन्छ।

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* प्राध्यापक, महेन्द्र संस्कृत विश्वविद्यालय वाल्मीकि क्याम्पस, काठमाडौं

२०५५ मा तयार गरिएको उच्चस्तरीय राष्ट्रिय शिक्षा आयोगको प्रतिवेदनले शिक्षाको राष्ट्रिय उद्देश्य तथा नीतिको प्रस्तावनास्वरूप नेपाल अधिराज्यको संविधानको व्यवस्थालाई यस प्रकार प्रस्तुत गरेको छ ।

"..... संविधानले विभिन्न जातजाति, वर्ण र संप्रदायका बीचमा सामञ्जस्यता स्थापित गरी सबै किसिमका आर्थिक तथा सामाजिक असमानता हटाउनु र सबै क्षेत्रमा न्यायपूर्ण व्यवस्था कायम गर्नुका साथै बहुलतावादी प्रजातान्त्रिक, सार्वभौमसत्ता सम्पन्न र स्वतन्त्र, न्यायपूर्ण, लोक कल्याणकारी, समुन्नत र समृद्ध राज्यको स्थापना गर्ने प्रत्याभूति गरेको छ ।"

यस अनुच्छेदले सबैका लागि समान अवसर र संभावना प्रदान गर्ने लक्ष्य निर्देश गरेको छ, जसका निमित्त शिक्षा सबभन्दा आवश्यक हुन्छ । शिक्षा नै सबै संभावनाको आधार स्तम्भ पनि हो ।

उक्त परिप्रेक्ष्यमा सो प्रतिवेदनले राष्ट्रिय उद्देश्यमाथि विशेष उल्लेख गरेको छ । उच्चस्तरीय राष्ट्रिय शिक्षा आयोगको प्रतिवेदन २०५५ तयार पार्दा यो पंक्तिकार पनि एउटा सदस्य रहेको हुँदा निकै छलफल गरिएको स्मरण हुन्छ । जसअनुसार आजसम्मका शैक्षिक अभिलेखमध्ये यसमा संभवतः सबभन्दा बढी स्पष्ट पार्ने प्रयत्न गरिएको छ । त्यसअनुसार शिक्षाका राष्ट्रिय उद्देश्य यसरी समावेश गरिएका छन् ।

१. राष्ट्रको सर्वाङ्गीण विकासका निम्ति आवश्यक ज्ञान, विज्ञान र प्रविधिमा सक्षम तथा जीवनोपयोगी सीपको विकास, प्रवर्द्धन र विस्तार गरी योग्य तथा दक्ष जनशक्ति उत्पादन गर्ने ।

२. राष्ट्रियता र विभिन्न जाति एवं समुदायका बीच राष्ट्रिय ऐक्यवद्धताप्रति आस्थावान नागरिक तयार गर्ने ।

३. बहुआयामिक व्यक्तित्त्वको विकास एवं सार्वभौम मानवीय मूल्य, मान्यता र आस्थाको संवर्द्धनका निम्ति निम्नलिखित कुरामा जोड दिने :

(क) नैतिक चरित्र र सदगुणको विकास

(ख) श्रमप्रति आस्था र स्वावलम्बन

(ग) सिर्जनात्मक प्रवृत्ति तथा सेवा भावको विकास

(घ) वैज्ञानिक दृष्टिकोण र समालोचनात्मक सचेतताको विकास

(ङ) पारस्परिक सहअस्तित्त्व र सद्भावको विकास

(च) प्रजातान्त्रिक, न्यायपूर्ण, शोषणरहित एवं समुन्नत समाजको निर्माणप्रति अग्रसरताको विकास

(छ) राष्ट्रिय तथा अन्तर्राष्ट्रिय भावना एवं सामञ्जस्यपूर्ण जीवन दृष्टिको विकास

४. प्रत्येक व्यक्तिमा अन्तर्निहित सामर्थ्य र व्यक्तित्वको विकास गर्ने ।

५. राष्ट्रभाषा, राष्ट्रिय भाषा, संस्कृति, साहित्य, सौन्दर्य एवं राष्ट्रिय सम्पदाको संरक्षण, संवर्द्धन र विकास गर्ने ।

६. प्राकृतिक सम्पदा एवं वातावरणको संरक्षण एवं संवर्द्धन गर्ने ।

७. ज्ञान, विज्ञान र प्रविधिका क्षेत्रमा अन्तर्राष्ट्रिय स्तरका सक्षम नागरिक तयार पार्ने ।

८. राष्ट्रप्रति समर्पित, उच्च नैतिक र सक्षम नेतृत्वदायी व्यक्तित्वको निर्माण गर्ने ।

९. विद्यार्थीहरूमा श्रमप्रति निष्ठा, सेवा भावना र सामाजिकीकरणको विकास गर्ने ।

१०. प्रजातान्त्रिक मूल्य, मान्यता र मानव अधिकारलाई मानवीय संस्कारका रूपमा विकास गर्ने ।

उल्लिखित शिक्षाको उद्देश्यका बुँदाहरूमा घोत्लिने हो भने अनेक किसिमका चुनौती उपस्थित हुने कुरा घाम जत्तिकै छर्लङ्ग हुन्छ । कहीं आर्थिक समस्या, कहीं व्यावहारिक कठिनाइ, कतै सामाजिक झन्झट, कतै भौगोलिक विकटता, कतै जनशक्तिको अभाव आदि कारणहरू पाइला-पाइलामा चुनौतीका रूपमा छन् । अनेक भाषा र जाति, हिमाल,

पहाड र तराईको बनोट, विविध परम्परा, छोरीलाई नपढाउने मनोवैज्ञानिक अवधारणा, इत्यादि कारणले शिक्षाका लक्ष्यित उद्देश्य प्राप्त गर्न सकिएको छैन र सजिलोसित प्राप्त गर्ने संभावना पनि देखिन्न ।

दूर शिक्षाको महत्त्व र आवश्यकता

अहिले शिक्षाको विकास र विस्तारमा श्री ५ को सरकारले औपचारिक प्रणालीका साथै अनौपचारिक शिक्षा प्रणाली पनि अवलम्बन गरेको छ । विद्यालयीय अध्यापनबाट मात्र नेपालजस्तो मुलुकमा न सबैलाई शिक्षा दिन सम्भव छ न त निरक्षरता हटाउन वा घटाउन सजितो छ । त्यसैले अनौपचारिक शिक्षण पद्धतिलाई विभिन्न माध्यमबाट विस्तार गर्ने प्रयास गरिएको छ ।

शिक्षा विस्तारमा एकातिर आर्थिक समस्या, सबभन्दा ठूलो बाधक त छँदैछ, साथसाथै चेतनाको अभाव, दृढ इच्छाशक्तिको कमी, व्यवस्थापनको दुर्बलता आदि थुप्रै अन्य समस्या पनि कम बलिया छैनन् । यस क्रममा दूर शिक्षाको महत्त्व बढेर गएको छ ।

ज्ञान, विद्या वा शिक्षाको ढोका खोल्न चारैतर्फबाट प्रयत्न हुनुपर्दछ । यसो भएन भने भूपरिवेष्ठित, पहाडी, दुर्गम इलाकाहरूको बाहुल्य भएको, यातायातको असुविधाले ग्रस्त, गरिबी र पछौटेपनले प्रताडित नेपालजस्तो राष्ट्रमा शिक्षाको गति तीव्र पार्न सकिन्न । यस परिप्रेक्षमा दूर शिक्षा प्रणालीको माध्यमबाट शिक्षा प्रसारण गर्दा केही राहत मिल्ने संभावना स्पष्ट देखिन्छ ।

दूर शिक्षा पद्धतिले औपचारिक र अनौपचारिक सबै किसिमका शैक्षिक कार्यक्रमहरूलाई टेवा दिन सक्दछ । कुरीति र अन्धविश्वासको पर्दा पन्छाउन रेडियो, टेलिभिजन, जस्ता संचार माध्यमको उपयोग गरेर दरिलो मदत पुऱ्याउन यसले सक्दछ भने खुला विश्वविद्यालयको तहसम्म पुगेर उच्च स्तरका डिग्री प्रदान गर्न पनि दूर शिक्षा प्रणाली सक्षम हुन्छ । यस प्रकार जनसमाजमा चेतनाको विस्तार गर्ने देखि लिएर आफ्नो घरैमा बसी अथवा व्यवसायमा संलग्न रहेरै पनि शैक्षिक उपाधि हासिल गर्ने अवसर दूर शिक्षा प्रणालीले दिन सक्दछ ।

माथिको कुरा खुलस्त पार्न नेपालका दुर्गम पहाडी गाउँको स्थिति अगाडि सार्न सकिन्छ । एउटा गाउँमा सरकारले चारओटा प्राथमिक विद्यालय खोले पनि सबैलाई पढ्ने सुविधा नमिल्ने अवस्था छ । कुनै गाउँको एक कुनाको बासिन्दा अर्को कुनासम्म पुग्न १-२ दिन लाग्ने ठाउँ पनि छन् । विकसित मुलुकमा पनि टोल-टोलमा सार्वजनिक विद्यालय खोलिँदैन भने नेपालमा त्यो सम्भव छैन । प्राथमिक विद्यालयमा पढ्ने शिशु विद्यार्थीले कतिपय ठाउँमा त १-२ घण्टासम्म हिंड्नुपर्ने बाध्यता छ , जो व्यावहारिक हुँदैन । विद्यार्थीले शिशु अवस्थामा पढाइको बाटो समाप्त सकेन भने पछि उसलाई शिक्षाको मूल धारमा आउन असम्भव नै हुन्छ । शिक्षाको अवसरबाट वञ्चित त्यस्तो व्यक्तिलाई भरपर्दो माध्यम दूर शिक्षा हुन सक्दछ । तर, दूर शिक्षाको तात्पर्य रेडियोबाट पाठ सुनाउन मात्र सीमित गर्नु हुन्न । स्थलगत अध्ययन, अभिमुखीकरण तथा नियमित अनुगमन र मूल्याङ्कन जस्ता प्रक्रिया पनि सम्पन्न गरिनुपर्दछ ।

खुला विश्वविद्यालयको औचित्य

दूर शिक्षाबारे पहिले संकेत गरेजस्तै खुला विश्वविद्यालय तहसम्म यसको विस्तार गर्नु आवश्यक हुन्छ । खुला विश्वविद्यालय स्थापनाका लागि गत डेढ दशकभन्दा बढी समयदेखि विभिन्न समिति र आयोगहरूले सुझाव दिँदै आएका छन् । राष्ट्रिय शिक्षा आयोगको प्रतिवेदन २०४९ ले खुला विश्वविद्यालयको स्थापनासम्बन्धी अवधारणा यस प्रकार अघि सारेको छ ।

"निकट भविष्यमा श्री ५ को सरकारले एउटा खुला विश्वविद्यालयको स्थापना गर्नुपर्छ । यस विश्वविद्यालयले प्राइभेट परीक्षार्थीहरूका निम्ति पनि परीक्षा संचालन गर्नुका साथै अनौपचारिक माध्यमबाट उच्च शिक्षाको विस्तारका निम्ति नेपालको आवश्यकतालाई ध्यानमा राखेर दूर शिक्षण कार्यक्रम पनि संचालन गर्नुपर्छ । यस खुला

विश्वविद्यालयलाई श्री ५ को सरकारले सुरूका ५-७ वर्षसम्म एकमुष्ठ अनुदान दिनुपर्छ र उक्त चरण पार भएपछि पञ्जिका शुल्क, परीक्षा शुल्क र प्रमाणपत्र शुल्कले नै त्यसलाई आर्थिक रूपमा आत्मनिर्भर गराउनुपर्छ ।"

यस भनाइले प्राइभेट परीक्षा र अनौपचारिक शिक्षाका निम्ति खुला विश्वविद्यालय ज्यादा प्रभावकारी र उपयोगी हुने कुरालाई प्रस्ट पार्दै यसको संचालनमा आत्मनिर्भरता ल्याउनुपर्ने तथ्यतर्फ पनि संकेत गरेको छ ।

उच्चस्तरीय राष्ट्रिय शिक्षा आयोगको प्रतिवेदन २०५५ मा पनि शिक्षाको पहुँच राष्ट्रव्यापी रूपमा सबै वर्ग र समुदायमा पुऱ्याउने लक्ष्यमाथि विशेष जोड दिदै खुला विश्वविद्यालय स्थापना गर्न सिफारिस गरिएको छ ।

नवौं पञ्चवर्षीय योजना (२०५४-०५९) को आधारपत्रमा खुला विश्वविद्यालय स्थापना गर्ने कुरा उल्लेख छ । त्यस्तै आ.व. २०५४-०५५ को सरकारी नीति र कार्यक्रममा पनि खुला विश्वविद्यालय स्थापना गर्ने कुरा उल्लेख गरिएको थियो । तर हालसम्म यसको कार्यान्वयन नगरिनुलाई चाहिं अनौठो मान्नुपर्ने भएको छ ।

खुला विश्वविद्यालय ज्ञानको त्यस्तो माध्यम हो जहाँ युवादेखि वृद्धसम्म, गरीबदेखि धनीसम्म र साधारण व्यक्तिदेखि उच्च पदाधिकारीसम्म एउटै कोर्स अध्ययन गरिरहेका हुन्छन् । ई. १९८९ को सेप्टेम्बर महिनामा काठमाडौंमा भएको "नेपालमा दूर शिक्षा" विषयक सेमिनारमा भाग लिन आएका भारतको "इन्दिरा गान्धी खुला विश्वविद्यालय" का एक विद्वानले भनेका थिए - "खुला विश्वविद्यालयको एकै कक्षामा एउटा रिक्सावाल र एउटा प्राध्यापक सँगसँगै अध्ययन गर्छन् र सँगसँगै मूल्याङ्कनमा सहभागी हुन्छन् ।"

जीवनभर ज्ञानको भोकले सताइएका व्यक्तिका लागि खुला विश्वविद्यालय अत्यन्त उपयोगी ठहरिन्छ किनभने यसमा न उमेरले छेक्छ न सामाजिक परिवेशले रोक्छ । यसरी विचार गर्दा शिक्षाको उद्देश्य प्राप्तिमा दूर शिक्षा वा खुला विश्व विद्यालयको खाँचो टड्कारो देखिन्छ । विकसित र विकासोन्मुख दुबै थरी देशमा यस्तो शिक्षा प्रणाली लोकप्रिय हुँदैछ । खुला विश्वविद्यालयकै कुरा गर्ने हो भने बेलायतबाट थालनी भएपछि हाल भारत, पाकिस्तान, चीन, म्यान्मार, अस्ट्रेलिया आदि देशका खुला विश्वविद्यालयले राम्रो सफलता पाएका छन् । शहरी र ग्रामीण क्षेत्र दुबैमा उपयोगी ठानिएको दूर शिक्षा प्रणालीमा लगानीको अनुपात पनि निकै कम रहने तथ्य स्मरणीय छ ।

उपसंहार

हाल विभिन्न भाषा, जाति, संस्कृति, कला आदिको गहिरो अध्ययन गर्नुपर्ने विषयमा प्रश्नहरू उठिरहेका छन् । तर भौतिक पूर्वाधारको अभावका साथै प्राज्ञिक जनशक्तिको कमी रहेको छ । सबै ठाउँमा सबै किसिमका आवश्यक स्रोत र साधन पर्याप्त छैनन् । यस दृष्टिकोणले हेर्दा पनि दूर शिक्षा वा खुला विश्वविद्यालयको उपयोगिता हाम्रो देशका लागि सार्थक देखिएको छ ।

सारांशमा देशले राष्ट्रिय स्तरमा स्वीकार गरेका शिक्षाका उद्देश्यलाई हालको शैक्षिक परिपाटी पर्याप्त छैन । नयाँ सोच र प्रक्रिया अवलम्बन गरी राजनीतिमुक्त रूपमा सुव्यवस्थापन गरिएको शैक्षिक कार्यप्रणाली आज आवश्यकता भएको छ । यसमा दूर शिक्षा पद्धतिको शिक्षण प्रक्रियालाई साधन-स्रोत-सम्पन्न बनाई विशेष महत्त्वका साथ विकसित गर्दै लैजानु समयोचित ठहरिन्छ ।

सामाजिक शिक्षा शिक्षणको व्यावहारिक अवधारणा

- डा. श्रीरामप्रसाद उपाध्याय*

यस लेखका लेखकले इतिहास शिक्षाको निम्ति रेडियो शिक्षाको उपयोगितासम्बन्धी लेख लेखेर शिक्षाशास्त्र संकाय डीनको कार्यालयबाट प्रकाशित शिक्षा-सम्बन्धी बुलेटिनमा डेढ दसकअघि प्रकाशित गरेको थियो। त्यो लेख आजको सन्दर्भमा पनि उत्तिकै सान्दर्भिक भएको हुँदा सर्वप्रथम त्यस विषयमा केही चर्चा गर्नु आवश्यक ठान्दछु। इतिहाससम्बन्धी सो लेखमा लेखकले "इतिहासका सबै किसिमका सामग्रीहरू सबै ठाउँहरूमा उपलब्ध हुन सक्दैनन् तर ती सबै सामग्रीहरू सबैका निम्ति उत्तिकै उपयोगी हुन सक्छन्। रेडियोबाट ती सामग्रीहरूलाई टाढाका श्रोता समक्ष पुऱ्याउन सकिन्छ" भन्ने भाव व्यक्त गरेको थियो। त्यसै गरी त्यो लेखमा "ऐतिहासिक व्यक्तित्वहरू सबै ठाउँहरूमा जान वा पुग्न सक्दैनन्। त्यसै हुनाले त्यस्ता व्यक्तित्वहरूलाई सबैको माझ पुऱ्याउन रेडियो मात्र एउटा भरपर्दो र सर्वसुलभ माध्यम हुन सक्छ" भन्ने विचार पनि अभिव्यक्त भएका थिए।

इतिहास शिक्षामा जस्तै सामाजिक शिक्षाका निम्ति पनि दूर शिक्षाका कार्यक्रमहरू अत्यन्त उपयोगी हुनसक्छन्। वेबसाइड र इन्टरनेटको माध्यमबाट सामाजिक शिक्षासम्बन्धी धारणाको विकास तथा विस्तार गर्ने सोचले प्राथमिकता पाइरहेको वर्तमान परिप्रेक्षमा दूर शिक्षाले अत्यन्त सहयोगी भूमिका निर्वाह गर्न सक्छ।

माध्यमिक तहको शिक्षा प्रभावकारी तथा उपयोगी नहुञ्जेलसम्म प्राथमिक तथा निम्नमाध्यमिक शिक्षा उपयोगी हुन सक्दैन। हाम्रो शिक्षा प्रणालीमा माध्यमिक तह उत्तिर्ण गरेका तालिम प्राप्त शिक्षकले नै प्राथमिक तहमा शिक्षण गर्न अवसर प्राप्त गर्ने हुनाले माध्यमिक तहको पठन पाठनमा सुधार नभाइ प्राथमिक तहमा सुधार गर्ने इच्छा राख्नु धानको बिऊ राखेर गहूँ फलाउने आशा गर्नु जस्तै हुनेछ। त्यसैहुनाले दूर शिक्षाले आफ्नो कार्यक्रमलाई प्राथमिक तहवाट क्रमशः विकास गर्दै लगी उच्च शिक्षासम्म पुऱ्याउने योजना बनाउने छ भन्ने आशा गर्न सकिन्छ।

श्री ५ को सरकार शिक्षा तथा खेलकुद मन्त्रालयले माध्यमिक तहको कक्षा ९ मा विगत वर्ष-देखि र कक्षा १० मा यस वर्षदेखि नयाँ विषयको रूपमा सामाजिक शिक्षा विषय लागू गरेको छ। सामाजिक शिक्षा के हो, यसको अध्ययन कसरी गर्ने, यसबाट कुनकुन सीपहरूको विकास गर्न सकिन्छ, यसको मूल्याङ्कन कसरी गरिनेछ भन्ने खुलदुली सम्बन्धित पक्षलाई लाग्न सक्छ। यिनै प्रश्न तथा खुलदुलीको उत्तर दिने प्रयास यस लेखमा गरिनेछ।

सामाजिक शिक्षा के हो ?

सामाजिक शिक्षा भूगोल, इतिहास, अर्थशास्त्र, राजनीतिशास्त्रका विषयवस्तु कण्ठ गर्ने विषय होइन। यो, मानव उपयोगी विषयहरूलाई जीवनमा उपयोग गरेर आफूलाई असल नागरिकको रूपमा प्रतिस्थापित गराउन सहयोग पुऱ्याउने विषय हो।

भूगोल विषयअन्तर्गत भूगोलको अध्ययन गर्नु र सामाजिक शिक्षाअन्तर्गत भूगोलको अध्ययन गर्नुमा निकै अन्तर हुन्छ। भूगोल विषयअन्तर्गत भूगोलको अध्ययन गर्दा पृथ्वीको बनोट, अक्षांश, देशान्तर, जलवायु इत्यादिको अध्ययन गरिन्छ। तर सामाजिक शिक्षामा भूगोलका ती विषयहरूको अध्ययन गर्दा मानिसले आफ्ना सबै किसिमको विकासका निम्ति पृथ्वी, अक्षांश देशान्तर स्थिति तथा जलवायुको प्रयोग कसरी गर्ने भन्नेतर्फ आफ्नो ध्यान केन्द्रित गर्दछ। सामाजिक शिक्षाका विद्यार्थीहरूले पृथ्वीको अध्ययन गर्दा यसको इतिहास, वैज्ञानिकता तथा वातावरणीय

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* प्रमुख, इतिहास शिक्षा विभाग, शिक्षाशास्त्र संकाय, कीर्तिपुर

पक्षको उपयोग गर्दछन् । सामाजिक शिक्षामा भूगोलको अध्ययन मानव जीवनसँग गाँसिएको हुन्छ । सामाजिक शिक्षामा भूगोलको अध्ययन एकाकीपन (isolation) मा हुँदैन ।

इतिहास विषयमा विगतका घटनाहरूको जानकारी राख्नका निम्ति इतिहासको अध्ययन गरिन्छ । यसले मानसिक सन्तुष्टि प्रदान गर्दछ । यसले भौतिक वस्तु प्राप्त गर्न सहयोग नगर्न पनि सक्छ । तर सामाजिक शिक्षाअन्तर्गत इतिहासको अध्ययनले मानव जीवनको उत्पत्तिसँगै भौतिक पक्षका विविध क्षेत्रको ज्ञान र त्यस ज्ञानको उपयोग गर्ने तर्फ पनि त्यत्तिकै महत्त्व दिएको हुन्छ । सामाजिक शिक्षाअन्तर्गत इतिहासको अध्ययन गर्ने विद्यार्थीहरू आफ्ना पुर्खाहरूको जीवनको अनुसरण गरेर भावी पुस्ताको निम्ति स्वयम् आफू पनि उदाहरण बन्नेछन् यति मात्र होइन यी विद्यार्थीहरूले पुर्खाहरूद्वारा निर्मित ऐतिहासिक धरोहरहरूको संरक्षण तथा सम्वर्द्धन गर्ने काममा सक्रियता देखाउनुको साथै भावी पुस्ताका निम्ति केही ठोस काम गर्ने तर्फ आफ्नू ध्यान केन्द्रित गर्नुपर्ने हुन्छ । यसका साथै यी विद्यार्थीहरूले ऐतिहासिक वस्तुहरूलाई आफ्ना जीवनका आवश्यकीय वस्तुको रूपमा प्रयोग गर्न सक्छन् । प्राचीन वा मध्यकालको गृहनिर्माण तथा ढल र शैचालय निर्माणसम्बन्धी सीप वर्तमान समयका निम्ति पनि उपयोगी हुन सक्छ । हाम्रा पुर्खाहरूले छोडेर गएका पुराना लिपि तथा चित्रकला वर्तमान समयमा पनि त्यतिकै उपयोगी हुन सक्छन् । प्राचीन लिपिको प्रयोगबाट विश्वमा राष्ट्रको पहिचान बढाउनुको साथै पुर्खाको कामको सम्मान गर्ने बानीको पनि विकास हुनेछ । यसरी सामाजिक शिक्षामा इतिहासको प्रयोग रोजगारीमूलक तथा श्रमप्रति आस्था जगाउने किसिमको हुन्छ । सामाजिक शिक्षाअन्तर्गत इतिहास पढ्नेले आफ्नो इतिहास अवश्य नै बनाउनु पर्दछ । यसरी ऐतिहासिक व्यक्तित्वको रूपमा आफूलाई प्रस्तुत गर्न विद्यार्थीहरूले आफ्नो जीवनलाई सकारात्मकतातर्फ उन्मुख गराउनु पर्ने हुन्छ त्यस्तो हुन चाहने विद्यार्थीहरूको बानी-बेहोरामा परिवर्तन भएकै हुनुपर्दछ ।

सामाजिक शिक्षाअन्तर्गत अर्थशास्त्रको अध्ययन गर्ने विद्यार्थीहरूले अर्थशास्त्रका सिद्धान्तहरूलाई कण्ठ नगरेर आफ्ना आर्थिक क्रियाकलापको आधारमा आफ्नै मौलिक सिद्धान्तको निर्माण गर्नेछन् । यसमा विद्यार्थीहरूले समुदायमा हुने क्रयविक्रय, वस्तुको माग-आपूर्ति, वस्तुको मूल्य निर्धारण गर्ने काममा सहभागी भई त्यससम्बन्धी नीति निर्माणमा सहभागिता प्रदर्शन गर्नेछन् । यसमा विद्यार्थीहरू सहकारिता जस्तो आर्थिक गतिविधिमा संलग्न भई आफ्नो मुनाफाको केही रकम खर्च गर्नमा मितव्ययिता अपनाउँछन् । यसमा यिनीहरूले व्यापारिक खेलको आनन्द लिनेदिने काम गर्दछन् ।

सामाजिक शिक्षाअन्तर्गत राजनीतिशास्त्र अभ्यास गर्ने विषय हो । यसमा विद्यार्थीहरूले समुदायमा राजनीतिक चेतना जगाउनुका साथै राम्रो शासन पद्धतिका निम्ति सरकारलाई सहयोग गर्न आफ्नो समुदायका मानिसहरूलाई सचेत गराउँछन् । यसमा विद्यार्थीहरूलाई भविष्यमा असल नागरिक हुन अभ्यास गराइन्छ । यिनिहरूले नियम कानून बनाउन, दलको घोषणा पत्र बनाउन, निर्वाचनको मतपत्रको नमूना तयार गर्न, दलको चिन्ह तयार गर्न , मतदानको बाकस बनाउन, निर्वाचनमा दलको प्रचार प्रसारका निम्ति पोष्टर तथा पर्चा बनाउन, प्रचार अभियानको कार्यक्रम बनाउन, व्यवस्थापिका, कार्यपालिका तथा न्यायपालिकासम्बन्धी अभिनय गर्न, नागरिकतासम्बन्धी फारम भर्न, नागरिकता प्रमाणपत्रको नमुना बनाउन अभ्यास गर्दछन् । यसमा विद्यार्थीहरूलाई भ्रष्टाचारविहीन शुसाशनका निम्ति अभ्यास गराइन्छ ।

सामाजिक शिक्षामा विद्यार्थीहरूले आफ्नो ज्ञानको उपयोग सीपको प्रयोगद्वारा गर्दछन् । यसमा विद्यार्थीहरूले नक्सा, तालिका, चित्र, कुनै वस्तुको नमुना, गीत, सङ्गीत, ग्राफ, कविता, चिठी, सम्बाद, कथा, समाचार पत्र, निमन्त्रणापत्र, प्रवचन तथा वक्तृत्वकलाको कार्यक्रम तयार गर्न, खेलकुदको नियम बनाउन, अनुसन्धानको प्रस्तावना तयार गर्न र अनुसन्धानका निम्ति प्रश्न बनाउनमा आ-आफ्ना सीपको प्रयोग गर्नेछन् ।

सामाजिक शिक्षाको अध्ययन कसरी गर्ने ?

सामाजिक शिक्षा बालकेन्द्रित विषय हो । यसमा बालबालिकाहरूले आफ्ना निम्ति आफैंले अध्ययन गर्ने योजना बनाउँछन् र त्यसै योजनाअनुसार आफ्ना सबै क्रियाकलापहरू सञ्चालन गर्ने गर्दछन् । यसमा शिक्षकको भूमिका

शोध निर्देशकको जस्तै हुनेछ। अनुसन्धानमा शोध निर्देशकले अनुसन्धान कर्तालें गरेको कामको आधारमा उसको मूल्याङ्कन गर्दछन्। त्यसैगरी सामाजिक शिक्षाका शिक्षकले आफ्ना सबै किसिमका सीपको प्रयोग गरी विद्यार्थीहरूलाई काम गर्न उत्प्रेरित गर्नुपर्दछ। यदि कुनै विद्यार्थीले कुनै काम गर्न मान्दैन वा गर्दैन भने शिक्षकले मनोवैज्ञानिक उपायको प्रयोग गरी उसलाई काम गर्न तयार गराउनुपर्दछ। यसका साथै शिक्षकका निम्ति त्यस विद्यार्थीले काम नगर्नु एउटा अनुसन्धानको विषय हुन सक्छ। साथै शिक्षकले भनेर, सुनेका आधारमा विद्यार्थीले आफैंले गरेर सिक्ने काम कठिन र सैद्धान्तिकजस्तै देखिन्छ। तर लगातारको अभ्यासबाट यस काममा शिक्षक तथा विद्यार्थी सफल हुन सक्छन्। मानिसमा जन्मदेखिनै अनुसन्धानप्रवृति हुन्छ। बालक बामे सर्दै आफ्नो नजिक रहेको आगो समातेर परीक्षण गर्न चाहन्छ। बालक धेरै सानो छ भने उसले यो प्रक्रिया दोहोऱ्याइ रहन्छ किनभने उसको सानो मस्तिष्कमा आगोले पोल्छ भन्ने कुरा रहिरहँदैन। तर बालक ठूलो छ भने आगो छोएपछि पोल्छ भन्ने सम्झिरहन्छ र उसले त्यसो गर्दैन। बालबालिकाहरू यही अनुसन्धानात्मक प्रवृतिलाई पछिसम्म प्रयोग गर्छन्। बालबालिकाहरू घरबाट स्कुल आउँदा अनेक कुराको अनुसन्धान गरिरहेका हुन्छन्। त्यस अनुसन्धानको उपयोग गरेर यिनीहरू स्कुल पुग्न र घरतर्फ फर्कन सफल हुन्छन्। यिनीहरू घर र स्कुलको बीचमा रहँदा विभिन्न किसिमका अनुसन्धान गर्दछन्। धेरै बाटाहरूमध्ये एउटा सुगम बाटोलाई रोज्नु, मानिसले हिँडेकै बाटोबाट हिँडनु, आफ्नो अगाडि पर्न आएको मानिस, जनावर, गाडा, वा अन्य कुनै अवरोधात्मक वस्तु छल्नु, बाटोमा हुर्केका रूख, फुलेका फूल वा फल पत्ता लागाउनु आदि विद्यालय जाने बाल-बालिकाका अनुसन्धानका विषय हुन्। सामाजिक शिक्षाका शिक्षकले बालबालिकाको अनुसन्धानबाट आफूले पनि लाभ प्राप्त गर्न सक्छन्। एक जना बालबालिकाले गरेको अनुसन्धानबाट अनेक बालबालिकाहरूलाई फाइदा हुन्छ। बालबालिकाहरूले गर्ने बाटाका सबै अनुभव शिक्षकले गरेका हुँदैनन्। त्यसैले शिक्षकले बालबालिकाहरूका त्यस्ता अनुभवबाट धेरै कुरा सिक्न सक्दछन्। सामाजिक शिक्षाको पाठ्यक्रम तथा पाठ्यपुस्तकले शिक्षकलाई विद्यार्थीहरूका अनुभवबाट विविध कुरा सिक्ने प्रशस्त अवसर प्रदान गरेको छ। हाम्रा पुर्खाहरूले यस्तै किसिमको शिक्षाको अनुशरण गरेका हुनाले आज हाम्रो अस्तित्त्व कायम रहेको छ। गुरूकुल पद्धतिमा आफ्ना विद्यार्थीहरूले खोजेर तथा परिश्रम गरेर ल्याएका खाने कुरा गुरू विश्वास गरेर स्वीकार गर्दथे। त्यस बखत गुरू र शिष्यको बीचमा राम्रो सम्बन्ध रहन्थ्यो। दुबैको बीचमा राम्रो समझदारी पनि थियो। त्यसै हुनाले यिनै गुरू शिष्यहरूले गरेकै अनुसन्धानका आधारमा हामीले नयाँ नयाँ खानेकुराहरू चिन्दै र उपयोग गर्दै गयौं। यदि अनुसन्धानको यो प्रक्रिया सुरू नभएको भए धान वा चामलबाहेक हामीले अन्य खाद्य वस्तु पत्ता लगाउन सक्दैनथ्यौं। आज हामीले चामल वा गहूँका अनेक परिकार बनाउन र खान जानेका छौं। भोलिका दिनहरूमा पनि खाने कुराहरूको नयाँ नयाँ आविष्कार हुनेछ। हाम्रा बालबालिकाहरूले गरेका नयाँ नयाँ आविष्कारबाट हामी सबैले नयाँ नयाँ खानेकुराको स्वाद लिन पाउने छौं।

माध्यमिक तहको कक्षा ९ र १० को पाठ्यक्रम तथा पाठ्यपुस्तकका प्रत्येक पाठ वा विषयवस्तुले विद्यार्थीहरूलाई अनुसन्धानतर्फ उन्मुख भएर आफ्ना निम्ति आफैंले पाठ्यक्रम तथा पाठ्यपुस्तक बनाउन अभिप्रेरित गर्दछ। पाठ्यपुस्तकका प्रत्येक एकाइको प्रारम्भ चित्र, महानबाणी, गीत, कविताबाट सुरू भएको छ। यसो गर्नुको मुख्य उद्देश्य एकाइअन्तर्गत पर्ने सम्पूर्ण कुराको जानकारी सुरूकै पृष्ठबाट विद्यार्थीहरूले हासिल गर्न सकून् भन्ने हो। साथै चित्र, महावाणी, गीत, कविता ज्ञान प्राप्त गर्ने माध्यमहरू हुन, केवल अक्षरले मात्र ज्ञान दिँदैन भन्ने जानकारी गराउनलाई नै प्रत्येक एकाइको सुरूमा चित्र राखिएको हो। सामाजिक शिक्षाका शिक्षकले प्रत्येक एकाइ प्रारम्भ गर्नुअघि एकाइको पहिलो पृष्ठमा दिइएको चित्रको आधारमा चित्र, गीत, कविता बनाउन र गाउन लगाउनुपर्दछ। सुरूमा चित्रहरू हेरेर सार्ने र पछि त्योभन्दा राम्रो चित्र बनाउन अभ्यास गराउनुपर्दछ। त्यसपछिको अभ्यासमा विद्यार्थीहरूलाई चित्रका सम्बन्धमा महानवाणीमा दिएजस्तै विचार गर्न र चित्रको गीत बनाई गाउन लगाउनुपर्दछ। चित्र बनाउन चित्रकारले मात्र सक्छन्, कविता लेख्न कविनै चाहिन्छ, गीत गाउन गायक नै चाहिन्छ भनेर त्यस्तै मानिसको खोजिमा लाग्नाले समय मात्रै व्यतित हुनेछ। यस्ता चुनौतीहरूलाई सहजै सामना गर्न हाम्रा बालबालिकाहरूलाई सधैं अभिप्रेरित गर्नुपर्छ। नत्रभने चुनौती आउनासाथ यिनीहरू हतास भएर अरूको

सहारा खोज्न थाल्दछन्। विद्यार्थीहरूले गरेका प्रत्येक रचनात्मक कामको लेखोटहरूलाई शिक्षकले सम्मान साथ सङ्ग्रह गरेर राख्नुपर्दछ। सामाजिक शिक्षाका शिक्षकले विद्यार्थीहरूका रचना सङ्ग्रह गरेर प्रकाशित गरी पुस्तकालयको विकास गराउन सक्छन्। विद्यार्थीहरूलाई दिनको एक रूपियाँ बचाई आफ्ना कृति छाप्न पैसा जम्मा गर्न लगाउनुपर्दछ। यसबाहेक कृतिमा उल्लेख गर्न विज्ञापनको छनोट गरेर पनि विद्यार्थीहरूले आर्थिक सङ्कलन गर्न सक्छन्। यस क्रियाकलापबाट विद्यार्थी तथा विज्ञापनदाता दुबै लाभान्वित हुन सक्छन्। विद्यार्थीहरूमा रचनात्मक काम गर्ने प्रवृतिको विकास हुन्छ भने विज्ञापनदाताले आफ्नो व्यवसायको प्रचार प्रसारबाट लाभ प्राप्त गर्न सक्छ। यस्ता क्रियाकलापबाट अन्य विद्यार्थीहरू पनि अभिप्रेरित भई अझ राम्रोसँग रचनात्मक काम गर्नेतर्फ उन्मुख हुनेछन्। सुरूमा अभ्यस्त भई नसकेका हुँदा रचनात्मक काम गर्न विद्यार्थीहरूलाई समय लाग्न सक्छ। त्यस्तो अवस्थामा शिक्षकले आवश्यक सल्लाह तथा सहयोग गर्नुपर्दछ।

अचेल हाम्रो देशका प्रत्येक जिल्ला वा गाउँ वा शहरमा केही सरकारी र गैर सरकारी संस्थाहरू कार्यरत रहेका छन्। त्यस्ता संस्थाहरूमध्ये केही संस्थाहरू प्रत्यक्षरूपमा विद्यार्थीहरूको विकासका निम्ति कार्यरत छन् भने अन्य केही संस्थाहरू अप्रत्यक्षरूपमा विद्यार्थीहरूको हितमा संलग्न हुन्छन्। सामाजिक शिक्षाका विद्यार्थीहरूलाई यी संस्थाका प्रतिनिधिहरूसँग कुरा गर्ने अवसर प्रदान गर्नाले पनि उनीहरूलाई हित हुन्छ। विद्यार्थीहरूले त्यस संस्थाका विषयमा थाहा पाएर त्यसको काममा सहयोग गर्छन् र दोस्रो त्यस्ता संस्थाहरूको सहयोगबाट आफ्ना सीपहरूको विकास तथा आफ्ना कृतित्त्वको प्रकाशन गर्न समेत पाउँछन्। संस्थाहरूले विद्यार्थीहरूलाई कागज, कलम र केही आर्थिक सहयोग उपलब्धगराई दिएको खण्डमा बाल-बालिकाले पनि संस्थाहरूले चाहेको जस्तो पोष्टर चित्र तथा पत्रपत्रिका प्रकाशित गर्नमा सहयोग पुऱ्याउन सक्छन्। विद्यार्थीहरूले संस्थाहरूलाई आफूहरूले गरेको काम समाजलाई उपयोगी हुन सक्छ भनी विश्वस्त पार्नुपर्ने हुन्छ। यस्तो काममा सामाजिक शिक्षा शिक्षकले विद्यार्थीहरू र संस्थाहरूको बीचमा मध्यस्थता गर्न सक्छन्।

सामाजिक शिक्षाका पाठहरूलाई तीन किसिमका क्रियाकलापहरू गराएर सम्पन्न गर्नुपर्ने हुन्छ। पहिलो क्रियाकलाप गर्दा विद्यार्थीहरूले पाठ्यपुस्तकमा उल्लेख गरिएका पाठका विषयवस्तुलाई कविता, कथा, सम्बाद, चित्रको माध्यमबाट प्रस्तुत गर्दछन्। दोस्रो किसिमका क्रियाकलापहरूमा विद्यार्थीहरूलाई समुदायको भ्रमण गराई पाठसँग सम्बन्धित सूचना सङ्कलन गर्न लगाउनु पर्दछ र तेस्रो किसिमका क्रियाकलापमा पाठ्यपुस्तकका विषयवस्तु र समुदायमा सङ्कलन गरिएका सूचनाको आधारमा प्रश्न बनाई आफ्ना सहपाठीहरूको मूल्याङ्कन गर्न लगाउनुपर्दछ। सबै पाठहरूमा समुदायको भ्रमण गराउन नसकिए पनि केही पाठहरूमा अवश्य नै समुदायको भ्रमण गराउनुपर्दछ। समुदायमा भ्रमण गराउन नसकिएका पाठहरूमा विद्यार्थीहरूको समुदायसम्बन्धी अनुभवमा छलफल गराई त्यसलाई पाठसँग सम्बन्धित बनाउन सहयोग पुऱ्याउनुपर्दछ।

हामी, हाम्रो समुदाय र हाम्रो राष्ट्र सामाजिक शिक्षाको मूल मन्त्र हो। हामी भन्नाले प्रत्येक व्यक्तिले आफ्नो विषयमा वा आफूजस्तै अरू मानिसका विषयमा थाहा पाएर एक अर्कालाई सहयोग गर्नु हो। हाम्रो समुदाय भन्नाले विद्यार्थीहरूको घर, छिमेक, गाउँ, शहर भन्ने बुझिन्छ। सामाजिक शिक्षाका विद्यार्थीहरूले आफूले पढेका पाठमा दिएका व्यक्तित्त्वजस्तै आफ्ना समुदायमा कुनै व्यक्तित्त्वहरू छन् कि छैनन् त्यस्ता व्यक्तित्त्वहरू पत्ता लगाई कक्षामा प्रस्तुत गर्नुपर्दछ। यसअन्तर्गत विद्यार्थीहरूले समाजमा विद्यमान समस्या तथा समाधानका उपायहरू पत्ता लगाई त्यस्ता समस्या समाधान गर्न समुदायलाई सहयोग पुऱ्याउनुपर्छ। विद्यार्थीहरूलाई आफ्नो समुदायमा भएका त्यस्ता व्यक्तित्त्व वा समाजका समस्यालाई आफ्नो राष्ट्रको विकासको निम्ति आएका समस्याहरूसँग दाँज्न लगाई समस्या विहीन राष्ट्रको निर्माणमा संलग्न गराउनुपर्दछ।

सामाजिक शिक्षाबाट कुन कुन बानीको विकास गर्न सकिन्छ ?

सामाजिक शिक्षाले ज्ञान, सीप र सिर्जनात्मक क्षमतालाई समान महत्व दिने भएतापनि यसले कुनै ज्ञान प्राप्त गरिसकेपछि उसको जीवनमा कुनै परिवर्तन आयो कि आएन, उसको सीपको विकास भयो कि भएन भनी लगातार

परीक्षण गर्दछ । सामाजिक शिक्षाको मुख्य उद्देश्य नै परिवार, समुदाय, राष्ट्र र विश्वमा आफूलाई उपयोगी व्यक्ति बनाउन सक्नु हो । यस्तो उपयोगी व्यक्ति हुन उसले आफ्नो आचरणमा सुधार गर्नुका साथै यस काममा सहयोगी हुने आफ्ना बानीहरूको विकास गर्दै जानुपर्ने हुन्छ । यस्ता बानीअन्तर्गत कक्षामा अपनाइने सम्पूर्ण बानीहरू पर्दछन् । कक्षामा अपनाइने बानीहरूमा कक्षामा मिलेर बस्ने, एक अर्कालाई सहयोग गर्ने, कक्षाको अनुशासन पालन गर्ने , शिक्षकको निर्देशनलाई ध्यान दिएर सुन्ने र त्यसको पालन गर्ने जस्ता कुराहरूलाई लिन सकिन्छ । पाठसँग सम्बन्धित समुदायका विभिन्न व्यक्तिहरूसँग भेट्ने र समस्यासमाधानमूलक प्रश्नहरू नम्रतासाथ सोध्ने र पाएको जवाफलाई क्रमबद्ध रूपमा लेख्दै जाने, समुदायको अवलोकन गरेर हेरेको भरमा अवलोकन फारम भर्ने, समुदायबाट प्राप्त तथ्याङ्कहरूलाई प्रदर्शन तथा प्रस्तुत गर्ने कुराहरूलाई पनि सामाजिक शिक्षाबाट हासिल गर्ने बानीको रूपमा लिन सकिन्छ । कक्षामा विभिन्न व्यक्तित्वहरूको भूमिका अभिनय गरेर भूमिकाका सम्बन्धमा टिप्पणी गर्ने, भूमिकालाई अझै व्यावहारिक बनाउन आवश्यक सुझाव दिने कामहरूलाई पनि सामाजिक शिक्षाअन्तर्गत राख्न सकिन्छ ।

सामाजिक शिक्षाको मूल्याङ्कन कसरी गरिन्छ ?

सामाजिक शिक्षाको मूल्याङ्कन लिखित परीक्षाबाट मात्र सम्भव हुँदैन । लिखित परीक्षाबाट उसको ज्ञान पक्षको मात्र मूल्याङ्कन गर्न सकिन्छ । ज्ञान पक्षको मूल्याङ्कनबाट विद्यार्थीहरूको जीवनमा परिवर्तन आयो कि आएन भनी थाहा पाउन सकिँदैन । हाम्रो जस्तो लिखित परीक्षामा भर पर्ने शिक्षा प्रणालीमा लिखित परीक्षाबाट पनि विद्यार्थीहरूमा आएको केही परिवर्तन तथा सीपको मूल्याङ्कन त गर्न सकिन्छ । सामाजिक शिक्षाका विद्यार्थीहरूले नक्सा, तालिका, योजना, अनुसन्धान प्रस्ताव, अनुसन्धानात्मक प्रश्न इत्यादि बनाई आफ्नो मूल्याङ्कन गराउँछन् । यसमा यसो हेर्दा ज्ञान पक्षलाई गौण बनाएको जस्तो देखिन्छ । तर प्रश्नहरूको माध्यमबाट ज्ञान पक्षलाई सशक्त बनाई त्यसको आधारमा सीपको पनि परीक्षण गरिन्छ ।

मूल्याङ्कनमा विद्यार्थीहरूले सूचनालाई विभिन्न माध्यमबाट प्रस्तुत गर्ने सीप आफूमा विकास गर्नुपर्छ । यस्ता सीपको विकास गर्न प्रश्नका सूचनाहरूले सहयोग पुऱ्याउन सक्छन् । प्रश्नमा ग्राफको रूपमा कुनै सूचना प्रस्तुत गरिएको छ भने विद्यार्थीहरूलाई त्यसको आधारमा कुनै अन्य सूचना प्रयोग गर्ने किसिमको ग्राफ बनाउन लगाउन सकिन्छ । प्रश्नमा समाचारको रूपमा कुनै सूचना राखिएको छ भने त्यसको आधारमा विद्यार्थीहरूले सङ्कलन गरेका सूचनाहरूलाई समाचारको रूपमा प्रस्तुत गर्न लगाउन सकिन्छ । त्यस्ता किसिमका सूचनामूलक प्रश्नले विद्यार्थीहरूलाई प्रश्नको जवाफ दिन सजिलो बनाउँछ । मूल्याङ्कन प्रश्नको मुख्य उद्देश्य विद्यार्थीहरूलाई सबै किसिमका हाँकहरूलाई स्वीकार गर्ने र आफ्नो सिर्जनात्मक प्रतिभाको प्रदर्शन गर्ने अवसर दिनु हो । सिर्जनात्मक प्रश्नहरू पाठ्यपुस्तकबाट जस्ताको तस्तै सार्न सकिँदैन । यस्ता प्रश्नको जवाफ दिन विद्यार्थीहरूले आफ्नो सोचको विकास गर्नुपर्ने हुन्छ ।

निस्कर्ष

दूर शिक्षाअन्तर्गत हाल प्रशारित भइरहेका धेरैजसो कार्यक्रमहरू पनि सामाजिक शिक्षासँगै सम्बन्धित हुने गर्दछन् । कुनै कार्यक्रमको थालनी गर्दा सङ्गीतको धुनबाट प्रारम्भ गर्नु, रेडियोको माध्यमबाट वार्तालाप प्रशारित गर्नु, कथा कविता वाचन गर्नु, सम्वाद पढ्नु, ज्ञानवर्द्धक प्रश्नहरू सोध्नु, कलात्मक कामहरू गर्न प्रोत्साहित गर्नु जस्ता कुरा सामाजिक शिक्षासँगै सम्बन्धित मानिन्छन् । सामाजिक शिक्षाका विद्यार्थीहरूले जसरी समाजका सबै वर्गहरूमा बिना कुनै भेदभाव सहयोग आदान-प्रदान गर्दछन् त्यसैगरी सामाजिक शिक्षाले पनि नेपाली, अंग्रेजी-जस्ता भाषाहरूका साथै गणित, विज्ञान, वातावरणजस्ता विषयको विषयवस्तुलाई आफ्ना विषयवस्तुको विकास गर्न उपयोग गर्दछ र अन्य विषयहरूलाई पनि त्यसरी नै सहयोग पुऱ्याउँछ । राम्रो शिष्ट भाषा प्रयोग गर्न सकेको खण्डमा मात्र कुनै व्यक्ति असल हुन सक्छ । कठोर र अशिष्ट भाषा अपाच्य हुन्छ । यसरी नेपाली र अंग्रेजी भाषाले सामाजिक शिक्षाका विद्यार्थीहरूलाई शिष्ट भाषाको प्रयोग गर्न निर्दिष्ट गर्न सक्छ । गणितले सूचनाको सङ्कलन गर्न,

तथ्याङ्कहरूलाई ग्राफमा प्रस्तुत गर्न सहयोग पुऱ्याउन सक्छ । विज्ञानले आफ्नो वरिपरि भएका भौतिक वस्तु तथा जैविक वस्तुको परीक्षण गर्न सहयोग पुऱ्याउँछ । त्यसैगरी वातावरण, जनसङ्ख्या र स्वास्थ्य शिक्षाले विद्यार्थीहरूलाई स्वस्थ हुन र आफ्नो वरिपरिको वातावरणको सुरक्षा गर्न र विरूवा रोप्न प्रोत्साहित गर्दछ । यसरी दूर शिक्षाबाट प्रशारित गर्ने सबै कार्यक्रमहरूले पनि सामाजिक शिक्षालाई सहयोग गरिरहेको हुन्छ । सामाजिक शिक्षाका विद्यार्थीहरूलाई समुदायको भ्रमणबाट सामाजिक शिक्षामा एकैसाथ भाषा, गणित, विज्ञान तथा वातावरणको प्रयोग कसरी गर्ने र ती कुराहरूबाट आफ्नो ज्ञान, प्रवृति र सीपको विकास कसरी गर्ने भन्ने सम्बन्धमा पनि सहयोग पुग्न सक्छ ।

दूर शिक्षा प्रणालीमा गणित शिक्षण - प्रशिक्षणको स्वरूप

- चित्र प्रसाद देवकोटा*

परिचय

हाम्रो देशमा दश महिने सेवाकालीन, प्राथमिक शिक्षक प्रशिक्षण कार्यक्रमका पाठ्यसामग्रीहरूलाई हाल साढे दुई महिनाको दरले चारओटा प्याकेजमा विभाजन गरिएको छ। प्रत्येक २.५ महिनामा अर्थात प्रत्येक प्याकेजमा प्राथमिक शिक्षकहरूले ३३० घण्टा तालिममा संलग्न हुनुपर्छ। यो दश महिने सेवाकालीन प्राथमिक शिक्षक तालिम अनिवार्य हो र यो तालिम दूर शिक्षा केन्द्र र शैक्षिक जनशक्ति विकास केन्द्रअन्तर्गत स्थापना भएका नौओटा प्राथमिक शिक्षक तालिम केन्द्रहरूले दिने गरेको छ। तालिमको पहिलो प्याकेजमा शिक्षाको आधार पहिलो, नेपाली भाषा शिक्षण, गणित शिक्षा शिक्षण, सामाजिक शिक्षा शिक्षण र शिक्षण अभ्यास जस्ता विषयहरू समावेश छन्। दोस्रो प्याकेजमा शिक्षाको आधार दोस्रो, अंग्रेजी भाषा शिक्षण, वातावरण विज्ञान शिक्षण, शारीरिक शिक्षा शिक्षण, सिर्जनात्मक अभिव्यक्तिशील कला, शिक्षण अभ्यास राखिएको छ। पहिलो र दोस्रो प्याकेजका विषयहरू भने सबै अनिवार्य हुन्। तेस्रो प्याकेजमा प्राथमिक शिक्षा तथा समुदाय विकास, नेपाली शिक्षण, गणित शिक्षण, सामाजिक शिक्षा शिक्षण, शिक्षण अभ्यास अनिवार्य विषयको रूपमा र इच्छाधिन विषयहरूमा कक्षा संगठन तथा विद्यालय व्यवस्थापन, अनौपचारिक शिक्षा, गृह विज्ञान मध्येबाट कुनै एक विषय लिनुपर्ने व्यवस्था गरिएको छ। त्यस्तै चौथो प्याकेजमा पनि अनिवार्य विषयहरूमा बाल विकास, पाठ्यक्रम र सिकाइ सिद्धान्त, अंग्रेजी भाषा शिक्षण, वातावरण विज्ञान, शिक्षण अभ्यास पर्छन्। इच्छाधिन विषयमा मूल्याङ्कन तरिका, शिक्षण सामग्री र शारीरिक शिक्षा समावेश गरिएका छन्। यी मध्येबाट कुनै एक विषय लिनुपर्ने हुन्छ। प्रत्येक प्याकेजमा २८५ घण्टा शिक्षण सिकाइका लागि, ३५ घण्टा शिक्षण अभ्यास र १० घण्टा अन्तिम परीक्षाका लागी छुट्याइएको छ।

यी चारओटा प्याकेजको तालिम दिने क्रममा शैक्षिक जनशक्ति विकास केन्द्र पहिलो र चौथोमा अनि दूर शिक्षा केन्द्र दोस्रो र तेस्रोमा संलग्न छन्। यी चारओटा प्याकेजअन्तर्गत गणित विषय पहिलो र तेस्रो प्याकेजमा राखिएको छ। गणितको पहिलो प्याकेजमा प्राथमिक स्तरमा कक्षा १ देखि ५ सम्म सिकाउनुपर्ने गणितका विषयवस्तुहरू अर्थपूर्ण र प्रभावकारी ढंगबाट पढाउनका लागि आवश्यक पर्ने कुराहरू दिन खोजिएको छ। यसरी यसका विषयवस्तुहरू प्राथमिक तहको गणित पाठ्यक्रममा आधारित छन्। सम्पूर्ण विषयवस्तुहरूलाई तालिम प्याकेजको ११ ओटा एकाइहरूमा प्रस्तुत गरिएको छ। पहिलो एकाइमा बालकको मनोवैज्ञानिक पक्ष, पाठ्यक्रम, पाठ्यपुस्तक, गणित शिक्षण विधि तथा सामग्रीहरूको बारेमा छलफल गरिएको छ। बाँकी दशओटा एकाइहरूमा प्राथमिक तहको गणितको विषयवस्तु शिक्षणबारे उल्लेख गरिएको छ। पहिलो प्याकेज तालिमका लागि गणित विषयलाई ९० घण्टा समय छुट्याइएको छ। तेस्रो प्याकेजको गणित शिक्षण तालिममा, गणित शिक्षणका लागि तयारी (preparation for maths teaching), सेटको परिचय (introduction to sets), संख्याको परिचय (introduction of numbers), सरलीकरण र रूपान्तरण (simplification and conversion), चल र गणितीय वाक्य (variables and mathematical sentences), आकार र नाप (shapes and measurement), जस्ता एकाइहरू समावेस गरी तिनको अध्यापन कसरी गर्ने, आवश्यक शैक्षिक सामग्री कसरी निर्माण गर्ने आदि विषयमा शिक्षकहरूलाई तालिम दिइन्छ। तेस्रो प्याकेजमा भने गणित विषयका लागि ३५ घण्टा मात्र समय दिएको छ। यसमा ७ घण्टा प्रयोगात्मक पक्षका लागि छुट्याइएको छ।

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* उप-निर्देशक, शिक्षा विभाग

सिकाइउपलब्धि

पहिलो प्याकेजअन्तर्गत दिइने गणित विषयको तलिमबाट निम्न सिकाइउपलब्धी (learning-outcomes) हासिल गर्ने लक्ष्य लिइएको छ ।

- विद्यार्थीको बौद्धिक विकासलाई ध्यान दिएर गणित शिक्षण गर्न,
- प्राथमिक तहको गणित शिक्षा पाठ्यक्रमका उद्देश्य, विषयवस्तु र पाठ्यपुस्तकलाई पुनरावलोकन गर्न,
- शिक्षणका उद्देश्यहरूलाई मापन योग्य व्यावहारिक उद्देश्यमा लेख्न,
- गणित शिक्षाका विषयवस्तुहरूलाई वास्तविक कक्षाकोठामा शिक्षण गर्न उपयुक्त शिक्षण विधिको पहिचान गर्न,
- पाठयोजना लेख्न तथा सोही अनुसार शिक्षण गर्न,
- उपयुक्त शिक्षण सामग्रीको निर्माण तथा प्रयोग गर्न,
- विद्यार्थीको सिकाइउपलब्धिताई मूल्याङ्कन गर्नका लागि गणित विषयको प्रश्न निर्माण गर्न ।

त्यस्तै तेस्रो प्याकेज अन्तर्गतको गणित विषयको तालिमबाट निम्न सिकाइउपलब्धि हासिल गर्ने अपेक्षा गरिएको छ ।

- प्राथमिक विद्यालय स्तरमा गणित विषयको प्रभावकारी शिक्षणका लागि प्राक्टिकल तथा इन्टिग्रेटेड म्याथम्याटिक्स (practical and integrated mathematics) को प्रयोग गर्न,
- प्राथमिक विद्यालयस्तरमा गणित शिक्षाको व्यावहारिक आवश्यकता तथा उद्देश्य बुझेर पाठ्यक्रम तथा पाठ्यपुस्तकको उपयुक्ततामा आ–आफ्नो राय दिन,
- सेट, संख्या र सरलीकरण, बीजगणितीय अभिव्यञ्जक र गणितीय वाक्य तथा रेखागणितीय आकृति र नापको क्षेत्रमा आधारभूत धारणा (basic concept) को विकास गर्न,
- गणित शिक्षणमा खेलको महत्त्व बताउन र प्रयोग गर्न,
- भिन्न, दशमलव, प्रतिशतलाई एक अर्कामा रूपान्तरणसम्बन्धी शिक्षण गर्न,
- समीकरण र असमानतामा फरक छुट्याई सामान्य रेखीय असमानतामा भएका चलको मान अवलोकन विधिबाट निकाल्न तथा सोहीअनुसार शिक्षण गर्न,
- माथि दिइएका विषयवस्तुहरूमध्ये प्राथमिक विद्यालयको गणित शिक्षा पाठ्यक्रममा भएका विषयवस्तुहरूको प्रभावकारी शिक्षण गर्न उपयुक्त शिक्षण विधि तथा शिक्षण क्रियाकलापहरूको पहिचान तथा प्रयोग गर्न ।

शिक्षक शिक्षा शिक्षण पद्धति

शैक्षिक जनशक्ति विकास केन्द्रबाट दिइने तालिममा शिक्षक र प्रशिक्षक बीच आपसी छलफल गरी विषयवस्तु लिने दिने गरिन्छ । दूर शिक्षा केन्द्रबाट दिइने तालिममा रेडियो प्रसारणको माध्यमबाट सम्बन्धित विषयवस्तुलाई संगठित रूपमा प्रस्तुत्याउने प्रयास गरिन्छ ।

दूर शिक्षा प्रणाली मार्फत तालिम दिँदा स्रोत केन्द्रको सम्पर्क कक्षालाई अभिन्न अङ्गको रूपमा लिइन्छ । उक्त भेलामा रेडियोबाट प्रसारण पाठ बुझे नबुझेको यकिन गर्ने, स्वाध्ययन सामग्रीमा राखिएका पाठहरू पढे नपढेको पत्ता लगाउने र तालिम पाठ्यक्रममा उल्लेख्य प्रश्न पत्र निर्माण, शैक्षिक सामग्री निर्माण, पाठ योजना निर्माणजस्ता सीपमूलक कार्यहरू गराइन्छ । यी क्रियाकलाप प्रत्येक विषयका लागि गराइन्छ ।

तेस्रो चरणको शिक्षण तालिमको गणितको विषयवस्तुहरूलाई दूर शिक्षा केन्द्रले दूर शिक्षा प्रणालीका तौर तरिकाहरू अपनाई निम्न प्रक्रियाद्वारा संचालन गरेको छ ।

रेडियो पाठ प्रसारण (Radio Broadcast)

गणितका २० ओटा पाठहरू रेडियोबाट प्रसारण गरिन्छन् । प्रत्येक पाठको लागि १५ मिनेटको समय दिएको छ । यदि पाठ छोटो भएमा बचेको समय विविधमालाका लागि प्रयोग गरिन्छ । गणितको पाठ कुन दिन कुन समयमा प्रसारण गरिने हो सो को जानकारी परिचयात्मक कार्यक्रमको समयमा स्रोत शिक्षक तथा सहभागी शिक्षकहरूलाई दिइने गरिएको छ । तालिममा संलग्न शिक्षकले रेडियो अनिवार्य सुन्नुपर्छ । नबुझेका कुराहरू वा समस्याहरू सम्पर्क भेलाको दिन छलफलद्वारा हल गर्ने व्यवस्था पनि मिलाइएको हुन्छ ।

स्वाध्ययन सामग्री (Self-Instructional Materials)

रेडियो प्रसारणबाट सबै विषयवस्तुलाई सजिलैसित शिक्षकहरू बीच पुऱ्याउन नसकेको हुनाले स्वाध्ययन सामग्रीको निर्माण गरिएको हो । रेडियो प्रसारणबाट दिन कठिन हुने विषयवस्तुहरूलाई स्वाध्ययन सामग्रीको रूपमा दिँदा बढी व्यावहारिक हुन्छ । तेस्रो प्याकेजका गणितका विषयवस्तुहरूलाई २५ ओटा पाठ बनाई स्वाध्ययन सामग्रीमा दिएका छन् । प्रत्येक पाठमा मूल्याङ्कनका लागि अभ्यासहरू राखिएका छन् । सम्भाव्य उत्तर पनि त्यहीं दिएको छ । तालिम लिने शिक्षकलाई केही अप्ठ्यारो महसुस भएमा वा सही उत्तर पत्ता लगाउन नसकेमा अझ बढी प्रस्ट हुन सम्पर्क कक्षामा आफ्ना कठिनाईहरू राख्न सकिन्छ । यसका लागि शिक्षकले नबुझेका कुराहरू टिपोट गरी राख्नुपर्छ ।

रेडियो सार पुस्तिका (Radio Summary)

रेडियो सार पुस्तिका भनेको रेडियोबाट प्रसारित पाठको सार संक्षेप हो । यसमा विशेष गरी रेडियोबाट प्रसारित पाठको उद्देश्य के हो ? सहभागी शिक्षकले रेडियो सुन्नुअघि र रेडियो सुनेपछि के कस्ता क्रियाकलाप गर्नुपर्छ ? आदि विषय उल्लेख गरिएको हुन्छ । यसको मुख्य उद्देश्य प्रसारण गरिएका पाठलाई स्मरणका लागि सजिलो बनाउनु हो । गणितजस्तो क्लिष्ट विषय वस्तुलाई सधैं रेडियोबाट प्रष्टसँग प्रसारण गर्न सकिन्न । यस्तो अवस्थामा रेडियो पाठ सार रेडियो सुन्ने शिक्षकहरूका लागि अति उपयोगी हुन्छ ।

सम्पर्क कक्षा (Contact Session)

सम्पर्क कक्षा दूर शिक्षा प्रणालीको एक अङ्ग हो । रेडियो प्रसारण, स्वाध्ययन सामग्री, रेडियो सार पुस्तिकाबाट राम्ररी बुझ्न नसकिएका विषयवस्तुहरू सहभागी शिक्षकहरूले सम्पर्क भेलामा स्रोतव्यक्तिसँग छलफल गरी बुझ्न सक्छन् । यस्तो सम्पर्क कक्षा तेस्रो प्याकेजका लागि १४ ओटा शनिवारमा गर्ने गरिएको छ । गणित जस्तो विषयलाई त यो कक्षा अझै बढी महत्त्वपूर्ण मानिन्छ । गणित विषयको सम्पर्क कक्षाका लागि छुट्याइएका कार्यक्रमहरू यस प्रकार छन् ।

- प्रसारण र स्वाध्ययन सामग्रीहरूको अध्ययनबाट स्पस्ट नभएका कुरामा छलफल
- शैक्षिक सामग्री निर्माण
- मूल्याङ्कन साधन निर्माण
- पाठयोजना निर्माण
- पाठ्यपुस्तकको सिंहावलोकन
- शिक्षण अभ्यास (कक्षा वातावरणमा वा सहभागीका बीचमा)

यसरी दूर शिक्षा प्रणालीअन्तर्गत कुनै एउटा विषयवस्तुलाई विभिन्न उपायहरू जस्तै: रेडियो प्रसारण, स्वाध्ययन सामग्री, रेडियो सार पुस्तिका, सम्पर्क कक्षाबाट प्रस्ट पार्न कोशिस गरिएको छ। अपेक्षित सिकाइउपलब्धीहरू हासिल गर्न यी प्रक्रियाहरू बढी व्यावहारिक र भरपर्दा छन् ।

गणित शिक्षणको मूल्याङ्कन

मूलत: तालिम कार्यक्रममा मूल्याङ्कनलाई निरन्तर प्रक्रियाको रूपमा लिइएको छ। त्यसमा पनि सम्पर्ककक्षामा गरिएका क्रियाकलापको आधारमा आन्तरिक मूल्याङ्कन हुने र केन्द्रबाट सञ्चालित परीक्षाको आधारमा सहभागी शिक्षकको बाह्य मूल्याङ्कन हुने गर्छ। गणित शिक्षणको तालिम प्रभावकारी भयो भएन थाहा पाउन मूल्याङ्कन गर्नु नितान्त आवश्यक छ। मूल्याङ्कन गर्नुअगाडि गणितीय ठोस धारणा (concrete concept) र भावात्मक धारणा (abstract concept) हरू कुन उपायबाट बढी प्रस्ट हुन सक्छन्, सो सम्बन्धमा छलफल गर्नु आवश्यक देखिन्छ। अहितेसम्पको अनुभव र अनुसन्धानका आधारमा स्वाध्ययन सामग्रीबाट गणितीय ठोस धारणालाई बढी प्रस्ट पार्न सकिन्छ। हुनत: सम्पर्क कक्षामा पनि गणितीय धाराणहरूलाई स्पष्ट पार्न सकिन्छ तर यस विषयका छलफलका लागि छुट्याइएको समय नपुग हुन सक्छ। त्यस्तै रेडियो प्रसारणबाट कठिन धारणाहरू प्रस्ट पार्न गाह्रो हुने हुनाले स्वाध्ययन सामग्री र सम्पर्क कक्षाबाट पनि हामीले कुनै कठिन गणितीय विषयवस्तुलाई सरलीकरण गर्नु उपयुक्त हुन्छ नै। रेडियो प्रसारणको समयमा कठिन विषयवस्तुलाई प्रस्ट्याउनु पऱ्यो भने सम्वाद अर्थात वार्तालापको रूपमा प्रस्ट्याउनुपर्छ। कठिन विषयवस्तुलाई पनि वार्तालापको रूपमा रेडियोबाट प्रसारण गरेर सफलता हासिल गरेका थुप्रै उदाहरणहरू छन्। जस्तै, हामीले पनि झण्डै १०/१२ वर्ष पहिले भक्तपुरका केही विद्यालयहरूमा रेडियो गणित परियोजना (सानो रूपमा) कार्यान्वयन गरेका थियौं। यस कार्यक्रममा गणितका विषयवस्तुहरूलाई रोचक तवरले विद्यार्थी केन्द्रित बनाएर वार्ता वा सम्वादका माध्यमबाट प्रस्तुत गरिएको थियो साथै केही धारणाहरू सङ्गीतको रूपमा प्रस्तुत गरिएका थिए। हिसाब गर्न निर्देशन दिने, मिले नमिलेको उत्तर अन्तिममा बताइ दिने, प्रश्नहरूको उत्तर दिन विद्यार्थीलाई उत्प्रेरित गर्ने खालका क्रियाकलापहरू रेडियोबाटै बताइएका थिए। मूल्याङ्कन गर्दा सकारात्मक नतिजा नै प्राप्त भएको थियो। निकारागुवामा पनि सम्वाद र वार्तालापको माध्यमबाट प्राथमिक तहको गणित सिकाउने परियोजना छ। यस परियोजनाले सफलता प्राप्त गरेको छ र साथै यो मार्ग दर्शकको रूपमा पनि रहेको छ।

बीज गणितीय अभिव्यञ्जक र गणितीय वाक्य, रेखा गणितीय आकृति, सेट र सङ्ख्या सम्बन्धी कठिन समस्याहरू अरू विषय जस्तो रेडियो प्रसारणको सामान्य प्रक्रियाबाट प्रस्ट पार्न भने कठिन हुन्छ। रेडियो प्रसारणले मात्र यी कुराहरू प्रस्ट नभएको हाम्रा अनुभव र अनुसन्धान प्रतिवेदनले उल्लेख गरेका छन्। अत: सम्पर्क कक्षा, स्वाध्ययन सामग्री एवं रेडियो सार पुस्तिका यी सबैको प्रयोगलाई उतिकै उपयुक्त प्रक्रिया मान्न सकिन्छ। अत: रेडियो प्रसारणमा तीनओटै प्रक्रियाबाट विषयवस्तुहरूलाई प्रस्ट्याउनु सान्दर्भिक देखिन्छ।

समस्या र सुझाव

गणित शिक्षणलाई प्रभावकारी बनाउन सिकाइउपलब्धि के हो ? यो कतिसम्म प्राप्त भएको छ ? भएको र खोजेकोमा अन्तर (gap) कति छ ? अन्तर पूरा गर्न के के प्रक्रिया अवलम्बन गर्नु पर्छ, आदि विषयमा सोच पुऱ्याउनु नितान्त आवश्यक छ। यसका लागि सामान्यतया निम्न विषयहरूमा दृष्टि पुऱ्याउनु उपयुक्त देखिन्छ।

- दूर शिक्षाबाट दिइने विषयवस्तुहरू अडियो क्यासेटहरू (audio cassettes) को माध्यमबाट समेत उपलब्ध गराउनुपर्छ।
- सम्बन्धित विषयमा पूरक सामग्रीहरूको व्यवस्था गरी यी सामग्रीहरू सञ्चितैसँग शिक्षक अर्थात उपभोक्ता (stakeholders) का बीच पुऱ्याउनुपर्छ।

- गणित विषयमा अभ्यासहरू दिँदा उदाहरणहरू पनि दिइनुपर्छ। शिक्षण प्रक्रियालाई स्तरीय बनाउन अध्ययनका मोडेलहरू प्रसस्त दिइनुपर्छ र यस्ता मोडेलहरू प्राथमिक तहसँग सम्बन्धित हुनुपर्छ।
- गणितमा कस्तो क्षमता अभिवृद्धि गर्न खोजिएको हो, शैक्षिक सामग्री त्यहीअनुरूप विकास/निर्माण गर्नुपर्छ।
- दूर शिक्षा प्रक्रियालाई सफल बनाउन गणित शिक्षणमा पत्राचार (correspondence) कार्यक्रमलाई प्राथमिकता दिनुपर्छ। नेपालमा सन् १९९१–९३ मा संचालित पत्राचार कार्यक्रमलाई फेरि प्रयोगमा ल्याउनुपर्छ। एरोग्राम (aerogram) प्रक्रियालाई बृहत रूपमा उपयोग गर्नुपर्छ।
- शिक्षकका जिज्ञासाहरूलाई म्यागाजिन (magazine) कार्यक्रमको रूपमा प्रकाशन तथा प्रसारण गरिनुपर्छ।
- दूर शिक्षा केन्द्रले सुरु गरेको सुन्न एवं कुराकानी गर्न पनि सकिने फोनइन (two way audio telephone) प्रोग्रामलाई निरन्तरता दिनुपर्छ। यसो गर्दा बाहिर जिल्लाबाट फोन गर्दा लाग्ने शुल्कको बारेमा दूरसंचारसँग समन्वय गरी शिक्षकहरूलाई सहुलियत रूपमा टेलिफोन सुविधा उपलब्ध गराउनुपर्छ।
- सम्पर्क कक्षा सम्बन्धित विषयका विशेषज्ञले संचालन गर्ने व्यवस्था हुनुपर्छ। सम्पर्क कक्षा सञ्चालन गर्ने सम्बन्धित शिक्षक वा स्रोतव्यक्तिका लागि गणित विषयको गोष्ठी संचालन गर्नु पनि त्यति कै आवश्यक हुन्छ।

दूर शिक्षा केन्द्रको गतिविधि

- बोधकुमार खनाल
- खुबीराम अधिकारी*

स्थापना

श्री ५ को सरकार शिक्षा मंत्रालयअन्तर्गत २०५० साल श्रावण १ गतेदेखि दूर शिक्षा केन्द्रको स्थापना भयो । दूर शिक्षा पद्धतिको थालनी भने सन् १९७८ मा रेडियो शिक्षा शिक्षक तालिम आयोजनाको स्थापना पश्चात भएको थियो । उक्त रेडियो शिक्षा शिक्षक तालिम आयोजनाले दुई चरण गरी १० वर्षसम्म काम गऱ्यो । त्यसपछि रेडियो शिक्षा शिक्षक तालिम कार्यक्रमले श्री ५ को सरकारको स्थायी कार्यालयको रूपमा पाँच वर्षसम्म काम गऱ्यो । त्यस अवधिमा रेडियोबाट शिक्षकहरूलाई तालिम दिने प्रणालीका रूपमा मात्र संचालित दूर शिक्षा पद्धतिलाई अब आउँदा दिनमा बिस्तार गर्दै जाने लक्ष्य छ ।

विद्यालयमा शिक्षण गर्ने शिक्षकलाई प्रशिक्षण गरेर गुणात्मक शिक्षाको विकास गर्नु चुनौतीको विषय हो । विद्यालय तथा विश्वविद्यालय तहको शिक्षालाई सबैको पहुंचभित्र पुऱ्याउनु पनि उत्तिकै आवश्यक छ । यसै सन्दर्भमा दूर शिक्षा केन्द्रको स्थापना भएको हो ।

प्रसारणको सुरूआत

सर्वप्रथम २०३७ भाद्र ४ गते दूर शिक्षा प्रणालीको रूपमा रेडियो नेपालबाट तालिम कार्यक्रमको प्रसारण भयो । सुरुमा अण्डर एस.एल.सी शिक्षकहरूलाई १० महिने तालिम ('B' Level Training) दिन तालिम कार्यक्रम संचालन गरिएको भए तापनि पछि एस.एल.सी उतीर्ण शिक्षकहरूलाई पनि दूर शिक्षा पद्धतिकै रूपमा रेडियोबाट तालिम दिन यस केन्द्रले तालिम कार्यक्रमको सञ्चालन गऱ्यो ।

दूर शिक्षा केन्द्रको स्थापनापछि रेडियो शिक्षा शिक्षक (रे. शि. शि.) तालिम कार्यक्रमले संचालन गरेका कार्यक्रमहरू यस केन्द्रमा समाहित भए । त्यस्तै पाठ्यक्रम विकास केन्द्रको श्रव्यदृश्य शाखालाई पनि यसै केन्द्रमा समावेशगरी त्यहाँबाट संचालित साप्ताहिक शैक्षिक कार्यक्रम पनि अहिले यसै केन्द्रबाट संचालन गर्ने गरिएको छ

सुरुको प्रगति

रेडियो शिक्षा शिक्षक तालिम आयोजनाबाट २०४३ सालसम्म जम्मा ६२ जिल्लाका ६४९२ जना शिक्षकलाई 'B' Level को तालिम प्रदान गरियो । त्यसमध्ये ३४७८ जना शिक्षकले तालिममा सफलता पनि प्राप्त गरेका थिए ।

रे. शि. शि. आ. को दोस्रो चरण (वि.सं.२०४३)मा शिक्षकहरूको क्षमता अभिवृद्धि गर्ने तथा भाषागत सीप विकास गर्ने उद्देश्यले स्वीकृत पाठ्यक्रमअनुसार अंग्रेजी रेडियो ट्यूसन कार्यक्रम पनि संचालन गरिएको थियो । यसमा ५०४ जना S.L.C अनुतीर्ण शिक्षकहरूले भाग लिएका थिए । यस आयोजनाले तालिम अप्राप्त S.L.C उत्तीर्ण शिक्षकहरूका लागि सेवाकालिन आधारभूत प्राथमिक शिक्षक तालिम (BPTT) कार्यक्रम पनि संचालन गऱ्यो । १०७९ जना शिक्षकहरूले यस तालिममा पनि सफलता प्राप्त गरेका थिए । यसै संस्थाबाट २०४५ सालदेखि १५० घण्टे प्राथमिक शिक्षक तालिम कार्यक्रमको पनि आरम्भ गरियो । यसमा ०५२/०५३ सम्म जम्मा ६३३७ जना शिक्षकहरूले सफलता हासिल गरे । १५० घण्टाको तालिम लिएका यिनै शिक्षकहरूलाई ०५२/०५३ मा थप १८० घण्टाको तालिम सञ्चालन गरियो । यसमा पनि ५३८९ जना शिक्षकहरूले सफलता हासिल गरे ।

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* प्राविधिक अधिकृत, दूर शिक्षा केन्द्र

यस केन्द्रका प्रमुख उद्देश्य

१. विद्यालयमा अध्यापन गर्ने शिक्षकहरूलाई शिक्षणसिकाइसम्बन्धी आवश्यक ज्ञान तथा सीप प्रदान गरी गुणात्मक शिक्षामा सहयोग पुऱ्याउन तालिम प्रदान गर्नु ।

२. समुदायलाई उपयोगी हुने विविध अनौपचारिक शैक्षिक कार्यक्रम प्रसारण गर्नु र

३. विद्यालयीय शिक्षालगायत उच्च शिक्षालाईसमेत सर्वसुलभ बनाउने कार्यमा सहयोग पुऱ्याउनु ।

तालिम प्रक्रिया

केन्द्रले तालिम संचालन गर्दा मुख्यतया तीनवटा प्रकृयालाई अवलम्बन गर्ने गरेको छ । ती प्रकृयाहरू हुन:

(क) रेडियो पाठ प्रसारण

(ख) स्वाध्ययन सामग्री

(ग) सम्पर्क कक्षा

(क) रेडियो पाठ प्रसारण

शिक्षा सचिवको अध्यक्षतामा गठित तालिम समन्वय समितिबाट स्वीकृत प्राथमिक शिक्षक तालिम पाठ्यक्रमको आधारमा विशेषज्ञहरूद्वारा रेडियो स्क्रिप्ट तयार गरिन्छ । सो स्क्रिप्टहरू आफ्नै स्टुडियोमा रेकर्डिङ्ग गरेर रेडियो नेपालको राष्ट्रिय प्रसारणमार्फत प्रसारण गरी शिक्षकहरू समक्ष पुऱ्याउने व्यवस्था छ ।

(ख) स्वाध्ययन सामग्री र रेडियो पाठ सार

तालिममा समावेश भएका सहभागी शिक्षकहरूका लागि स्वाध्ययन सामग्रीको व्यवस्था गरिएको छ । स्वाध्ययनबाट सहजै बुझ्न सकिने विषयवस्तु यसमा समावेश गरिएको हुन्छ । रेडियोमा प्रसारण गरिएका पाठको सारांश समेत छपाइ गरी संबन्धित शिक्षकहरूलाई निशुल्क उपलब्ध गराइन्छ । यसरी स्वाध्ययन सामग्री, रेडियो प्रसारण पाठ र त्यसको सार (रेडियो पाठ सार) का माध्यमबाट निर्धारित विषयवस्तुलाई समग्रमा समेटिएको हुन्छ । अध्ययनशील र लगनशील सहभागी शिक्षकहरू यस किसिमका सामग्रीबाट निकै लाभान्वित भएको पनि पाइएको छ ।

(ग) सम्पर्क कक्षा

स्वाध्ययन सामग्री र रेडियो पाठ प्रसारणका विषयवस्तुहरूको कठिनाइ हल गर्न र शिक्षण सिकाइका प्रयोगात्मक क्रियाकलापहरूमा शिक्षकलाई दक्ष बनाउन सम्पर्क कक्षाको पनि व्यवस्था गरिएको छ । सम्पर्क कक्षाको सञ्चालन स्रोत केन्द्रमा हुन्छ । प्रत्येक स्रोत केन्द्रमा २० देखि ३० जनासम्म शिक्षकहरू समावेश गरिन्छन् । सम्पर्ककक्षा शनिबारको दिन संचालन गरिन्छ । एकपटकको तालिम कार्यक्रममा जम्मा १४ वटा सम्पर्क कक्षा सञ्चालन गर्ने व्यवस्था छ ।

सम्पर्क कक्षामा गरिने प्रयोगात्मक कार्यहरू यस प्रकार छन् - अभ्यास शिक्षण, पाठयोजना निर्माण, शैक्षिक सामग्री निर्माण, मूल्याङ्कनका साधनको निर्माण र शूक्ष्म शिक्षण । उक्त प्रयोगात्मक कार्यका लागि सम्पर्क कक्षामा स्रोत व्यक्तिहरूको पनि व्यवस्था गरिएको हुन्छ । ती स्रोत व्यक्तिहरूको छनोट जिल्ला शिक्षा कार्यालयले गर्छ । सम्बन्धित विषयमा वी.एड. गरेको व्यक्ति स्रोत व्यक्ति हुन सक्छ । तिनीहरूलाई ५ दिनको प्रशिक्षण समेत दिइन्छ ।

(घ) मूल्याङ्कन

तालिम कार्यक्रमको मूल्याङ्कन २ प्रकारबाट गरिन्छ । (अ) आन्तरिक मूल्याङ्कन र (आ) बाह्य मूल्याङ्कन ।

(अ) आन्तरिक मूल्याङ्कन: ४० प्रतिशत अङ्कको आन्तरिक मूल्याङ्कन गर्ने व्यवस्था छ । यसको पूर्ण अभिभारा स्रोत व्यक्तिलाई दिएको छ । पाठयोजना निर्माण, शैक्षिक सामग्रीको निर्माण, मूल्याङ्कनका साधनको निर्माणलाई नै आन्तरिक मूल्याङ्कनको आधार मानिएको छ । आन्तरिक परीक्षामा उत्तीर्ण हुन ५० प्रतिशत अङ्क ल्याउनु

आवश्यक छ । शिक्षण अभ्यासको मूल्याङ्कन प्रयोगात्मक रूपमा हुने भएकाले यसको जवाफदेहिता सम्पर्क कक्षा सञ्चालन गर्ने स्रोत शिक्षकमै निर्भर गर्छ ।

आ) बाह्य मूल्याङ्कन: ६० प्रतिशत अङ्कको परीक्षा संचालन गरेर सहभागीहरूको वाह्य मूल्याङ्कन गरिन्छ । यो परीक्षा केन्द्रबाटै अधिराज्यभरि एकैपटक संचालन गरिन्छ । उत्तीर्ण हुनका लागि ४० प्रतिशत अंक प्राप्त गर्नुपर्नेछ ।

(ङ) अनुगमन तथा निरीक्षण

कार्यक्रमको अनुगमन तथा निरीक्षण जिल्ला शिक्षा कार्यालय, क्षेत्रीय शिक्षा निर्देशनालय, र दूर शिक्षा केन्द्रबाट गरिने व्यवस्था रहेको छ ।

दूर शिक्षा केन्द्रबाट हाल संचालित तालिम कार्यक्रमहरू र तिनको प्रगति

(अ) ३३० घण्टे प्राथमिक शिक्षक तालिम (प्रथम प्याकेज)

यस केन्द्रबाट २०५३/०५४ र ०५४/०५५ मा १० जिल्लामा दुई/दुई हजार गरी ४ हजार शिक्षकलाई तालिम दिने लक्ष्य रहेको थियो । जस्मा दुबै वर्षमा गरी १८४८ शिक्षक मात्र परीक्षामा सामेल भएका थिए । त्यसमा १७४७ जना शिक्षकले परीक्षामा सफलता प्राप्त गरे ।

(आ)३३० घण्टे प्राथमिक शिक्षक तालिम दोश्रो प्याकेज

आ.व. २०५५/०५६ मा दोश्रो चरणको तालिम कार्यक्रम ४१ जिल्लामा लागू गरिएको थियो । १०,००० शिक्षकलाई तालिम दिने लक्ष्यअनुरूप तालिम संचालन भयो । पूर्वाञ्चलका ४ जिल्लाका शिक्षकहरू परीक्षामा सामेल भएनन् । ३७ जिल्लाका ८,९३१ जना शिक्षकहरूले भने परीक्षामा सफलता प्राप्त गरे । चालु आ.व. मा पनि ५१ जिल्लाका १०,००० शिक्षकहरूलाई दोस्रो प्याकेजको तालिम दिने लक्ष्यअनुरूप तालिम संचालन भयो ।

(इ) प्रा. शि. तालिम तेस्रो प्याकेज

आ. व. ०५६/०५७ मा अधिराज्यका ४७ जिल्लामा ३३० घण्टे तेस्रो प्याकेज तालिम संचालन गरियो । दोस्रो प्याकेज पूरा गरेका १०,००० शिक्षकलाई तालिम दिने लक्ष्य रहेकोमा १२,००० शिक्षकहरू तालिममा समावेश भएका थिए । त्यसमा १०,७०० शिक्षकले तालिममा सफलता पनि हासिल गरे ।

यस आ.व. २०५७/०५८ मा यस केन्द्रले संचालन गरेका प्रमुख कार्यक्रमहरू:

(१) ३३० घण्टे प्राथमिक शिक्षक तालिम दोश्रो चरण

(२) अन्तरक्रियात्मक रेडियो कार्यक्रम

(३) शैक्षिक कार्यक्रम प्रसारण

१ ३३० घण्टे प्राथमिक शिक्षक तालिम दोश्रो चरण

३३० घण्टे प्राथमिक शिक्षक तालिम प्रथम चरण पूरा गरेका अधिराज्यका ५१ जिल्लाका प्राथमिक तहका १०,००० जना शिक्षकहरूलाई यो तालिम दिन २० देखि ३० जना शिक्षकहरूका लागि उपयुक्त स्थानमा ४८३ श्रोतकेन्द्र निर्धारण गरिएको थियो । उक्त श्रोत केन्द्रमा कार्यक्रम संचालन अवधिभरमा १४ वटा सम्पर्क कक्षाहरू संचालन गर्न अंग्रेजी र विज्ञान विषयसँग सम्बन्धित प्रत्येक श्रोत केन्द्रमा दुई जनाका दरले ९६६ जना श्रोत व्यक्तिहरू जिल्ला शिक्षा कार्यालयमार्फत छनोट गरिएका थिए । तालिम कार्यक्रमलाई प्रभावकारी बनाउन निम्न कार्यक्रमहरू सञ्चालन गरिए ।

(क) प्रमुख प्रशिक्षक प्रशिक्षण (MTOT)

सम्पर्क कक्षा संचालन गर्ने श्रोतव्यक्तिहरूलाई प्रशिक्षण गर्न यस केन्द्रले ५ दिने प्रमुख प्रशिक्षक प्रशिक्षण कार्यक्रम संचालन गरेको थियो । यसमा ५ विषयका ५० जना प्रमुख प्रशिक्षकहरू सहभागी भएका थिए ।

(ख) प्रशिक्षक प्रशिक्षण (TOT)

श्रोत व्यक्तिहरूका लागि ५ दिने प्रशिक्षक प्रशिक्षणको व्यवस्था निम्नानुसार मिलाइएको थियो ।

क्र.सं.	स्थान	अंग्रेजी समूह	विज्ञान समूह	संख्या
१	सुनसरी	५१	५१	१०२
२	सप्तरी	४७	४७	९४
३	धनुषा	५५	५५	११०
४	चितवन	४३	४३	८६
५	सानोठिमी, भक्तपुर	५७	५७	११४
६	तनहू	४८	४८	९६
७	कास्की	५२	५२	१०४
८	रूपन्देही	५२	५२	१०४
९	सुर्खेत	३२	३२	६४
१०	डोटी / दिपायल	४६	४६	९२
	कुल स्थान	४८३	४८३	९६६ जना

(ग) क्यासेट प्लेयर तथा क्यासेट चक्का वितरण

अधिराज्यका ४८३ श्रोत केन्द्रमा प्रत्येक श्रोत केन्द्रका लागि एउटा क्यासेट प्लेयर र ४१ वटा क्यासेट चक्का (१६० रेडियो पाठ भएको) यसै वर्ष देखि पहिलो पटक वितरण गर्ने कार्य भयो । विभिन्न कारणवश रेडियो प्रसारण सुन्न नसकेको अवस्थामा तथा सुनेर पनि नबुझेको अवस्थामा सम्पर्क कक्षामा नै सुनेर छलफल गर्ने अवसर प्रदान गर्न यो व्यवस्था मिलाइएको हो ।

(घ) फोन इन कार्यक्रम

यसै वर्षदेखि दूर शिक्षा केन्द्रले तालिमका सहभागी तथा स्रोत व्यक्तिका विषयगत समस्याहरू समाधान फोनबाट गर्ने व्यवस्था मिलाएको छ । यसका लागि केन्द्रले विषय विशेषज्ञ पनि उपलब्ध गराएको थियो । उक्त कार्यका लागि यस केन्द्रमा रहेको टेलिफोन नं. ६३०१८० र ६३०४५७ लाई प्रयोगमा ल्याएको थियो । यो कार्यक्रम महिनाको दुई पटक पहिलो र अन्तिम शुक्रवार दिउँसो २:०० देखि ४:०० बजेसम्म संचालन गरियो ।

(ङ) Non-credit परीक्षा संचालन

तालिम कार्यक्रमलाई प्रभावकारी रूपमा संचालन गर्न यस आ.व. मा रेडियो पाठ प्रसारणको आधारमा प्रश्नपत्र तयार गरी कार्यक्रम अवधिभर जम्मा तीनपटक सहभागीहरूका लागि सम्पर्क कक्षामा नै परीक्षा संचालन गरिएको थियो । उक्त परीक्षाको प्रश्नपत्र निर्माण तथा परीक्षण पनि जिल्ला शिक्षा कार्यालय मार्फत नै गरियो ।

२. अन्तरक्रियात्मक रेडियो कार्यक्रम (Interactive Radio Instruction)

गत आ.व. २०५६/०५७ देखि युनिसेफको आर्थिक सहयोग र अमेरिकाको Education Development Centre (EDC) को प्राविधिक सहयोगमा संचालन भएको यस कार्यक्रमको प्रमुख उद्देश्य प्राथमिक विद्यालयका शिक्षक र विद्यार्थी दुबैलाई शिक्षण-सिकाइ क्रियाकलापमा एकैसाथ समावेश गरी सिकाइ क्रियाकलापमा सुधार ल्याउनु हो । प्राथमिक तहको पाठ्यक्रम तथा पाठ्यपुस्तकको आधारमा कक्षा ३ को गणित र कक्षा ५ को अंग्रेजी विषयका २५/२५ वटा रेडियो पाठहरू तयार गर्ने लक्ष्य राखिएकोमा गत वर्ष १०/१० वटा रेडियो पाठहरू तयार भइसकेका थिए । यस वर्ष बाँकी पूरै पाठहरू तयार भइसकेका छन् । यस आ.व. मा यस कार्यक्रमलाई परीक्षणको रूपमा उदयपुर, नुवाकोट, कपिलवस्तु, दाङ्ग र डडेल्धुराका १०/१० वटा विद्यालयमा लागू गरिएको छ । सुधारात्मक मूल्याङ्कनका लागि प्रत्येक जिल्लामा ५/५ जना मूल्याङ्कनकर्ताहरू पनि रहेका छन् । यस कार्यक्रमको प्रभावकारीताका बारेमा त्रिभुवन विश्व विद्यालय अन्तर्गतको शिक्षा विकास तथा अनुसन्धान केन्द्र (CERID) ले अध्ययन गरिरहेको छ ।

३. शैक्षिक कार्यक्रम प्रसारण

हप्ताको एकपटक १५ मिनेटको शैक्षिक कार्यक्रम प्रसारण गरिन्छ । प्रत्येक सोमबार राति ८.३० बजे यो कार्यक्रम प्रसारण हुन्छ । यस कार्यक्रमअन्तर्गत शैक्षिक गतिविधि सम्बन्धी जानकारीका अतिरिक्त जनसंख्या शिक्षा, वातावरण शिक्षा, कृषि शिक्षा र महिला शिक्षा विषयका शिक्षाप्रद लेख-रचना, शैक्षिक नाटक, स्रोता सहभागिता र प्रश्नोत्तर कार्यक्रमहरू संचालन गर्ने गरिएको छ ।

Licensing For School Teachers – A Proposal

– Dr. Kedar N. Shrestha*

In 1975, the percentage of trained primary teachers was 43. In 1996, the percentage of trained primary teachers was 43.6. The government has implemented numerous programmes to raise the percentage of primary school trained teachers. But the percentage has remained the same. On the other hand, the number of untrained teachers has increased from 10811(1975) to 50398(1996), almost five times.

This quantitative data on the primary teacher training tell the failure story in quantitative terms. The information in primary teacher training tells even more serious story of failure. The 43percentagetrained teachers of 1975 had all completed the training of ten-month duration. The 43percentage of 1996 had completed training of all variety and duration ranging from 150 hours to 1320 hours (10 month). The data on trained teachers are in a mesh now. The present data on trained teachers have doubtful reliability because of the numerous types of trainings they have received. At present the government has a programme of 10-month training split into four packages of 2.5 months or 1320 hours. Some have taken the 2.5 months. Some have taken 5 months, some 7.5 months and some have completed the full course of 1320 hours. Because of the complexity of the training models, the reliable data are hard to obtain.

Training Policy

HMG/N has been persuing a very strange policy on primary teacher training, The policy is strange because the policy on primary teachers training is changed without any philosophical, psychological and pedagogical basis. The policy is changed on the basis of convenience of the government/MOE. Some examples of policy change are as follows:

In 1971, National Education System Plan adopted a policy of one academic year training as minimum training duration for primary, lower-secondary and secondary teachers. Tribhuvan University campuses were crowded with in –service teachers who had willingly joined training to comply with the training policy. In 1975, the percentage of trained teachers reached 43 percent. However, the trained teacher percent started declining because the number of in-take of new teachers exceeded he number of teachers joined training. Then came the policy change from MOE:

The minimum training duration would be Four Months instead of one academic year.

The Purpose of Policy Change

To train more teachers within shorter period of time.

Professional Reaction

The Institute of Education, T.U. accepted the policy change without any professional resistance.

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* Dean, School of Education, Kathmandu University.

- During 1980's, MOE showed its commitment to train all primary teachers by the year 2000 A.D. When the Ministry realized the magnitude of the task, the MOE rather changed the policy of primary teacher training instead of changing the target date and target number.

The Policy Change

A package of Primary Teacher Training of 150 hours will be the basic primary teacher training and all in-service primary teachers will be provided the Basic Teacher Training by the year 2000.

The Purpose of Policy Changes

A shortened training duration will help meet the quantitative target of training.

Professional Reaction

Basic primary teacher training was organized by MOE. Professional reaction from professional institution was not sought.

The National Education Commission (1992), appointed after the reinstatement of democracy, recommended that primary school teachers should require ten-months training. MOE readily approved the recommendation and adopted the policy of 10-month training for primary school teachers.

The Purpose of Policy Change

The purpose of the policy change was just to adopt the recommendations of the National Education Commission.

Reaction of Professional Institution

The Faculty of Education appreciated this policy change because it was a professionally sound decision on primary teacher training.

All those facts of history look like a folk-tale. In fact, it is more than a folk tale. Once, the requirement of 10-month training was accepted, the government even brought an amendment in the loan agreement with ADB and replaced the 150-hour training to 10-month, and the Technical Assistance (TA) was used to develop a 1320-hour (one-year) training split into four packages of 2.5 months (330 hrs.) each. Further more, MOEC launched a massive program of 330-hour training even utilizing the Resource Centers which were created to conduct useful need-oriented practical training for schools within the cluster. For some years, the whole network of Resource Centers along with some Education Campuses were vibrating with the ritual of 330-hour training. This act of the drama did not last long. Soon, studies on primary teachers training pointed out that the use of Resource Center for 330-hour training was a blunder. The very purpose of the creation of Resource Center was defeated. Basic and Primary Education Project (BPEP) suffered because of the Primary Education Development Project (PEDP).

Primary Teacher Training Program is not a one act plays. It is a full scale drama. So, such policy changes in the form of one act plays will continue until the time when the MOE would realized that training in just a means, not an end.

The Problem

An analysis of all the developments in the form of policy changes indicates clearly that the government has not duely identified the problem of primary teacher training. Investigation on primary teacher training has shown that trained teachers do not adequately use the skills they learned in the training programmes. If the purpose of teacher training was to raise the instructional quality of schools, the purpose is hardly fulfilled. So long as teachers do not feel the need to receive training to raise their professional competency, teachers training will remain almost a futile expensive exercise. Some experiences in primary teacher training raise searching questions.

Case I. In one Primary Teacher Training Center, (PTTC), trainee-teachers refused to attend the class unless they were given all the money provided to the training center for educational materials.

Case II. Inspite of the maintenance allowance given to teachers to attend training, large number of teachers deputed for training do not report in the training centers.

In-service teachers do not show interest to receive training. They come to receive training because they were deputed. And, studies have shown that most teachers hardly use the skills and knowledge they received in training in their classrooms. Some problems in the teachers training are the following:

1. Achievement of numerical targets guide the government in the planning and implementation of teachers training programmes. Quality of teachers training takes the backseat.
2. National expertise in primary teacher training is very limited. Whatever is done to improve the quality of teacher training is just a mathematical game of parnotation and combination. They are all acts of scissor and paste jobs, and an excellent example of in-breeding.
3. Teachers neither have the faith nor liking for teacher training conducted by government agencies. They attend training to meet their administrative obligations.
4. Public schools do not present any challenge for teachers to perform sincerely and efficiently. Even regular attendance of teachers and students are taken as indicators of efficiency. Use of better methods of teaching is taken as exceptions.
5. The erratic and irrational policy of the government for providing permanent entry to teaching cadre have allowed huge number of untrained and under-qualified teachers resulting in the negation of all efforts for quality improvement.

Rationale for Teacher Licensing

Defining Teacher Licensing System: Teacher licensing system has been used in various forms in different countries. The pre-qualification and eligibility to apply for license vary from country to country. There is no uniform process of providing the teaching license. There are some features of teacher licensing which are common to all the teacher licensing systems.

Common Features

1. Purpose: Teacher licensing system is used as an additional measure to ensure that relatively more intelligent, and knowledgeable people with appropriate attitude are allowed to enter the teaching profession.
2. Process: An autonomous professional agency is authorized to conduct all appropriate tests to the academically qualified persons who apply for teaching positions. Persons who succeed in the examination are given the teaching license. Successful candidates are certified to take up teaching position. Professional academic degrees are the prerequisite to apply for the certification examination.
3. Product: The certification examination successfully selects persons who are generally more fit to be teachers.

Never before has the teacher licensing system become so urgently required as it is today. The teacher training system is at a state of total hay wire. Some instances of this distressing situation are as follows:

1. There has been unhealthy competition among the universities in the operation of academic programmes. A new university authorized by the Act of Parliament can offer any program. That is what the universities are doing. Even the professional agency with good credentials like Faculty of Education has started giving affiliation to institutions which are hardly equipped for professional training. There is no mechanism to ensure that FOE affiliated campus would produce those persons, who are professionally competent to be a teacher. There is no mechanism in the T.U./FOE to constantly monitor the quality of training. At such situation, all professional degree holders cannot be recognized as professionally competent. Certification examination can be a better way of screening the candidates for the jobs.
2. A Sanskrit university offers a teacher training degree. No one knows what is the nature of the demand for a trained person from Sanskrit University. Is it a utilization of the legal authority by a university to start a professional training without having anyone in its faculty to provide professional guidance to the programme? A certification of teachers by providing teaching license would help screen the academically trained persons from such institutions.
3. A small institution like Secondary Education Development Unit could initiate a 10 month unprofessional training by ignoring all the academic sanctity to provide a professional certificate. This has become possible because of the Project resources. Certification or licensing teachers would stop such programmes of teachers training.

Any thing unprofessional can happen in the teachers training when such programme becomes a hostage of the unprofessional agencies, which are backed by financial resources provided by philanthropic and development support agencies.

There is no academic and administrative agency in Nepal at present which possesses the credential to steer the teachers training programme to the right direction. In this situation

certification of teachers and providing teaching license to teachers can be one way to standardize the teachers training programme if this task is assigned to an appropriate agency.

The Proposal for Teacher Licensing and Certification

The government can select from among the numerous systems of teacher licensing that are prevalent in many countries. Systems that have proven benefits in other countries may not be applicable for Nepal. Some adaptation may be necessary. The following is the proposal of a teacher licensing system which may prove useful for Nepal.

Purpose

To make qualified skilled teachers with right attitude available to the school education system of the country.

Certifying Agency

The government should appoint a Teacher Education Council under the chairmanship of a reputed teacher educator. The council should be formed by an Act of Parliament. The council should have members representing the government, training institutions, consumers, teachers and teacher educators.

Tasks of the Agency (Teacher Education Council)

To provide teaching license to the candidates who apply for the certification.

To provide accreditation to the teacher training institutions.

To develop professional requirements of persons who would want to apply for teaching license.

To conduct all kinds of tests: knowledge, attitude and skill, to the candidates and provide certificates to the successful candidates.

To conduct research and development activities to constantly improve and update the teacher education programme.

To decide the requirement for certification of primary and secondary teachers.

Legal Provision: A legal provision should be made under an Act of Parliament making certification or Teaching license mandatory of all teachers of the country. The Teacher Education Council should be authorized to make decisions on the types of license, renewal of license and other rules and regulations.

Sustainability: The Teacher Education Council can be a self-sustaining agency by generating resources from affiliation and examination fees.

Conclusion

An analysis of the educational scenario that emerged during the 1990's can lead one to conclude that the first ten years of the new millennium will be the years when market mechanism will play a dominant role in the educational area. The controlling role of government should be replaced by the promotional and regulatory role. In the case of teacher production, an agency like Teacher Education Council can play both the promotional as well as regulatory role. So, teacher certification by an autonomous agency can be suggested for consideration.

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Education Financing in Nepal: Financing Educational Institutions or Education of Students?

– Dr. Shiva Raj Lohani*

1. Introduction

The present education financing modality, which supports schools and higher education institutes (not students and households directly) is basically a supply side approach. Many of the problems and challenges in the education sector in Nepal have resulted from this approach. This approach has not been successful to address quality, equity, efficiency and relevance (QEER) issues. The major challenges are as follows:

- **Access and participation**: access and participation of children from poor and disadvantaged community (about a million 6-10 years children do not go to primary school). The problem of access and participation is more serious at the secondary and higher education levels.
- **Internal efficiency**: reduction of dropouts and repetitions and improvement in pass rates at SLC and higher levels of education.
- **Quality of education**: introduction of effective classroom teaching practices, improvements in qualification and training of teachers and teacher attendance, introduction of relevant curriculum.
- **Community participation**: involvement of community in managing and financing schools and colleges,
- **Financing:** improvements in financing of institutions which are under-financed in terms of both regular and capital heads and equity in government spending.
- **Private education**: development and enforcement of regulatory framework for the healthy growth of private educational institutions with government support to private schools and colleges for the development of physical facilities
- **Politicization**: elimination of politicization of experts, education personnel, non-teaching staff, teachers and students in government supported institutions

This article presents basic features of both demand and supply side financing approaches and attempts to relate these concepts to explain the financing issues and strategies in Nepal.

2. Supply Side Financing

The supply side financing involves building schools, paying for teachers and other operating costs by the government. The public school teachers continue to be paid even if they do not show up for class. The disadvantages of supply side financing are (a) Not all members of society would benefit equally as it is not targeted to the groups who need the support, (b) Schooling offered could be inappropriate for children from certain backgrounds, (c) Girls,

* Free Lance Education Economist

indigenous people, tribal groups, disadvantaged minorities and the poor would be left out, (d) Wide gap between urban and rural areas in terms of educational services would result, (e) Inefficiency of public spending on education resulting from the misallocation of resources would happen, and (f) Government would not able to meet increasing cost of public education system.

3. Demand Side Financing

Demand side financing concept is based on the assumption that households and individuals determine the demand for schooling by an implicit cost-benefit analysis. The costs to households are direct costs such as fees, books, and materials and indirect costs including the opportunity costs or income foregone. The benefits are the return to schooling to the individual household as well as the society as a whole, which are affected by many factors. Public support to household through demand side financing (eg vouchers or stipend) reduces the cost of schooling thereby increases the participation of poorer households in schools. The demand side financing tools used are stipend, community financing, targeted bursaries, voucher, subsidy to private institutions and student loan (Harry Anthony Patrinos and David Lakshmanan Ariasingam, 1997).

(a) Stipend is a cash payment that a public agency makes to a family to offset schooling expenses for a child and opportunity cost of sending a child to school (Example: Female Stipend Projects in Bangladesh which provide stipend and tuition to more than 3.8 million secondary girls every year).

(b) Community financing can occur through monetary contributions or non-monetary support in the form of land, labor, material and social marketing of the benefits of education (Example: Basic Education Project in Chad).

(c) Targeted bursaries are cash payments that go directly to schools, municipalities, or provinces for specific purposes such as increasing school access for minority and poor children or purchasing teaching aids to increase education quality (Example: BPEP II in Nepal which provides funds to finance School Improvement Plans).

(d) A voucher is a cash payment given by a public entity directly to students. Under the voucher system, public funds are given directly to students or their families (Example: Columbia Secondary Education Project)

(e) Government provides assistance to private institutions for serving children from the low-income households (Second Basic Education Project in Dominican Republic).

(f) Student loans are used to help defray costs to government and also to help greater number of students receive higher education (Example: Student Loan Project in Jamica)

(g) Community grants are given to a community of students in lump-sum for attending community created institutions (Primary Education Program in Balochisthan province of Pakistan)

The main advantage of the demand side financing is that it makes education system more efficient, improves quality, increases access, and enhances equity. The argument for public finance is equity in terms of resources, student achievement, future income or opportunity.

Demand side financing has been proved to be effective to address the equity issues. It encourages choice and schooling investment is made in order to attract parents. It can be used to help poor families invest in schooling by reducing tuition charge.

4. Cost Sharing Concept

Cost sharing means meeting costs of schooling by households, community and the government jointly. If the education providers (government or the private) charge fees to the students to meet their full costs, it is called full cost recovery approach. On the other hand if the education providers meet full costs by other sources such as government subsidy or community contributions and do not collect funds from the household, it is called zero cost recovery method. In zero cost recovery approach, there is no sharing of direct schooling costs by the households whereas in the full cost recovery, households bear all the costs. As the private service providers may earn profit, they may include profits in their costs and operate in a full cost recovery model. Supports of the community to the education providers would reduce the burden to both the households and the government. Cost sharing arrangements are possible in both the demand side and the supply side financing approaches.

The estimates of private and social rates of return would guide the policy makers to make decisions regarding public subsidies by levels of education and corresponding expected cost sharing by the households. Generally, the social payoffs are the highest for primary schooling followed by general secondary schooling. Therefore, the share of government should be higher at these levels than for secondary vocational education and higher education. The government subsidy to education would cause private rate of return exceeding social return. Therefore heavy subsidies (say higher education in the case of Nepal) tend to encourage a strong demand for education.

Generally cost sharing policy demands increased private financing in education. However, the objectives of increasing private contributions should not be to recover cost fully, particularly when there are economies of scale and when the education produces externalities.

5. Financing of Education in Nepal

Education in Nepal is divided into primary (grades 1-5), lower secondary (grades 6-8), secondary (grades 9-10) and higher secondary (grades 11-12), and proficiency certificate level under universities, and higher education. From the standpoint of financing, there exist three parallel systems: (a) a fully subsidized education provided through government aided schools (GASs) and colleges/universities, (b) a partially subsidized education provided in the facilities of GASs and colleges with community support, (c) private secondary institutions opened with profit motive. There is a substantial increase in government allocation to education, which has benefited the GASs and colleges as most of the government financing for education goes to them. The private schools (PSs) and institutions are privately financed and some community institutions receive one or two teacher positions paid for by the government. .

Government aided schools and higher education institutions in Nepal have been financed from grants provided by the government (grants in aid), supports from externally funded government projects such as BPEP, SEDP, Higher Education Project, projects under Ministry of Local Development (MLD), local elected bodies such as DDCs and VDCs, local communities and contributions made by households (Table 1).

Table 1: Sources of Financing Education in Nepal

Sources	Roles
Government Grants in Aid	MOES provides grant to all GASs (excluding private and community supported institutions) to meet the following expenses: 100% salary and allowances of teachers hired under approved post, expenses for peon, annual stationary expenses, training facilities to untrained teachers, award prize to best schools Grants to Tribhuban University and other government universities to meet salaries for teaching as well as non-teaching staff and other operating costs
Externally funded Projects	Provision of instructional materials and teacher and management training and construction of classrooms
MLD	Support schools basically for the improvement of the physical facilities through its projects. Provide scholarship to ethnic and socially deprived communities
DDCs /Municipalities/ VDCs	DDCs /Municipalities/VDCs provide grants to schools for the provision and improvements of physical facilities of schools. Contribute to meet salary expenses of teachers hired from private sources.
NGOs/INGOs	NGOs/INGOs involved in education sector contribute to improvements of physical facilities providing money and materials to schools.
Local Communities	Participate in school construction and rehabilitation activities providing voluntary labor, land, material and financial resources. Mobilization of fund to deposit in the fixed account of the school as required to establish a higher secondary institution
Households	Households contribute through payment of fees, students' subsistence and purchase of textbooks, stationary and uniform, apart from the opportunity cost. Urban households are spending substantial amounts to educate children in private schools.

National Education Account (NEA) estimates prepared for the year 1994/95, 1995/96 and 1996/97 revealed that Nepal invested Rs 9.82 billion in the education sector in 1994/95, Rs 12.17 billion in 1995/96 and Rs 13.97 billion in 1996/97. The share of education sector in GDP increased from 4.7% in 1994/95 to 5.1% and 5.3 % in 1995/96 and 1996/97 respectively. Household was the major contributor in the educational expenditure in 1994/95. The contribution of households was more than two-fifths (41.4%) while the share of government and donors were 38 per cent and 20 per cent respectively. Government was the major contributor in education expenditure in 1995/96 and 1996/97 as its contribution has increased from 38 per cent to 40 per cent in 1995/96 and further to 40.25 per cent in 1996/97. National account tables show that most of the household expenditure on education has gone for secondary education (55%) followed by primary education with 38% and higher education receiving the least share of less than 10%. There has been a reduction of the contribution of households in secondary education from 72% in 1994/95 to 64% in 1996/97 with the increase in funds from government and donors. (Table 2)

Table 2: Financing of Secondary Education (Rs in million)

	1994/95	1995/96	1996/97
1. National Education Expenditure	9818	12167	13396
2. Secondary Education Expenditure	3099	3840	4321
• Donors	32	191	229
• HMG/MOF	828	1055	1337
• Households	2239	2593	2754
3. Secondary Education Expenditure	100	100	100
• Donors	1.0	5.0	5.3
• HMG/MOF	26.7	27.5	30.9
• Households	72.3	67.5	63.7

Source: National Education Account Estimates (unpublished tables)

There has been a steady growth in government expenditure on education and particularly on the primary and secondary education (grade 1-10) sub-sectors in recent years, indicating increased government involvement in financing education. The government education expenditure/GDP Ratio has shown a continuous rise (with little fluctuations) from 1.8% to 2.8% between 1990-99. This has well been reflected in the share of education expenditure in the total government expenditure, which has reached to 14.2% in 1996/97 as compared to its level of 8.8% in 1990/91. However, it has declined in recent years and stagnated around 13% after 1997/98. This share is expected to be higher for 2000/01 due to rise in the salary of teachers (Table 3).

The major portion of expenditure on education is of recurrent nature, which includes personal expenditure (wages and salaries), and other expenses. Almost all expenditure under grants in aid (GIA) is used to finance the salary of teachers.

Table 3: Trends in Public Expenditure on Secondary Education (Rs in million)

Year	GDP	Total Exp	Foreign aid in Ed	Education Exp		Secondary Education		% of GDP	
				Amount	% of Govt Exp	Amount	% Ed Exp	Total	Education
1990/91	116127	23550	122.2	2082	8.8			20.3	1.8
1991/92	144933	26418	205.1	2868	10.9			18.2	2.0
1992/93	165350	30898	712.3	4150	13.4	615	14.8	18.7	2.5
1993/94	191596	33597	617.1	4564	13.6	667	14.6	17.5	2.4
1994/95	209974	39060	1318.8	5066	13.0	870	17.2	18.6	2.5
1995/96	239388	46542	1317.6	6150	13.2	1195	19.4	19.4	2.5
1996/97	269570	50724	1785.7	7203	14.2	1460	20.3	18.8	2.9
1997/98	289746	56118	1400.6	7804	13.9	1743	22.3	19.4	2.7
1998/99	327445	59579	941.5	7682	12.9	1817	23.6	18.2	2.5
1999/00b	362934	77238		10176	13.1	2059	20.2	21.3	2.8
2000/01a		91621		11750	12.8	2280	19.4		

a/ estimate b/ revised estimate

Source: Ministry of Finance, Economic Survey and Red Book (various years)

The donor contribution to financing of the education sector has been increasing. Education sector in Nepal received Rs122.2 million from external sources in 1990/91, which accounted for 5.9% of total education expenditure. This proportion increased to 26% in 1994/95, 24.8% in 1996/97 and declined to12.2% in 1998/99. Of the total development expenditure, foreign aid accounted for 73.6% in 1995/96. Loan constitutes the major portion of the total foreign assistance (65% in 1995/96 and 66% in 1997/98). The rise in foreign assistance is due to the implementation of projects like BPEP, PEDP, SEDP, HEP, Engineering Project, School Feeding and Technical Education. The major donors are IDA, ADB, DANIDA, SDC, WFP and JICA. The increased aid flows for education contributed to the rising shares of education in total expenditure (World Bank, 2000).

6. Supply Side Financing in Nepal

Many of the educational problems in Nepal are the result of supply side financing modality with limited cost sharing arrangements.

Following the restoration of democracy in 1990, the elected government increased its commitment to education by initiating the policy of free secondary education. Under this policy 100% of salaries of teachers of government-aided schools were to be met from the public sources. For example, although the per student cost of government aided secondary schools for the government has increased by 72% at current price (from Rs 956 in 1993 to Rs1643 in 1998) during 1993-99 period, it is still low (Table 4).

Table 4: Secondary Level per Student Costs of GAS

	1993/94	1998/99
1. Enrollment in GAS	697620	1105823
2. Secondary Education Expenditure (Rs Million)	667	1817
3. Per student cost	956	1643

Because of the introduction of this policy without adequate funds secondary education system in Nepal has faced a number of problems. Government has not been able to provide subject wise teachers to government aided schools. Under free education policy, government aided school were prevented to raise monthly fees from student. As result, public schools are forced to operate within severe financial constraints as the notion of free schooling has discouraged the generation of local resources and mobilization of internal resources of the schools. This policy has substantially reduced the cost recovery level and further eroded the already weak financial base of secondary schools. To meet the expenses, the schools often raise different types of informal fees, which have serious impact on the participation, and retention of disadvantaged children. The fee free secondary education policy has generated confusion among parents and communities regarding their role in sharing the cost of secondary education in Nepal. Studies have shown that free secondary education has reduced the role of parents in monitoring the performance of the schools (METCON/SEDP, 1999).

Head teachers of public schools and most education experts and planners strongly feel that the free education policy up to Grade 10 is not affordable for Government, particularly if standards are to improve. On average, the total revenues of public schools have declined after the declaration of the free education policy because this policy funds mainly teacher salaries. Schools that were already struggling for resources to finance quality inputs prior to the free education policy are now totally unable to arrange for these inputs. It is widely believed that this is the main cause for the proliferation of private schools, which are able to spend significant amounts on non-salary inputs critical for quality improvements.

MOES provides grants-in-aid (GIA) to government aided schools and it is the main source of income of government-aided schools. The present GIA policy, as part of centralized management system, provides little control of resources to those responsible for implementation at the field level. The GIA to schools has become an entitlement for which no justification is required. It does not encourage teachers to aim at a higher level of performance, as their salaries are not linked to their performance and school outcomes. The government budget allocation gives little emphasis on activities directly related to the improvement of classroom instruction. Most of the schools have been established through initiatives and support from local communities. Once government starts supporting them through grants, communities find themselves marginalized. The support from government has not added to the resource available to schools. GIA is provided to schools through DEO. DDCs, VDCs and local communities are not involved in the process. GIA is allocated at a point far removed from the local context, on some uniform basis, leading to lower motivation for local resource mobilization and creating dependency on central source. As a result of the present GIA policy, teachers see themselves as employees of a distant parent organization (i.e. school) they serve.

A study on Secondary Education Development with special reference to Science, Mathematics and English conducted in 1991 identified critical financing issues and problems and suggested a number of measures to address them (Table 5). Most of these measures suggested have emphasized the need for adopting strategies to achieve greater cost sharing by households. The study suggested for enhancing community participation and piloting a strategy of charging US$5 to US$10 per student annually.

Table 5: Issues and Problems of Secondary Education Financing

Issues	Suggested Measures
Reducing educational unit costs by reducing wastage by improving repetition, dropout and failure rates	Better school supervision and class room management Accommodation of more students Generation of funds from the community and private sector Increasing the number of students per classrooms Increasing the number of teaching shifts Good management of time, space and energy
New ways of financing education	Increasing government funds to be ensured by way of policy and legislation Shifting resources to school education by curtailing subsidies to higher education Creating a specific tax for education Increasing tuition fees steadily Enhancing private sector participation
Sustainability and cost recovery	Financial experiment in cost-recovery charging US$ 5 to 10 per student per year for quality

Source: British Council (1991), Nepal Study on Secondary Education Development

Secondary Education Development Project (SEDP: 1993-2000) sponsored two studies to find out the current status in terms of cost sharing and recommend practical strategies for achieving greater cost sharing from household. The Micro Study of School Finances conducted in 1996 provided current status of the financing situation of individual secondary schools-both government aided and private whereas the study on Cost Sharing Options for Quality Secondary Education conducted in 1999 provided additional information on costs and financing of schools.

The empirical findings (Table 6) showed that the quality of secondary education as measured by the performance in SLC examination depended heavily on the quality of school funding measured in terms of per student annual total expenditure, contribution of parents and guardians in school financing, mobilization of resources from the school and allocation of fund for non-salary expenditure (Metcon, 1999). Based on the comparison of income and expenditure data between best performing schools (SLC pass rate of 60% or above) and worst performing schools (SLC pass rate of 10% or less), the study observed that the best performing schools had higher per student expenditure (Rs3096 Vs Rs1707), higher contribution of parents (26% Vs 18%) in school financing, lower share of government in total school expenditure (41.5% Vs 78.1%) and lower proportion of salary in total expenditure (62.2% Vs 82.8%). This finding implies the need for effective cost sharing arrangements in government financing system.

Table 6: A Comparison of Best and Worst Performing Schools in SLC Examination (7 best schools, 6 worst schools)

	Best Schools*	Worst Schools*	Difference
Per student annual expenditure (R)	3096	1707	1389
Contribution of parents (Rs)	815	315	500
2. Average annual fee charged (Rs)	1070	310	760
3. Share of government contribution %	41.5	78.1	36.6
4. Average secondary enrollment size	496	385	111
5. Proportion of salary in total expenditure %	62.2	82.8	20.6

Source: METCON (1999), Cost Sharing Options for Quality Secondary Education, Kathmandu

The 1999 study also proposed 6 cost sharing modalities for implementation (Table 7).

Table 7: Proposed Recurrent Cost Sharing Modalities

Options	Main features of the strategy
1.	Existing support mechanism with a provision o f allowing schools to raise Rs2000 per student per annum
2	Block grant: Meet recurrent expenses for a set minimum
	Equalization aid: Supplement with incentive fund
	Matching grant: Provide based on local contribution
3	Teachers salary and additional matching grant for quality related expenses and/or indirect expenses such as admission fees
4	Additional teachers salary supports depending on the mobilization f resources from the schools
5	Full support for teachers with a maximum limit for a school
6	Meeting 45% of the required unit cost per student by the government (100% of the cost in the case of disadvantaged groups)

Source: METCON/SEDP (1999)

These proposed cost sharing modalities, which are basically based on the concept of supply side financing, could be piloted to identify effective strategies to achieve the desired results.

Demand Side Financing in Nepal

Private Education: The roles and contribution of private schools run on commercial basis has been increasing in recent years especially in urban areas. Its role in the secondary and higher secondary (including Proficiency certificate level) sub-sector has remained substantial.

Households have made significant contributions in the financing of secondary education in Nepal. Despite the free textbook distribution policy of the government, 53% of the household expenditure on primary education was utilized for the purchase of textbooks (Table 8.).

Table 8: Distribution of Household Education Expenditure Percent

	Primary	Secondary	Higher
Admission/Registration	25	31	27
Textbooks	53	45	32
Private tutoring	8	10	17
Examinations	5	5	3
Boarding/Others	8	8	10
Transport	1	1	11
Total	100	100	100
Unit Cost (Rs)	172	709	1516

Source: CBS, 1996, National Living Standard Survey.

A micro finance study done by Metcon in 1996 indicated a per student cost of Rs.2460 in government-aided secondary school in 1994/95. The unit cost for private secondary school was Rs 8114. The unit cost of secondary education for government-aided schools was Rs2243 in rural area and Rs2953 in urban area. In contrast, the unit cost of private school was Rs8182 in rural area and Rs9482 in urban schools. The study also revealed that most of the budget in government aided schools (76.2%) was spent on teachers salary and salary of other staff. As a result the spending of govern aided secondary schools on other important components (namely, stationary, instructional materials and regular maintenance) was very low. The private schools were better as the salary component utilized only 48.5% of their budget in it on average (Table 6).

Table 6: Education Pattern of Secondary Schools (Rs 000)
(Based on the mean of 19 public and 8 private schools)

Items	Government aided		Private	
	Amount	%	Amount	%
Teachers salary	11962	67.7	4566	41.7
Non-teacher salary	1495	8.5	709	6.5
Administration	274	1.6	175	1.6
Teaching materials	772	4.4	1017	9.3
Domestic	26	0.1	1563	14.3
Operation and maintenance	369	2.1	416	3.8
Extra curricular	195	1.1	126	1.2
Transport	0	0	1021	9.3
Others	2561	14.5	1344	12.3
Total	17654	100	10937	100

Source: METCON (1996, page 5.3 and 5.5)

resources could be justified only when available resources are effectively utilized to achieve intended results. There is a need to review the policy of free primary and secondary education policy. The supply side financing approach could be modified to allow more cost sharing arrangements wherever feasible. Demand side financing modality could be introduced to reduce cost of education of household focusing on the well-defined target groups. Government should stop adopting blanket policy with the same strategies to all areas and all problems. With regard to cost sharing, the answer cannot be yes or no, it must be specified in terms of how much and at what levels. Similarly, the issue should not be whether to finance institutions or students with government funds, but it should be which strategy to be used when and with what purpose. This paper provides general overview of the problem and what presents basic framework to intimate reforms in education financing.

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Private institutions are generally perceived to provide good quality education. The SLC results as well as few other achievement studies seem to support the general perception that private schools are better than public schools. However, there is no clear regulatory framework to promote private education by safeguarding public interest from exploitative practices. Private schools also feel the need to acknowledge their services to the community by the government and also encourage them by providing technical services such as teacher training and monitoring (FAAN, 2000). The regulatory framework should make provisions to monitor the level of fees, qualification of teachers and the content of curricula in the private schools.

Community Supports: Community participation remained substantial prior to the introduction of the NESP in 1971. Communities have been contributing or expected to contribute in various ways to the extent possible, by way of providing land, building, furniture, labor, donations and recurring costs. The Cost Sharing Study based on a sample of 25 urban schools and 26 rural schools showed that 78% of the schools were initially established by the community. DDCs were also found spending only a small portion of their own earnings on education (METCON/SEDP, 1999). The role of the communities has been marginal due to the absence of appropriate management structure and limited role in decision-making. The role of local bodies in the management and financing of education has not been clearly defined. As a result, the support that could come from local bodies has not been fully mobilized.

School Improvement Plans (SIPs): Basic and Primary Education Project (BPEP II) has initiated a piloting activity on SIPs. Under this, schools are encouraged to prepare school improvement plans involving parents and other stakeholders and the project provides fund based on the school proposal.

Supply side financing emphasizes financing institutions whereas demand side financing approach focuses on students and households. The examples of private education and community financing discussed above show that there is a great potentiality to introduce cost sharing arrangements with well designed strategies based on the principles of demand side financing. A number of instruments used in different countries have been listed in section 3 above. Not all instruments could be effective in financing different levels of education. For example, the student loan scheme could be appropriate in financing higher education whereas stipend and tuition scheme would be easier to implement at the secondary level. Subsidies to private schools enrolling the children from poor household or community might be suitable at the primary level. Different schemes could be piloted and assessed to identify the appropriate instrument to achieve the specified goals.

Conclusions

A number of studies and reports of the national education commissions have repeatedly pointed out the problems of financing modality adopted by the government. Findings and recommendations of studies and reports have not influenced decision makers to change the financing approach and modality. Education sector in Nepal requires additional resources to achieve the goals relating to Education For All (Early Childhood Development, increasing functional literacy, universal quality primary education up to grade 8), expansion of quality secondary education (general as well as vocational) and quality higher education. Additional

Enhancing the Quality of Education at the School Level

– Prof. Khadga Man Shrestha*

Introduction

We all aspire for the development of education at the school level. The term development has been variously defined in each epoch. In our daily usage the ordinary dictionary meaning of the word predominates, we urge for development and all we mean is a change for the better - an improvement. To simplify the concepts of development it has been defined as a function of planning and management at all times. However the question arises what is improvement ? To answer the question, the above common sense of definition of development should be read in conjunction with widely accepted indicators of development. Some of the realistic indicators of development are level of national per capita income, Educational profile of the population, per capita living space, copies of newspapers/books per 1000 persons, literacy rate, enrolment at different levels of education as per percentage of corresponding age groups, teacher-pupil ratio (within certain limits) public expenditure in education / health (as a percentage of government budget / national income etc. After having a fair idea of development we would have to turn our attention to the process of development. In the developing country like ours where poverty is still wide spread, eradication of poverty is not possible without resources. In order to have more resources, the nation's capability to produce goods and services, its people want must be expanded. This depends on four fundamental determinants, namely

1. The quality and quantity of natural resources
2. The quality and quantity of labor forces
3. The quality and quantity of real capital. and
4. The level of teclmological attainment of the society.

Thus certain widely accepted indicators of development include the level of national and per capita income and their rate of growth. The other socio-economic indicators indicate not only quantitative but also qualitative improvement of life. The rate of economic growth is determined by the mix of application of human skills and technology to the formation of capital in the exploitation of natural resources. The quality of development is determined by the mix of economic growth with social development. This is ultimately the goal of development. Thus for poverty alleviation, human skills have to be developed in keeping with the development of technology. In other words, development of human resources is needed for capital formation. In a country where living is already at subsistence level for majority of people , it is difficult to mobilize more capital for investment in education. However, HMG has been allocating more than thirteen percent of the total government expenditure on education in the last one decade. The total government expenditure on education in 1999/2000 is 77.24 billion rupees i.e. 13.17 percent o f the total government expenditure.

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* Free Lance, Educationist

Educational Development

A bird's eye view of the development of education in Nepal will indicate the quality and quantity of education along with management and planning. With the establishment of Durbar High School in Kathmandu, modern education began in Nepal. By 1853 the school was accessible to the children of Rana family and their courtiers. In the reign of the Rana Prime Minister Dev Shamsher, Durbar school was made accessible to the general people. Jaya Prithivi Bahadur, the Raja of Bajhang, the son in law of Rana Prime Minister Chandra Shamsher for the first time published Achharanka Shikshya the first Nepali text book to the beginners to teach Nepali. Dev Shamsher established Bhasa Pathsalas. In 1929, Tribhuvan Chandra College was established and in 1931, it was named as Trichandra College. In 1934, S.L.C. Board was established. At that time, the structure of education consisted of lower primary (grades 1-2), upper primary (grades3-5), middle (grades 6-8) and high schools (grades 9-10). In 1938, the structure was changed. It was three years of primary, four years of middle school and three years of high school education. In 1951, there were only 11 secondary schools with 1680 students. There were not more than 200 schools altogether. In the first five year plan (1956-1960) eighty percent of the budget allocated for primary education was spent. In 1951, the national literacy rate was only two percent. The education code was published in 1954 with emphasis on election of school management committee for wider public participation in education. Before 1954, there were six types of schools in Nepal - English Schools. Basic Education Schools, the Sanskrit Schools, the Gompa (Buddhist Monastic) Schools, the Madarasa Schools and the Bhasa Pathasala (Vernacular) schools at primary level. The Ministry of Education made 5 years of primary education. In the same year, Nepal National Education Planning Commission (NNEPC) initiated a comprehensive national education system. The NNEPC published its report entitled "Education in Nepal". The recommendations of the report was implemented. The multipurpose secondary schools and general schools were established in the country. The Sanskrit stream was continued. The general stream featured an explicit emphasis on the modernization of education. In 1957, College of Education was established. In 1958, the Department of Education published primary and lower secondary curriculum. In 1959, Tribhuvan University was established. In 1960, a section in Dept. of Education was established for the first time to look after curriculum and text book.

In 1961 the All Round National Education Committee (ARNEC) published its report. The report was implemented in other subsecutive years but nothing new was initiated with regard to secondary education. In 1962 a two person UNESCO Mission conducted progress survey in education. (Wood and Knall Survey 1962)

In 1971 the National Education Committee was formed. The committee prepared National Education System Plan (NESP). The NESP specified education goals explicitly for the first time. It added a strong development thrust in the education system clearly mentioning that education should support nation building. The NESP aimed at universalization of primary education and the primary level was limited to 3 years period from the period of 5 years. Lower secondary education was extended from 4 to 7 grades and secondary education included 8 to 10 grades. It prescribed a uniform curriculum in the country with a view to ensuring national integration and bringing about a uniform standard of education throughout the country.

Comprehensive scheme of student evaluation was put into effect. The objective of each level of education was specified. The objective of primary education was to impart literacy, lower secondary education aimed at character building and the aim of secondary education was to produce skilled workers by imparting vocational training. The text books were prepared on a national basis to reduce cost and assure quality. The construction of local school building had remained as a major contribution of local people.

In 1975 primary education was made free. Textbooks were distributed free of cost. The government was to bear the total salary cost of all primary school teachers.

The Radio Education Teacher Training was started for training the primary school teachers. In 1981 primary education was again made of five years, lower secondary two years and secondary three years. In 1984 H.M.G. implemented Primary Education Project (PEP) with the assistance WB- UNICEF in six districts as a pilot project (Jhapa, Dhankuta, Tanahun, Kaski, Dang, Surkhet). In 1991 BPEP master plan identified external and internal financial support needed for achieving the goal of education for all. In 1992, the National Education Commission was set up. Primary education was made of 5 years. and recruitment of at least one female teacher at a primary school was made mandatory. In the same year National Council for Non-formal Education was formed as the policy making body for non-formal education at the national level. In 1992 Primary Education Development Project (PEDP) was financed by ADB. The project aimed at the training of primary school teachers and building of infrastructure for National Centre for Educational Development (NCED) and nine Primary Teacher Training Centres (PTTCs) were set up. In 1992 the Basic and Primary Education Project (BPEP I) was financed by W.B, DANIDA, UNICEF and JICA. In 1993 Secondary Education Development Project (SEDP) was started and Science Education Development Centre (SEDEC) was set up. In 1993 the NCED was set up as an apex body for primary technical support and conducting training of educational personnel and subject experts.

In 1998 a High Level National Education Commission was established. The Commission recommended to make educational reforms in Nepal. It proposed to allocate government funds for pri-primary education. The commission also strongly recommended to allocate 17 percent of government budget on education and 55 percent of education budget to basic and primary education. In 1997-1998 Compulsory Primary Education Programme (CPE) was initiated in Chitwan and Ilam. In the following fiscal year CPE was expanded in other three districts i.e Syangja, Surkhet and Kanchanpur. In 1997 the Master Plan for basic and primary education was updated in consonance with the Ninth Five Year Plan of the country (1997-2002). The plan emphasizes the gradual introduction of CPE and the launching of National Literacy Campaigns with the involvement of national and international agencies, local bodies and communities as a strategy for achieving the goal of education for all.

On 16th July, 1999, a Department of Education (DoE) was established under the Ministry of Education for taking overall responsibility of planning, implementing and monitoring primary and secondary educational programmes.

The second phase of Basic and Primary Education Programme (BPEP II) (1999-2004) is being implemented by DoE. The project is being financed by IDA, DANIDA, European Union (EU),

NORAD, Finland, HMG through basket funding modality. In financing of Core Investment Programme (CIP), UNICEF is also financing along with the agencies mentioned above. JICA is financing for the construction of primary school building, toilets, drinking water and other facilities directly.

Problems and Issues

The development of education in the later half of the nineteenth century was quite negligible in Nepal. But from the later half of the twentieth century, the development of education was very rapid. The configuration of education has become voluminous. The quantitative development is not matching with the qualitative development. In the last decade of the twentieth century the government has been endeavouring its best to impart education free of cost in the public schools. However, the quality of education in public schools has not been satisfactory as compared to private schools. The following measures should be taken to address the emerging issues:

1. Education, as a process should have capacity to respond the changing needs and challenges, education should respond the demands of widening objectives and resources should be made available to education should keep place with the expanding demand.
2. Educational development should have a process by which the growth and change in education are ensured, the system of education should be reviewed with a view to diagnosing its weakness and problems and reform measures should be designed and developed to remedy such weaknesses and problems.
3. Project the needs of resources for educational development and mobilize and allocate such resources, co-ordinate the activities of different units in the educational system and mobilize the public participation in educational development.
4. Keep liasion with agencies outside the educational system in co-ordinating related activities, develop plans of action and get necessary approvals of appropriate authorities, and identify programme details and formulate appropriate projects.
5. Manage programme and project operations, evaluate performance and progress of educational system as a whole or its sectors and train and orient personnel in various positions their roles in educational development.
6. The educational system has to be continually modernized and overhauled to meet changing needs and challenges.

At present the country is confronted with many problems in education sector. In a democratic country like Nepal , education of the people is of great value.. 47% of the people are still illiterate. Not all the children of school going age have access to education. Net enrolment of the primary school going children is only 70.1%, and 58% of the girl children are out of school . The promotion rate of the children in primary school is average 70% only. There is wide disparity in the enrolment of the children in rural and urban areas. The disadvantaged groups have no access to education in the remote area. Teacher absenteeism is in vogue.

Education has become expensive even in urban areas. Only the families with sufficient financial means are able to send their children in the schools. Education has become elitist based. Private schools have increasingly been reserved only for wealthy families. The government is

committed for fulfillment of basic needs and universalization of primary education as envisaged in the five year plan of the country. Only 43.3% of the teachers are trained in which the percentage of female teachers is only 35.9%. Although the National Education Commission of 1992 suggested to revise the school level curriculum, teachers are not oriented to revised curriculum. They have no access to self-directing resource materials as required. Instructional quality of public schools is not in pace with private schools. The examination system has many deficiencies. Public participation in education is not encouraging.

Measures to Enhance the Quality of Education

Since July 16, 1999 (1st Shrawan 2056) the Department of Education is in operation to address the problems of education at school level. The Department is entrusted with the responsibility of co-ordinating central level educational agencies and activating district and local level bodies in consonance with Decentralization Act. BPEP II is being operated on programme basis rather than project basis. School improvement plans are being implemented with emphasis on school improvement plans and programmes. Early childhood development programme is lunched with the aim of reducing dropout and repetition rate at the primary level education. Under BPEP II seventeen components of activities have been identified to meet the programme objectives which are grouped under access and retention, enhancement of learning achievement (quality) and capacity building. BPEP II targets for improving access and retention for the year 2004 include 90% NER and 75% cycle completion rates for both boys and girls.

The targets on learning achievements are:

- 100% pass rate for grade I to III
- 90% pass rate for grade IV and V,
- 75% average scores on national assessment at grade III,
- 40% increase in average scores on national assessment at grade V,
- 90% daily attendance of students,
- 80% average daily attendance of teachers ,
- 100% teachers attending a minimum of 10 days recurrent training.

Quality Enhancement at Primary Level

The following are the suggestions for enhancement of quality at primary level.

- Manage school on the basis of Decentralized Act.
- Use more reliable and current data
- Plan school location for efficient control
- Expand peoples participation
- Implement alternate schooling plan
- Maintain standard
- Establish early childhood development centres
- Enroll all girl children of the age group
- Increase women's participation in education

- Improve classroom management
- Have competency based evaluation for course completion
- Assure universal access to school for all children, promote universal access to all children, promote universal retention to all children.
- Improve instructional materials for quality education
- Make quality materials
- Develop the specific skills, attitudes and knowledge to be learned by primary school children on the general and specific objectives of the primary curriculum
- Develop instructional materials that are self directing for teachers and students
- Develop quality instructional materials for reducing the high repetition rate
- Manage in-service and pre-service teacher education
- Use distance learning method or media such as radio education for primary teacher
- Accredate the training programmes
- Promote active students' participation giving immediate feedback to students on the correctness of their responses
- Make a provision of Bilingual teaching at grade I and II using mother tongue / first language by translating the existing text materials in local setting
- Make classroom environment congenial and healthy
- Increase public contribution for quality infrastructure including games and recreational facilities
- Use maximum of local resources
- Distribute of workbooks to the primary school children
- Use of hot food in tiffin
- Improve classroom management
- Improve staff incentives to reduce teacher absenteeism
- Create significant role of headmaster
- Develop a cadre of primary teacher educator to facilitate training of primary school teachers
- Develop playground, toilet, drinking water facilities at the school etc.
- Develop minimum level of learning
- Use resource centre for recurrent teacher training.

Quality Improvement at the Secondary Level

For the improvement of quality of education at the lower secondary and secondary level, the following suggestions are recommended :

- Prepare students for workforce including self employment
- Make the headmaster able to take lead in the school management

- Reduce teacher absenteeism providing staff incentives
- Develop school on democratic atmosphere imparting student centered learning
- Make quality materials available to the teachers
- Develop teacher education as professional programme
- Develop multimedia package for in-service teachers including the use of radio and self instructional modules involving face to face contact with experienced teacher trainers
- Establish a co-ordinating mechanism to integrate all teacher education programmes
- Establish a teacher education accreditation board to maintain minimum standard
- Use resource centres for recurrent training of in-service teachers
- Provide minimum in-service training to many teachers as far as possible
- Avoid rote memory by participatory teaching and improved classroom management
- Develop, preserve, expand and extend learning science, technology and skill as may be necessary for producing a cadre of able workers
- Avoid examination deficiency by establishing detailed school assessment maintaining detail school records
- Provide regular and quality supervision
- Increase accountability of the teaching and non teaching staff
- Increase practical applications
- Conduct school improvement plan
- Develop qualitative physical improvement of the school
- Increase parent teaching interaction
- Create a significant role for headmaster and teachers
- Prepare a detailed implementation plan of academic programme
- Recognize outstanding public contributions for effective performance

Conclusion

The challenge of our technological society today is to deal with the development of citizen who would be able to meet the complex problem of family life, of civil social life, of work life and of leisure life. It calls for citizens able to act in a changing world in which problems persist through life and appear in many forms under very difficult circumstances. The society demands citizens with high moral values. The society needs "Thinking men", "Equal men" and "Co-operative men" seeking maximum contribution for the social goods to ensure democratic life.

Open University

– Dr. Tirth Raj Khaniya*

Background

University of a country stands as a mirror of the development of its cultural, economic, educational and social aspects. It is said, "If every thing is well with the university, every thing will be well with the nation". It means that our well being is largely dependent upon what happens in our universities. It is through university education that a country leads its young generation to the prosperous future.

After the restoration of democracy in 1990, Nepal made several efforts towards reforming higher education both in terms of mobilizing internal and external resources and restructuring university education. It formed two high-level education commissions and an Education Task Force in order to gain insights into the intended purpose. Along this line, Nepal adopted multi university system of higher education before which there was TU as the sole institution for higher education. Later, Mahendra Sanskrit University was established for the promotion of Sanskrit education. Then Kathmandu University was established under an act passed by the parliament but with the initiation from Non-government sector. Purbanchal University and Pokhara University were also established with an intention of establishing universities in development regions. Other universities like Open University, National Agriculture and Forestry University, Far-western University are also in the pipeline. Among these universities, TU is the one which holds a great responsibility for higher education. It has covered the whole country with its 61 constituent campuses and 158 affiliated campuses. It is the university which allows a large number of students involving both regular and private to sit for its exams every year. It has campuses ranging from less than 100 to more than 10 thousand students. Nepal spends around 13% of its total budget on education out of which 15% is allocated to higher education. Mahendra Sanskrit University, Kathmandu University, Purbanchal University, and Pokhara University are also running campuses in many parts of the country. Despite all these efforts, there is a growing dissatisfaction among politicians, professionals and common people about the quality and access offered by these universities. The government and all agencies concerned are under pressure to look for other ways too to address the problems so that our higher education becomes compatible with the higher education of the rest of the world in term of access, quality and use of information technology (IT).

The Functions of Higher Education: Teaching, Research and Service

The major functions of higher education are to transfer knowledge and skills, train people to run the management of the country and participate in the development works, coordinate international cooperation, expand the body of knowledge and information through research, and apply knowledge and skills in a practical world.

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* Reader, FOE, Tribhuvan University

However, our present universities do not appear to be performing all the tasks. Our higher education institutions are performing only the teaching task not the others. The other functions are still far away from our reach for unknown reasons. The challenge, therefore, is how to make our system of higher education work well so that it also performs the other tasks as well. It is therefore essential that we look for ways to make our higher education institutions carry out all the services that it can be expected of.

Challenges for Our Higher Education

There have been many changes in the whole set up of our society because of the effect of globalization. If we fail to appreciate it, we may not be able to cope with the changing context. In this sense, it is necessary that we adjust our way of doing things in line with the changed context. For that purpose, we need to review the delivery system of our education. There is increased internationalization of production and trade. There is high mobility of capital. The political inter-dependency and socio-cultural transformation is increasing. This process of globalization is demanding for new information and communication flows. Human resources are also not confined to a political and geographical boundary. Rather every body has access to a job anywhere in the world if he or she has useful knowledge and skills.

In this global context, our higher education faces many challenges.

Many new subjects are emerging but our conventional universities are failing to appreciate them because of lack of resources and trained man-power. The conventional universities are following the traditional mode of educational delivery which could have been replaced by the use of IT had we been able to adopt new technology. Universities around the world, in these days, are taking new responsibilities because of their institutional strength, in initiating new business, industry, and collaboration with other organizations. This is one of the ways of making higher education closer to real life. But our universities are no more than academic institutions. There is very little reflection of our national priority and programmes on what our universities are offering. We do not find cases in which our central departments take lead in reform programmes through teaching and carrying out research works like Ph. D and Masters in the areas which have direct application to our situation. This is one of the reasons how our higher education is distancing itself from the society. Because of fast development in education and technology, there is increasing use and dependence on using IT in every part of the world. Regardless of our interest and ability in making use of it, we have to move towards adopting it for getting access to worldwide network and modernizing our system.

Classroom size in our higher education is large. Because of several reasons, the system has failed to encourage students for regular attendance. There is absence of close monitoring for quality education. The pass rate, for example, in TU is very low; Education faculty 32%, Humanities- 13%, Management 20% and Science 40% in the year 1998. It is a glaring example of educational wastage. Because of the absence of the provision of an Open University, learners who cannot afford to leave their jobs or business are putting a pressure on TU to continue permitting private students for its examinations. This is how TU is becoming a mix of regular and private students. Similar was the case with British universities before the establishment of UK Open University.

Our higher education is blamed for generating unemployable graduates by many people. The challenge is how to produce people with necessary skills and knowledge who will either get jobs or create jobs (self-employment). It is urgent to establish a close link between industry, business and higher education.

In this context, apart from many other things, our higher education has to move towards providing opportunities for collaborating with foreign universities for strengthening Nepalese higher education through improving staff development programme and updating curriculum and teaching methodologies. Higher education is also expected to be relevant to the local needs so that education appreciates the dynamics of the surroundings. Our higher education, therefore, should establish collaboration with industries, business firms, hotels, travel agencies, etc. so that the higher education becomes relevant with the world of work. This is another way of extending university services to the benefit of all kinds of people. It is also necessary that higher education should be responsive to the new demands of the market. For this purpose, universities should be engaged in appropriate research works.

Establish an Open University

In order to address the above issues, we have to do many things. One of the ways to move towards this direction is to establish an Open University.

An Open University is described as the offering of educational programmes designed to facilitate a learning strategy which does not depend on day-to-day contact teaching but makes best use of the potential of students to study on their own. It provides interactive study material and decentralized learning facilities where students can seek academic and other forms of educational assistance when they need it. In a country like Nepal, which is full of mountains, which has its population scattered all over the difficult lands, which has scarce resources, the use of Open University for all kinds of education is of paramount importance.

An Open University prepares quality materials (self-study books, workbooks, audiocassettes, videos and software) and makes available for those who intend to do courses under its schemes. They can be single module or complete package. They can be purchased or collected from the institutions. It can run its own TV Channel. It can use the latest technology and be innovative and developmental. Collaboration with other open universities is possible for becoming more effective and updated.

Open University has the potential to generate new ways of teaching and learning. Because of its close links with information and technology, it is close to development of new learning and new patterns of information access and application. It can be believed that it can lead to innovative delivery of education through which a large scale of population can be addressed.

As it appears, there is growing demands of higher education in Nepal which has not yet been met by the conventional universities no mater how liberal they are in terms of allowing new colleges to exist and allowing students with private study to do their higher education. In that sense, Open University should be taken as a complementary and an alternative method of providing higher education and training. The potential of Open University should be seen in the light of its benefit based mainly on social, economic and technical criteria. In addition, Open University is important also for the educational impact because of its appropriateness for many

of our population. In these circumstances, Open University should be seen as a complement to and not as a substitute for the conventional universities.

Since Open University offers more open access to learning, it overcomes the constraints related to geographical distance, personal, cultural and lack of educational infrastructure. It is regarded as a cheaper mode in comparison to conventional approach to higher education. Through this approach, it is possible to combine education, training and work since many people cannot afford to leave their work for education. It is a learner-centred approach to learning allowing flexibility and choice of contents as well as organization of the learning programme. Along this line, this approach is profitable also for employers. The system of Open University offers possibility of organizing learning and professional development in the work place which is often flexible, and saves costs for travel and subsistence allowance. In this way, open university encourages both the employees and employers to jointly invest for training and education in order to pursue common goals based on shared values and culture. Eventually it contributes to increase productivity and supports the development of communication and other work-related skills.

The role of higher education in particular and education in general is to facilitate the process of planning and leading the society towards conceiving and actualizing the future. I believe that the future of any country is not predetermined. It is rather created through our careful thinking and clear vision. Therefore, every society should not be prepared only to address the present issues and problems but at the same time be prepared to plan for the future. For this purpose, as higher education is the pivotal factor to determine the extent of our prosperous future, more access to quality higher education is necessary. It has, therefore, been a matter of prime concern for us to revitalize the existing efforts seriously directed towards making our education more qualitative, relevant and innovative in order to enrich the human resources as an invaluable economy. At the same time it should strive for offering higher education for as many people as possible. It is through Open University, I argue, the state can provide more access to higher education for many people than the conventional way of doing it.

To Begin with

It should be mentioned here that when we talk about Open University, it is not confined to higher education. To-day's fashion is that an Open University covers both formal education and non-formal literacy. Open University, by its nature, is an informal way of providing education. There is not any fixed model for an open learning centre or university. We can make our own model as per our needs. Taking the Nepalese situation into consideration, it is advised that Nepal should follow the model, as elsewhere, that allows the institution to work for education at all levels. For this purpose, we should be prepared to exploit the existing resources and infrastructure at the initial stage for the establishment of an Open University. To be specific, the Distance Education Centre (DEC) at Sanothimi, which has been providing primary teacher training through its radio broadcast programme for the last several years should be used as a lead centre for the present purpose. We should also learn lessons from the Purbanchal and Pokhara University that adequate preparation should be done before any university is

established. Another step necessary to take is to work on the Draft Open University Act submitted to the Ministry of Education and Sports by the Education Task Force -2057. This act should be processed soon and a move needs to be made towards getting it approved from the parliament. Then a full-fledged Open University should be established by using our existing physical and human resources. For this to happen, careful planning and professional consultation is necessary.

Improving Teacher Education Through Distance Mode

– Dr. Mana Prasad Wagley*

Context

The context of Distance Education and Open Learning in Nepal would be interesting to frame a base for the use of educational teclmology in future. To explain the present context it is also essential to know how Open Learning has been flourished in other countries including the experience of the SAARC countries. The following points elaborate the context of distance mode in Nepalese situation.

- History of open university around the world says that the foundation of the university started from teacher education.
- Training of teachers has been an old concept; training means for specific skills; our teachers need broad skills; so we have to educate them rather than training.
- Is teacher education possible through radio? This has been a concern of many underdeveloped countries today. Nepal is the leading country in the SAARC region to start teacher education through radio.
- Radio can be heard in almost all villages; television access is only to the twenty seven percent of the total population but still underused; computer facilities are urban-based.
- We have tools to educate our teachers. We are using them. They are audio and print.
- Experiments were carried out to distribute cassettes and some sets of self instructional materials in some resource centers in the pest, the result of which is still not known clearly.
- Investment in distance mode has been made by the government since 1978, the impact if which is yet to be studied.
- Several proposals were made in the past for the development of distance education center as a real center, but no improvements have been made in this regard.
- We have resource centers by name, which run every Saturday for a whole day at the time when training program goes on air. Do we have necessary facilities at the centers as centers?
- We have two resource teachers in each resource centers to conduct the contact sessions, the effect of which seems not encouraging so far.
- We conduct orientation sessions and training of trainers each year which have become more ritual than fruit bearing.
- We are spending more than one hundred lakhs each year in the name if distance education and we are not ourselves happy about the achievements we have made so far.
- These contextual factors always draw our attention towards the question: is it worth running teacher education programs through radio?

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* Professor, FOE, Tribhuvan University

Grumbling

Even if the government has been spending a lot of money for the purpose of teacher training through distance mode, the attitude of the general public towards distance teacher training is not positive. Not only in Nepal it is also the same in other countries to categorize distance education degree as second-class degree. The following are some of the judgement aspect of general people towards distance mode:

- Teachers trained by distance mode are considered second-class category as compared to teachers trained through face-to-face mode.
- Teachers are less facilitated in distance mode. They are disadvantaged.
- Teachers do not listen to radio because the timing is not suitable.
- Resource teachers are not competent to deal with the problems of teachers related with all the subjects of the package.
- DEC is running the programs beyond its capacity.
- English, science and arts cannot be successfully taught by radio.
- There has been no clear policy of the government regarding the development of DEC at present and in future.
- The government did not implement the strategic plan for training primary school teachers which accorded a high priority to DEC.

Efforts Made to Improve the Situation

Although there are some dissatisfaction among people regarding the DEC programs because of various reasons, the program is a must in a topographical situation like ours. In this regard the government has also made some efforts to improve the situation. Some of the major steps taken by the government are as follows:

- DEC got the responsibility to cover the country instead of its 10 districts quota in the past.
- DEC also got opportunity to run the 2nd and the 3rd package.
- It has a kind of autonomy to develop the programmes, both audio and print based on the given package.
- It also has the autonomy to prepare, administer and score the test and make decisions even if certain formalities have to be fulfilled.
- It has no restrictions to devise plans an execute them to improve teacher training.
- It has been trusted to experiment on interactive radio instruction, a program to improve the quality of education in schools.
- Again the issues are: why did it not take off well? Will it crash-land somewhere?

Importance

It is very essential that the importance of DEC be disseminated among the public. Looking at the improvements made by other countries, it has been proven that the DE mode can successfully be implemented in formal, informal and non-formal education sectors. The followings are some of the tips that indicate the importance of DE mode in Nepal:

- Either we improve it or quit. There is no use of investing on it if it does not work.
- Are we tired of DEC? Or is there any hope that it works?
- There is no alternative with country to train all the backlogs of untrained teachers. It is almost impossible to train all of them through face-to-face mode.
- The country is at the crossroad of establishing an Open University. DEC is the only place where people with distance mode can be found. It only has the facilities and experience to help the government in distance mode.
- Then why is it neglected so much? Is it neglected or it has not been forwarded strongly to convince the authority for its development?
- DEC, if improved, can play a vital role in the enrichment of educational quality in the country.

Measures for Improvement

In order to improve the situation and bring DEC in the mainstream of educational development of the country, the following measures have been recommended as the initial steps:

- Prepare a master plan to develop distance education center. A strategic plan for 20 years is essential.
- Structure of distance education center needs to be revisited making it an autonomous body.
- Start with improved teacher training programs and extend it as a center for quality education.
- Supplementary instructional materials and packages would help teachers improve the quality of instruction in classrooms. DEC should start doing this.
- DEC should be given the authority to design, develop, produce and sell materials for its long-term sustainability.
- At least one model resource center need to be established in each district that will support other satellite resource centers with materials, equipment, manpower and other facilities.
- DEC alone can do nothing in the present position. Model resource centers should be equipped as district distance education centers with update information system and to other communication facilities.
- Permanent positions of resource persons in the model resource centers need to be established so that regular monitoring of the DEC program becomes possible in each district.
- DEC should have an authority to adjust the teacher training curriculum according to the modality it adopts.
- People, organizations, and institutions directly or indirectly associated with DEC, need to build positive attitude towards it.
- If somebody has a better idea to improve the teacher training through distance mode, that should be immediately forwarded to DEC.

- Start developing television programs as pilot programming so as to devise ways to use the media immediately after Nepal Television (NTV) goes in satellite technology.
- Start developing plans and conduct small experiments to use interactive communication media such as two-way audio: one-way video, two way audio; two-way video etc, establishing relations with televisions broadcasting companies.
- Establish good working relations with Nepal Telecommunication Center (NTC) to use available facilities in subsidized rate.

The Distribution of Science Equipment and Materials under SEDP:
An 'Aid' Package or a Planned Attempt to Improve Science Education?[1]

– Min Bahadur Bista, Ph.D.*

Introduction

School surveys conducted in Nepal suggest that secondary school teaching is often hampered by lack of equipment and teaching materials. In particular, science teachers are faced with the problem of equipment shortage, as the practical work is often an accepted part of science instruction. Convinced of the importance of educational materials to make teaching more effective, there have been at least three organized efforts to equip the secondary schools of Nepal with the science equipment and materials in the last three decades or so. In the early 70s, 234 secondary schools of Nepal were provided with the basic science equipment with UNICEF assistance. During the same period, UNICEF also assisted Ministry of Education (MOE) with the development of the Science Equipment Center. Technical training was provided to personnel and general supplies were also distributed. In order to enable the Center to design and prepare the prototype educational materials, many tools and a number of materials were also supplied.

In the mid-80s, 700 secondary schools received science equipment and materials under the ADB-assisted Science Education Project (ScEP). The same Project assisted the Janak Education Materials Center (JEMC) to enhance its capacity in the production of prototype educational materials.

The Secondary Education Development Project (SEDP), while naturally dealing with the key issues of secondary education, attempted to improve the quality of science teaching and learning in the secondary schools of Nepal. As envisaged in the Project Document, the Project provided science equipment and materials to 1,000 secondary schools. The program covered a broader spectrum of schools. These schools were selected using criteria such as prospect for future expansion, pass percentage in the SLC examination, availability of a dedicated science room, willingness of the School Management Committee (SMC) to support the school, school location, presence of at least one female teacher, etc.

The supply of science equipment and materials was primarily a centralized undertaking. The equipment and materials were procured, assembled and packed centrally and were distributed to the 25 Secondary Education Development Units (SEDUs) to be collected by individual schools. The schools were identified centrally by the Project. Distribution of packages was reported to be reasonably smooth despite transport difficulties. Due to poor transport services and isolation, some schools in the remote districts experienced transport delays. Each individual school was

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1 This manuscript is based on a research study conducted by the author for the Science Education Development Project (SEDP) in 1999. The research was funded by SEDP.

* Consultant, Institutional Linkage Programme, DANIDA.

made responsible to bear the transport costs, including the hidden costs in terms of storage, replenishment and repair. The Project conducted orientation meetings aimed at developing skills on the part of science teachers in using the equipment and materials supplied. SEDUs provided advisory services to teachers on the use of equipment.

While SEDP has met its physical target of distributing the science equipment and materials to 1,000 secondary schools, there are growing concerns that the supplied materials are not being used in the schools as expected. Anecdotal evidence suggests that science equipment and materials provided by external support agencies or other sources are in many cases unused. It is said that teachers in most cases lack the pre-requisite training in the use of such equipment and are often times threatened by the delicate nature and appearance of the equipment. There are also reports of teachers failing to supplement Project-supplied materials with materials of their own, despite advice on how to do so during the training courses. Most secondary schools operating in the remote districts of Nepal have inadequate storage facilities, which results in loss or damage of equipment and teacher inaccessibility. There are isolated observations that the equipment and materials available in schools remain unused primarily because the schools do not offer conditions often required for effective use. Usually these observations, as well as many others, have been admittedly subjective, based on somewhat isolated field observations. Many of these concerns and observations clearly pointed to the need for a systematic study on the supply and use of science equipment and materials supplied under SEDP.

Purpose of the Study

The present study was designed with the main purpose of examining the supply, storage and utilization of SEDP-provided science equipment and materials in a sample of secondary schools. The study also examined the impact of the science equipment and materials provision in schools on two dimensions: (a) conditions of science teaching, and (b) school efficiency and achievement indicators.

Method

SEDP-supported schools are scattered throughout the country ranging from the Terai to the Mountains and from the Far-Western Development Region to the Eastern Development Region. For the purpose of the present study, nine districts were selected through purposive method representing the various development regions and ecological zones. From every sample district, depending on the numbers of schools receiving Project support, 5 to 10 schools were selected except for Kathmandu. In this way, altogether 71 secondary schools in nine districts of geographical regions were included in the study sample. In selecting the schools, school location (rural/urban), school level (secondary/higher secondary), year of selection (first batch/second batch), and school type (public/private) were considered as the basis of stratification. The sample comprised 38 schools located in rural areas and 33 in urban areas.

To gather information required for the study, four sets of instruments were used. A short description of these instruments is presented below:

1. School Profile Data Form. This instrument was designed to collect background information of the sampled schools covering aspects such as school location, school type, school enrolment, SLC results, and staffing patterns.

2. Survey Questionnaire for Science Teachers. The major purpose of this questionnaire was to collect information on the supply, storage and use of science equipment and materials. It also sought teacher perceptions regarding the quality, adequacy, utility and relevance of the equipment and materials.
3. Classroom Observation Schedule: The main purpose of this instrument was to find out actual use of the equipment and materials in science teaching. The teachers who were observed by the Field Assistants were not pre-informed of the classroom observation. The intention was to do an unobtrusive study of the way teachers use science equipment and materials.
4. Science Teacher Profile Form: This form was prepared and used with a view to gathering information on the science teachers, which mainly related to their age, sex, training, education, teaching load, participation in SEDU-based training activities etc.

Findings

To begin with, an attempt was made to prepare a profile of the teachers teaching science subjects in the secondary schools. Assessment of characteristics of science teachers reveals that the sample schools have a majority of male science teachers, reaching almost 89 percent. The science teaching force in the sample schools is young, with a mean age of 33.5 years. They are most frequently between 20 and 40 years old, with an average teaching experience of 10 years. These teachers meet the government-defined academic qualification of intermediate level (12 years of education) for lower-secondary level and Bachelor level (14 years of schooling) in the case of secondary level. A large majority of them had studied science as a major subject and were assigned to teach science-related subjects. About 13% of all the teachers currently teaching science have no science background. Apparently, science subjects are still taught by teachers who have not studied science courses in colleges. Less than half of the teachers acquired professional degree from FOE campuses and nearly half of them have undergone SEDU-conducted in-service training courses. It is shocking to note that about 58% science teachers do not have permanent status in teaching, indicating potential risk of teacher attrition. On the whole, the quality of the science teaching force in the sample schools is comparable to any indicator at the national level.

The schools are found to have learnt about the science equipment and materials distribution scheme of the Project from five sources: (a) schools, (b) DEO and his staff, (c) SEDUs, (d) neighboring school and (e) communication media (radio and print). Of the several sources, the existing network of SEDUs is seen as the most effective source of information. Most of the schools and teachers reported having known about the program through the SEDUs. It implies that the network of 25 SEDUs has built a system of information and communication with the secondary school system of the country. Despite difficult terrain and lack of transport facilities, the Project appears to have delivered the equipment and materials efficiently. For the most part, the equipment and materials were delivered on schedule and with little time lapse.

Since the Project adopted a competitive selection procedure, the schools need to understand well in advance the criteria that make them eligible to apply and get selected. The more schools are informed about the program, the more they are prepared to compete. The schools were asked

whether they have had any understanding about the selection criteria and distribution procedure. Interestingly, a large number of schools reported their ignorance about the selection criteria and distribution procedure. Both rural and urban schools pointed out having not known about the program in advance. However, a slightly higher proportion of rural schools did not know about the program as compared to their urban counterparts.

Perceptions of beneficiaries confirmed limited involvement of science teachers in the establishment of contents in the packages. The contents of packages supplied to the schools were centrally determined by science educators and experts working in the Project Office, with very limited involvement of teachers who actually use the science equipment and materials. A large number of teachers did not know in advance about what was included in the packages. Teachers interviewed in the survey emphasized the need for more consultation in determining the requirements.

The Project adopted a uniform approach in the distribution of supplies wherein all schools received the supplies in the same amount/quantify, regardless of the numbers of students. Secondary schools in Nepal generally vary in their size, ranging from a few to several hundred students per school. Large school systems will obviously require equipment and materials in large quantities and vice versa. In any case, it is important to ensure that supplies match the needs of the school. Teachers' responses clearly indicate that in most cases the equipment and materials supplied by the Project do not match the needs of the schools. A large number of teachers in the survey rated the amount/quantity of equipment and materials supplied as being insufficient. The assumption that the quantity required of any item is identical for every school in the country must be considered too simplistic. The uniform approach has resulted in the mismatch between the items supplied and the actual needs of the schools. Large schools systems have been disadvantaged due to such a policy.

The Project insisted that all schools participating in the program must have a dedicated science room and appropriate storage facilities. Field data showed that storage situation in most schools was not appropriate. Although some schools had provision appropriately suited for storage, but most others were without such facilities. The schools visited by the study team were of two types: (a) good facility schools and (b) poor facility schools. Storage arrangements were more likely to be appropriate in the first category of schools than those in the second category of schools. The number of schools falling in the first category is painfully low. The centralized screening of schools based on self-reported information combined with limited field verification appeared to have resulted in the selection of schools which did not have appropriate physical conditions for effective storage of the equipment and materials provided by the Project. In every school visited by the study team, there was little enthusiasm among the teachers for taking care of the equipment and materials. Evidence of negligence could be observed.

The supply of equipment and materials supplied was found to have created some confusion among school administrators and teachers as to whether the Project will re-supply them annually or after a lapse of few years. Not knowing what will happen tomorrow, some schools were carefully preserving the equipment and materials supplied to them. Apparently, the whole component of equipment distribution was conceived without seriously considering the

replacement or replenishment provision. Although some schools have mobilized resources locally for this purpose, but most others have remained passive or indifferent. In these schools, resource mobilization for purpose of science education has not been thought out.

A large number of schools reported having noticed damages of one kind or the other to the equipment and materials, which may have occurred in transit. The most commonly reported problem relates to the breakage of delicate items. Yet, other problems such as unlabelled items or mismatch between specification and the items supplied are also reported. In the absence of a definite reporting mechanism and the lack of provision of replacement, most schools did not bother to report to the concerned authority even in cases of serious damage. A few of them reported the problems to the SMT, but no action was taken. Beneficiaries perceived the distribution scheme as if it were an 'aid' package, where recipients have a passive role. It is therefore normative to accept anything in any form or condition. It would, however, be naïve to expect flawless execution of a distribution scheme of this magnitude and scope.

Based on teacher reported information, it can be stated that teachers in large numbers did not have sufficient understanding about the items supplied and many did not know what item was to be used and when. It is alarming that nearly one third of them saw themselves inadequately prepared to use the available equipment and materials. Either these teachers did not attend the training or were inadequately prepared in their pre-service courses. Most annoying is the fact that there was no synchronization between the delivery of science equipment and training. One urgent action would be to identify such teachers and subject them to training courses to put them on board.

Government's investment in science education was received locally with little or no enthusiasm. The initiative to equip often resource-poor secondary schools with science equipment and materials was not seen as an important support for improving science education. There was little evidence that the science equipment and materials provided under the Project had contributed to create the basic science teaching-learning facilities needed to deliver science education. Both school administrators and teachers were not satisfied with the equipment and materials supplied to their schools by the Project.

Perceptions of beneficiaries and users confirmed that the equipment and materials provided to them did not meet with the reasonable standard. These supplies were described as being not compatible with the science curriculum of secondary grades (9 and 10). The science teachers did not rate the pedagogic utility and durability of the equipment and materials positively. The Project provided short courses to train science teachers in the use and repair of equipment and materials. There were science teachers who had yet to benefit from such courses. The training support provided by the Project in matters of use and maintenance of the equipment and materials was found to be inadequate by those who had undergone through the training courses.

Perceptions of beneficiaries/users confirmed that there was much scope for the promotion of classroom use of the Project-supplied equipment and materials. Not all items were found to be in use, but certain items were used more often. Several items had never been used. A serious review of contents is thus warranted. The equipment and materials were used for both lower-secondary and secondary grades, but higher-grade children had greater prospect of being

exposed to them. In the main, these supplies were more often used for purpose of demonstration. Some schools were found to have made internal arrangements to engage teachers and students in practical science by setting aside certain hours of the week for purpose of practical work.

Classroom observations of 51 science teachers revealed interesting findings. Only one-third teachers did use one or other kinds of materials, while two-thirds of them did not use any materials at all. These observations were performed in an unobtrusive manner — without warning them in advance that they will be observed. Most of the equipment or materials found to be in action were the ones that were supplied by the Project. Locally prepared materials were kept at minimum. Teachers performed demonstrations during the class. Lecture and question-answer methods of teaching remained dominant, but a larger proportion of teachers followed the latter method. Analysis showed that SEDU-trained science teachers were more likely to use educational materials and follow interactive teachers than their counterparts who have not had any training. This association between SEDU training and incidence of use of educational materials and participatory teaching methods provides a basis for further exploration.

Available incentives or disincentives may influence a teacher's decision to use or not to use educational materials. Incentives in financial terms were largely unavailable to the teachers. In a few cases, science teachers were provided with less teaching load to allow them to organize the laboratory or practical work. There was no pressure coming to the science teacher from his or her peers or colleagues to use the available materials. A number of factors were identified to prevent teachers from using educational materials. Most prominent among them are: heavy teaching load, content overload existing in the science curriculum and textbooks, large class size, lack of physical space, and the lack of provision for assessing practical work in the SLC examination. No follow-up visits were ever carried out by the Project. These contextual constraints and shortcomings need to be removed not only to promote the classroom use of Project-supplied science equipment and materials but also to raise the standard of education as a whole.

Perceptual data gathered from teachers confirm that there has not been any tangible improvement in the conditions of science teaching in schools since the supply of equipment and materials from the Project. Increased students' interest in the science subject and greater exposure of students to the empirical aspect of science teaching were the two positive changes felt by the teachers in a very small number of schools.

Analysis of longitudinal enrollment data, both overall and girls separately, reveals no improvement in the Project-assisted schools on these two counts. Enrollment growth rates observed for the sample schools are lower than the national averages. However, the Project-assisted schools showed improvement on the indicators of girls' participation in secondary education, average passing rates in the SLC examination and average test scores in science. However, these data require careful interpretation because gains in these three indicators may be a function of a number of variables, which have not been examined in the present study.

Conclusions and Recommendations

A number of lessons can be learned from this experience. The fact that science equipment and materials are provided to schools does not mean that they will be used regularly and effectively.

These inputs will have substantial impact only when appropriate working conditions, satisfactory incentive system and support structures are in place. Recommendations for the Ministry of Education include making policy reform with respect to science curriculum and the SLC examination to define the role and place of practical work and, in order to make local arrangement for regular re-supply of consumables and other items, reviewing the existing free secondary education policy to allow schools raise some funds locally to pay for quality expenditures. On the eve of introduction of the new curriculum materials, it is recommended that all secondary schools of the nation particularly the public ones must be provided with science equipment and materials as demanded by the curriculum to enable them to deliver the new curriculum materials. MOE should also pursue a policy goal of holding teachers more accountable and motivating a stronger commitment to higher level of student achievement. At the same time, MOE should consider providing greater incentives to science teachers not only to promote practical aspect of science teaching but also to develop a strong science teaching force by attracting qualified and competent persons in the profession.

The following measures are recommended to promote the use of science equipment and materials:

1. All schools in the country must at least be provided with a dedicated science room or a locally designed school laboratory, which can be built at affordable costs.
2. Update the contents of science equipment and materials in consultation with science teachers working in different settings;
3. The factor of school size should be taken into account in determining the amount/quantity of equipment and materials to be given to each individual school.
4. Re-activate the system of benefit monitoring and evaluation system within SEDEC to closely monitor the storage and use of equipment and materials made available to schools under the Project, including the use of locally available materials.
5. Strengthen the teacher follow-up and support program so as to provide on-site, in-class professional support to teachers.
6. Organize training courses in the use and maintenance of science equipment and materials giving priority to teachers not attending similar courses in the past.
7. Prepare an illustrated handbook explaining the use and maintenance of the equipment and materials.
8. Deploy one technician at each SEDU who can monitor the use of equipment and materials and at the same time carry out the repair work within the SEDU catchment area.
9. Introduce school clustering and local clubs or associations of science teachers to promote frequent exchange of professional experiences and sharing of available resources.
10. Establish linkage of science equipment and materials through references to teachers' guides, science textbooks, training materials and examinations.
11. To reduce the need for expensive imports, the government might consider identifying the local production and improvisation strategies or other cost-effective ways of supplying equipment and materials needed for science teaching.

12. Upgrade management capabilities of school administrators, particularly in the area of monitoring and evaluation of student and teacher performance, appropriate use of available resources, transfer of training skills and knowledge.

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Distance Education from the Perspective of Technical Education and Vocational Training

– Dr. Tanka Nath Sharma*

As we move through the new millenium, learning and training are facing enormous new opportunities and challenges. In this era of global competition businesses and industries are seeking new strategies for developing their workforce and improve performance of their organizations in a rapidly changing environment. Rapidly changing technology and powerful new developments make it difficult for skilled workforce and their trainers to stay current in their field. Moreover, there is a need to expand access and opportunities for education and training to wider segments of the population and age groups living in geographically remote locations, deprived of the formal schooling and in need of exposure to new technologies, approaches and methods. Distance education has become a strong approach to flexible delivery in education and training. Distance education ideas have been to increase access to education and training resources by eliminating the barriers of place and time (Olgren, 2000).

Distance learning is not a new idea; it is an evolving instructional method. Distance education was initiated in the 18th century in Europe in the form of corresponding courses. In the 20th century, radio and television joined the mail system as learning venues. Following this development , interactive video conferencing became popular in the United States. With the advancement of information technology and popularity gained by internet, interactive Web-Based learning is becoming popular in the new millenium.

In this paper, concept, importance, approaches and strategies, means and media, program evaluation and pertinent issues of distance education will be discussed.

What is Distance Education?

Before discussing about distance educational system, we first need to consider what we mean by distance education and systems. Frantz & King (2000) defined distance education as:

Planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements. (p. 2)

Similarly, King & Bartels (1996) defined distance education from the perspective of learner as:

A class of methods of instruction, either formal or non-formal, that place learner apart from the teacher, or the learning and practice detached by time and/or space from the teaching and the instruction. Communication channels and media such as computers and associated networks, print, audio, cable, satellite or videotape or combinations of these media are required to bridge the time and distance.

* Professor, School of Education, Kathmandu University

Based on these definitions, we may outline the key elements of distance education from the perspective of Technical Education and Training (TET): a focus on the learner, selection and use of appropriate instructional strategies, the types of communication channels, instructors and designers, and educational outcomes to be achieved by the process. Distance education is a dynamic system that allows flexibility and multiple options for the learner. Under the guidance and continued interaction with the teachers at distance, the learners learn, practice and progress using appropriate means and media. It allows an avenue for promoting self-paced learning and competency-based approach in TET.

Within a context of rapid technological change and shifting market conditions, the Nepalese education system is challenged with providing increased education and training opportunities without increased budgets. Many educational institutions in the developed countries are answering this challenge by developing distance education programs. At its most basic level, distance education takes place when a teacher and students are separated by physical distance, and technology. These types of programs can provide adults with a second chance education and training opportunity to those people who could not continue college education or traditional technical education and training because of limited time, distance or physical disability, and financial condition.

Importance of Distance Education in Technical Education and Training (TET)

There are increasing pressures to diversify the forms of learning opportunities in higher education, vocational education and employee training (Goodyear, 1996). These pressures are varied and apply with different strengths in different circumstances. Firstly, there is a need to educate and train vast majority of the people who are deprived of the education and training opportunities from the traditional formal structure. The traditional education and training system impose increasingly unacceptable restrictions, e.g. rigid schedule, student ratio, space, equipment and number of staff. A flexible instructional delivery system is required to reach wider population groups.

Secondly, need for broadening the access to education and training to the deprived segments of the population has been realized recently. The Nepalese government is committed to extend its support in skill training specially to those who are deprived of technical education and training opportunities. Education and training institutions may take advantage of potential incentives available for the purpose of raising the participation rates of ethnic minorities, women, and groups which are under-represented in various sectors of education and training.

Thirdly, there are calls for greater learner autonomy both from the learners and other interest groups such as employers. Learners want to have greater control of their learning in their own pace and time. Similarly, employers want employees with demonstrable capacity for on-going self-directed learning and professional development. Distance education allows such freedom to the learners and can meet the expectation of the employers.

Wills(2000) claimed that many teachers feel the opportunities offered by distance education outweigh the obstacles. Teachers usually experience that focused preparation required by the

distance teaching improves their overall teaching and empathy for their students. Wills states that challenges posed by distance education are countered by the following opportunities:

1. Reach the wider student audience,
2. Meet the needs of students, who are unable to attend on-campus classes,
3. Involve outside speakers who would otherwise be unavailable, and
4. Link students from different social, cultural, economic, and experiential backgrounds

Distance Education Delivery

Wide ranges of technological options are available to the distance educator. They fall into four major categories:

Voice: Instructional audio tools such as interactive technologies of telephone, audio conferencing, and short-wave radio. Passive one-way audio tools such as audio tapes and radio also fall in this category.

Video: Instructional video tools include still images such as slides, pre-produced moving images, such as film, video tapes, and real-time moving images combined with audio conferencing, one-way or two-way video with two-way audio.

Use of satellite television: Satellite technology allows education, training and development to reach remote audience in small groups in a timely, cost-effective manner (Forcinio, 2000). It is interactive so the lecture/demonstration receives almost continuous feedback from the students so that content and pacing can be tailored according to the group. Forcinio claims that satellite technology has proved to be successful in North America and is being extended to Europe. Satellite technology enables students from around the world to simultaneously take courses via television and two-way communication.

Use of Computers: Computers send and receive information electronically. Computers are widely used as instructional tools in distance learning. Computer application in distance learning are varied and include:

1. Computer Assisted Instruction (CAI)– uses the computer as a self-contained teaching machine to present individual lessons.
2. Computer-managed instruction (CMI) – uses the computer to organize instruction and track student records and progress. The instruction itself need not to be delivered through computer, however, CAI is often combined with CMI.
3. Computer-Mediated Education (CME) – uses the computer applications that facilitate the delivery of instruction. Example of CME are: electronic mail, fax, real-time computer conferencing, and World-Wide Web applications.

Printed Materials: Printed materials are the fundamental elements of distance education and basis from which all other delivery systems have evolved. Printed materials have been used since the beginning of correspondence courses, which became popular since 1840s. Even today, various print formats are available for the purpose of distance learning. Print materials include textbooks, study guides, self-learning packages, workbooks, self-paced learning modules, case studies and syllabi.

Printed materials can be effective means of delivering distance education if designed properly. Individualized learning resources and self-paced learning modules have added new dimension in the field of technical education and vocational training these days. Comprehensive competency-based learning resources can be designed to meet the skill development needs of the students. Well prepared training manual, work books and self-learning packages can be effective materials for TEVT at distance. Special expertise is required to design and develop such materials.

Selection of Appropriate Distance Learning Technology for Technical Education

Technology plays a key role in the delivery of distance education. Technology trainers should select appropriate technology and focus their attention on instruction outcomes. Before selecting a delivery system, distance educators in technical education and vocational training need to focus their attention on the needs of the learners, requirements of the curriculum, knowledge and skills to be developed, constraints to be faced by the trainer and the level of technology in the Country. Use of single technology may not serve all the requirements and educational needs of the learner. Therefore, combination of some of the instructional technologies may make the distance learning more effective and meaningful. Systematic approach will result in mix of media, each serving specific purpose (Willis, 1993). For example:

1. Well - developed self-learning printed materials and appropriate print materials can provide much of the basic instructional content, as well as, comprehensive skill development guide for the students. Well-designed self-learning materials and users guide can be useful media for skill development.
2. Interactive video conferencing can provide real time face-to- face interaction. This will allow the instructor to demonstrate and students to practice and can be an effective means of delivering technical education and vocational training at distance. This is also an excellent and cost-effective way to incorporate guest speakers and content experts who are only available in the cities.
3. Interactive Satellite Training through television have strength of providing education and training to wider population groups. This technology is considered to be efficient and effective for distance learning, training and corporate communications (Sims, 2000). Because of its interactive nature, satellite training technology is becoming popular through out the world. Using this technology, technical education and training institutions and corporations wishing to install their own distance learning and business television network can interact with their instructors, trainers, trainees, and corporate executives through a variety of interactive services that incorporate push-to-talk microphones and interactive key pads. For example, an Israel-based Arel Communication and Software has opened a North American operation in Atlanta, Georgia in early 2000 and is now marketing its Distance Education and Learning system, which provides on-to-many virtual classroom and communications link and also encompasses a single student desktop application (Sims, 2000).

4. Real-time computer conferencing will be an effective means of providing technical education at distance. This teclmology allows instructor and students two-way audio-visual interaction allowing students to practice following the instruction and demonstration presented by the instructors. The two way visual communications allow the student to ask questions and receive instruction while practicing skills.
5. Electronic mail using computers can be used to send messages, assignment, feedback and other targeted communication to one or more class members. It can be used to increase interaction among students.
6. Pre-recorded video tapes can be used to present class lectures and visually oriented contents. Students can learn skills by following demonstration presented in the video and practice skills in their own time and pace.
7. Fax can be used to distribute assignments, last minute announcements, and to provide timely feedback.

Effectiveness of Distance Learning in Technical Education and Vocational Training

Using integrated approach in selecting and using instructional media and methods can enhance effectiveness of distance learning. It is the task of educators and trainers to carefully select appropriate technologies from among the available options. The goal is to build a mix of instructional media, meeting the needs of the learner in a manner that is instructionally effective and economically affordable.

Effective distance education program begins with careful planning and focused understanding of program requirements and students needs. Appropriate technology and instructional media can only be selected once these elements are understood in detail. Effective distance education programs do not happen spontaneously; they evolve through the hard work and dedicated efforts of many individuals and organizations. Successful education and training in distance rely on the consistent efforts of students, faculty, facilitators, support staff, and administrators.

Students are one of the key players in distance education and their primary role is to learn. Effective distance education program should meet the instructional needs of students. To fulfil students' learning needs, they require motivation, planning, and the ability to analyze and apply instructional content being taught in a real work settings.

Success of any distance education efforts depends on capability, technological exposure, dedication and commitment of an instructor. The instructor must develop understanding of the characteristics and needs of distant students with limited face-to-face contact. The instructor should adapt instructional strategies taking into consideration the needs and expectations of multiple audiences. In order to make instruction effective, the distance instructor should keep up-to-date with technology, function effectively as a skilled facilitator and explore new approaches and methods in delivering instruction.

On-site facilitators act as bridge between the students and the instructor. The role of on-site facilitators is significant in teaching technology through distance education. In order to make distance education effective, a facilitator must understand students being served and the instructor's expectation. They must be willing to follow the directive established by the teacher

and serve as on-site tutor for the students. On-site facilitators set up equipment, collect assignments. administer tests and act as instructors' on-site representative.

Support staff and administrators are equally important to make distance education effective. Support staff carryout the support service functions such as registration, instructional materials ordering, material duplication and distribution, facilities scheduling, managing technical resources, arranging practical experiences for students, etc. Similarly, effective distance education administrators should be consensus builders, decision makers, and referees. They work closely with technical and support service personnel, ensuring that technological resources are effectively deployed to further the institution's instructional mission.

Web-Based Distance Learning: An Option for TET

Throughout the 1980s and early 1990s, many colleges and universities in advanced countries implemented video networks for distance education (Olgren, 2000). Interactive video network opened up an avenue for delivering technical education and training at distance. Distance education through instructional television and interactive video provided flexibility in education and training. Recent development in information technology, particularly in internet/Web applications, has opened up new models of flexible learning that take advantage of technology capabilities to tailor programs to difference audiences and learning needs. The new models are more learner-centric in providing asynchronous (anyplace, anytime) learning options. From the development of the new model, Olgren (2000) suggests that the distance educator in TET can select a variety of learning formats such as:

1. Collaborative learning to involve groups of students in online discussion forums for active participation in debates, small group projects, problem solving exercises.
2. Self-paced learning packages are available on the Web, allowing students to work through course materials and acquire competencies on their own pace, starting and ending at any time.
3. Wide-scale distribution of pre-produced or live presentations to any number of locations.
4. Simulations and virtual realities to create lifelike environments on the Web.
5. Two-way video applications that links instructors and students for real-time interaction.
6. Mixed-mode application, combining Web resources or internet communication with other technologies – interactive video networks, instructional television, audio conferencing, print materials, etc.

Advances in the development of the Internet infrastructure and associated technologies are being adopted in the developing Countries to enhance high quality education and training to their citizens (Grant, France & Hsu, 2000). There is a high potential for developing distance education network using Internet in Nepal. Although the cost of developing sophisticated Virtual Classrooms (VCs) may be beyond the means of Nepal, less sophisticated can be cost-effectively developed and their use can bring significant changes in the quality of education and training in Nepal.

Grant, France & Hsu (2000) states that a Virtual classroom consists of (1) educational materials on the Internet via the World Wide Web that are accessible by students who have access to the

Internet; and (2) mechanism that supports interactions between instructors and remote students. The VCs have capability to provide consistent quality education and training materials and interactive demonstration of practical exercises to students across a wide geographical area, in a timely manner and with minimum manpower. In a mountainous country like Nepal where high quality technical teachers and training facilities are in and around urban cities, VCs can be used to enhance accessibility of technical education materials, experiences, expertise and facilities provided at the urban centers by students in more remote areas of the country. Virtual Classrooms can be useful for providing technological education and training to the people residing in remote locations. For example, people in Jumla or Mustang may receive hotel management training delivered by an expert in Kathmandu through an interactive virtual classrooms in those locations.

Technology-based distance learning facilities such as Virtual Classrooms supplemented by self-learning instructional materials, instructional television and access to practical experience with periodic performance assessment would be effective means of providing technical education and vocational training at distance. Previous research suggests that distance education is as effective as traditional education (Hanson & Moushak, 1996). Some studies have shown that participants in distance learning programs are more motivated, self-directed, and achieve more than participants in traditional classrooms achieve (Johnson, Lohman, Sharp & Krenz, 2000). Based on this foundation, technical education and vocational training can be made accessible to the broader segments of the Nepalese population if the government shows its commitment and willingness to invest in the development of distance learning network in the Country.

Challenges and Constraints

Although distance education has become a strategic means of providing education and training to business enterprises, educational institutions, government and other public and private agencies, there are several challenges and constraints that need to be addressed while implementing systematic distance education programs in Nepal. Some of the constraints and challenges of delivering technical education and training at distance are as follows:

1. It requires significant amount of investment to set up distance learning facilities in different training sites. Due to the resource constraints, Nepal may find difficulty to develop effective distance learning sites.
2. Level of technological awareness and educational level of potential trainees is very low. Without face-to-face interaction with the instructors distant learners may find difficulty to grasp technological concept and performance skills delivered through distance education.
3. Nepal does not have adequate expertise to design, set up and operate distance learning centers using most recent technologies. So far, there are no higher education institutions that prepare distance education experts needed for the development and operation of distance education facilities.
4. Nepal lacks sufficient number of well trained technical instructors who can comfortably deliver technical education and training at distance.

5. The policy makers and administrators have not realized the concept of distance learning and its importance of reaching the wider audience. Without their understanding and support distance education programs can not be made effective and efficient.
6. Telecommunication network and television network are not well developed to address the technological requirements of distance learning. At the present level of technology, it would be difficult to set up interactive virtual classrooms for distance education.
7. It is important to consider the maintenance aspect of the distance education facilities and equipment. It is difficult to find adequately trained maintenance personnel for distance education equipment.
8. Currently we do not have adequate expertise to design and develop instructional materials, self-paced learning packages, CD-ROMs and other relevant instructional media.
9. Only technological theory, concept and soft skills can be taught through distance education. To teach hard core skills, supervised intensive workshop practice or work-site training is needed.

Recommendations

1. Survival and success of distance education program depend on the level of support from the top management and the government. Before initiating any distance education scheme, there should be full support from the top management and the government.
2. Identify one specific occupation area in which technical training can be conducted by using distance education.
3. Distance education is for increasing access, not saving money. The reality is that distance education costs money. It is better to realize this earlier than be surprised when it is too late. Rather than saving money, it is better to take advantage of distance education that has potential providing access to under-served, place-bound, and highly motivated populations.
4. Take adequate time to plan, prepare and develop lesson materials, use appropriate technology and media.
5. Prepare or train adequate number of distance education experts and educational technologists required to set up the distance learning sites, developing teaching/learning materials and establishing and operating distance education/learning centers.
6. Nepal needs to develop multi-purpose distance learning centers at different remote locations from where teacher training, agriculture extension, adult education programs, technical education and training, and open learning services can be provided. These centers should be equipped with integrated Virtual Learning facilities having capability to serve various education and training needs of people residing in remote and rural areas.

Conclusion

Nepal is at the primitive stage in the field of distance education. The distance education department under the Ministry of Education and Sports is having sincere efforts to strengthen and develop distance education in Nepal. Since the beginning of 1970s distance learning was

initiated through radio education. Few instructional television programs are incorporated in Nepal Television's regular programs. So far, there are no distance education programs in the field of technical education and training in Nepal. There is a long way to go to keep pace with the recent development in distance education and training outside Nepal.

Distance learning is an alternate mode of education and training. There are many limitations and challenges in implementing distance education in the field of technical education and vocational training. Selecting and installing appropriate media and method is one of the challenges. Setting up technology-based distance learning sites requires heavy investment. For a Country like Nepal with limited financial resources may have difficulty to set up distance learning facilities to support flexible delivery approach to technical education and vocational training (TEVT). Effective distance learning in TEVT requires adequate support and commitment from the government, well-designed learning materials, adequately trained instructor or coordinator and use of appropriate media and approaches.

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Distance Education : Emerging Mode of Instruction

– A.B.Bhandari*

Introduction

Education deliberations imparting through a technology with negligible involvement of face-to-face interaction between teacher and learner generally has been considered as distance education. The concept of distance education was started more than 150 years ago. However, introduction of 'correspondence course' of U.K. in 1840 A.D. and formation of 'home study society' of U.S.A in 1873 have made significant contributions to the development of distance education. Commonwealth of Learning (COL, 1992) has recognized distance education as 'correspondence education', 'home study', 'independent study', 'external study', 'off campus study', 'open education' etc.

Keegan (1986) has pointed out five salient features of distance education mode : i) No face-to-face interaction. ii) Different from private study having education institution for deliberating programs. iii) Media as a contact point for interaction. iv) Learning centre and contact session a means of two way communication between learner and tutor, and v) Creation of self-help groups for time-to-time discussions and seminars. Analyzing the historical development stages of distance education, Trenton (2000) has examined in three generations : i) Traditional correspondence education as the first generation. ii) Multimedia as the second generation. iii) On-line education as the third generation

Distance education, more popularly ICT education (Information Communication Technology) , is education through distance includes the various forms of study at all levels which are not under the continuous immediate supervision of tutors, the opportunity which can be enjoyed by any group of people, anywhere, who are being deprived of getting education.

Media Instruction

Media Instruction, a system of using media for instructional purpose, is based on wide spread distribution of instruction through various media- printed materials, television programs, audio/video tapes, radio broadcast, education software etc. Use of multimedia instruction which has been considered as second generation of distance education (Trenton 2000) refers to non-conventional method of instruction which has more impact on wider coverage and easy access. However, a survey conducted in U.K. revealed that technology skill still ranks low when people asked about their favourite method of learning. Johan Daniel (1996) has concluded responses having favourite books 67 %, lecturing 36 %, CD-ROM/ Computer 19 %, audio tapes 7 %, no preference 3 %, and do not want to learn 3 %. Media instruction having strength of less impersonal and broad use of technologies, can be regarded as an effective mode of education system. Based on world practice, media instruction can be divided into four broad

* Director, DEC

categories : Non-broadcast media, broadcast media, computer networks media and interpersonal media.

- **Non-broadcast media**

Cassettes (audio/video), carefully designed for instructional inputs as a means of one-way communication have been regarded as non-broadcast media. These materials can be played by individual and group of people at any time at any place with little support of equipment whenever they desire. Non-broadcast media being under control of users have been regarded more convenient than the broadcast media.

- **Broadcast media**

Instruction through radio/ television has been assumed as distributive technology in which there is no immediate interaction among presenters and learners. But the opportunities might be created through correspondence and telephone in the form of 'delayed interaction' or "live interaction". So, broadcast media provide most comprehensive access having 100 percent coverage . This media has two fold advantages - one way communication (non-interactive) and two way communication (interactive) . Audio-conferencing, audio-graphic teleconferencing and video conferencing are good examples which fall in this category.

Audio-conferencing - A technology used in one way communication, is formed with the help of telephone system in which voices of experts and participants are connected through which learner's questions, queries and problems are satisfied and discussions are eld.

Audio-graphic-teleconferencing - An 'enhanced audio' technology or audio with still figure or image, is formed with the help of telephone system and narrow band of tele-communication to transmit to graphics and other images as scanned still pictures. For this, audio conference may be combined with telecommunication and may be used some audio bridges for multiple links. Devices used, for instance, are facsimiles, telewriters, optical scanners and remote-controlled slide projectors.

Video-conferencing - the most complex in terms of technology and process, is the technology which provides fully interactive visual and audio communication . One way video (usually via satellite to many receiving sites) and two way video (usually through telephone call to video station) are called interactive satellite video conferencing. Similarly, two way video and audio between two or more points, usually using terrestrial link through Integrated Services Digital Network (ISDN) is called 'compressed video conferencing'. However, convening teleconferencing raises practical hurdles because tremendous preparation, concentrated effort and huge resources have been regarded as pre-requisite for its successful implementation.

- **Computer networks**

The delivery of education programme through computer for enriching people in various areas like information , knowledge and skills is known as computer network education system. Computer based delivery of education inputs can be divided into two parts - Interactive Computer Mediated Communication (ICMC) and Interactive Multi - Media (IMM)

In ICMC the user can get access to a person and computer which is linked either local area network or dial-up connection. This provides services through connection of computer and telecommunication system which includes use of electronic mail (e-mail), computer text, conferencing bulletin board, data base, file transfer and range of other computer based services. IMM has a provision of audio/video sequences in its content and the key words for searching particular topic which may include text, graphic, audio, video (still or motion) etc.

- **Interpersonal media**

Printed media like periodicals, posters, journals, calendars and books in addition to telephone and facsimile has been considered as Interpersonal media. All of these materials help people in self-instructing.

Our Efforts to Distance Education

Execution of Radio Education Teacher Training Project (RETTP) with the financial and technical support from USAID in 1978 could be regarded as landmark towards the development of Distance Education in Nepal. Basically, this project was designed and implemented in aiming development of professional competencies and training skills of under qualified (under SLC) and untrained in-service primary teachers. RETTP I (1980-85) and RETTP II (1986-87) were two projects implemented in Nepal in which the former insisted on upgrading professional competencies of under-qualified and untrained primary teachers who entered teaching service without any orientation. The second project as an extended programme of the former project gave emphasis on upgrading academic qualifications of in-service teachers who had academic standard as low as grade five and this project had intended to upgrade qualification to the extent that they might sit in S.L.C. examination to receive S.L.C. certificate.

RETTP I developed the ten-month course parallel to conventional campus based training in which 318 lessons covering all subjects taught in grade one to grade three were designed. 6429 in-service teachers had participated in the programme of which 84 percent completed the course.

RETTP II was launched with the recommendation of project evaluation report which said though the participants had developed some knowledge about teaching pedagogy and methods, but lacked skills to be able to implement what they had learned as a result of low qualification (Butterworth et.al. 1988). RETTP II developed 171 lessons of 18 minutes which tried to cover contents from grade 7 to 10. Four hundred and fifty-seven in-service teachers of 10 districts benefited from this project.

The movement of basic need programmes in Nepal gave birth to 150 hours' teacher training as basic teacher training needs. Hence, Radio Teacher Training Project was assigned to carry out 150 hour teacher training for working primary teachers who had S.L.C. qualifications because the government had decided to stop under S.L.C. people entering teaching profession and encouraged to have professional training. Basic teacher training (BTT) was implemented with the support of Government's developmental resources and it developed training package of 150 hours' covering both teaching methodology and contents taught at primary level (grades 1-5). More than 15,000 teachers participated in this programme of which 90 percent completed

the course. BTT continued up to the implementation of 4 packages of primary teacher training having each package of 330 hours's and 2.5 months.

Thus, existing Distance Education Center (DEC) is an outgrowth of former RETTP, which was established with administrative reform plan of government in 1994 in keeping view of global needs and broader perspectives of open education system. But due to lack of resources and clear vision towards it, DEC has been limited to teacher training. At present, DEC conducts the second and third package of 330 hours's which were developed and approved by National Centre for Education Development (NCED). These training packages of NCED have been translated into distance mode dividing into six parts - 40 hour radio broadcast, 80 hours' pre-broadcast activities, 120 hours' post-broadcast activities, 45 hours' contact sessions, 35 hours' practice teaching and 10 hours' examination. Moreover, 341 lessons have been divided into 160 radio lessons and 181 self-instruction material lessons. From the fiscal year 2000/2001 phone-in programme of 14 hours having each of 2 hours and external examinations of 45 minutes having each of 15 minutes have been added for effective implementation of the programme as non-credit course. Besides teacher training, DEC conducts a weekly education programme of 15 minutes, which is broadcast through Radio based on collected educational information, innovations and methods.

Faculty of Education (FOE, T.U.), on the other hand, has been struggling to implement open education system. In 1957-58, it started 10 minute radio-slot for adult education and in 1977-78 it conducted teacher training through correspondence but unfortunately both of these programmes have disappeared now because of some technical and administrative problems. Even so, FOE has decided to implement one year B.Ed. with specialization of Early Childhood Development (ECD) and primary education in three year B.Ed. through open learning. According to P.C. Baidya (2000), dean of FOE, the modality of these courses will be as follows:

- Self-study of materials by students
- Face-to-face contact of 40 days a year to clarify abstract concepts.
- Provision of audio, visual, and audio-visual facilities at out of reach centres.
- Use of outreach centre facilities by the students as required.
- Assistance from outreach co-ordinator as needed.
- Correspondence between students and outreach centres
- Certain period of face-to-face contact of the outreach co-ordinators and students.
- Internship of students at assigned school.

All of education commissions have suggested the government to have open education system with immediate need of establishment of open university. A recently constituted education task force for providing suggestions for reformation of education has submitted its report in the form of draft bill on open education. Despite all of these efforts, open education system in Nepal is virtually nil. The DEC, a central level institution established by the government two decades ago, has been perceived as non-functional by distance education perspectives.

Issues

Enrollment and access to all levels of education system have improved dramatically over the past four decades, even though low participation and retention rates and high examination failure rate indicate the state of an ineffective education system.

Seventy percent NER in primary education can be regarded as encouraging but it is still inadequate, because more than one million children have not been enrolled. According to the statistics of 1996, 48% of literacy rate in Nepal is still low as compared to 90 percent in Srilanka and 65 percent in India. More than 50 percent illiterate people have been a serious concern. Children doing primary graduate take more than two years than the prescribed years, which indicates low efficiency of education system. A study conducted on national achievement test for grade 3 students in which average score was 44 in three subjects (EDC, 1999) supports the above statements.

Access to secondary is limited in the case of the children belonging to poor parents, disadvantaged communities and backward areas. GER for lower secondary and secondary school children from households with the income in the highest quartile are 94 percent and 90 percent respectively. For the children from the poorest quartile household, the enrollment rates have been reported 22 percent and 8 percent. Quality of secondary education is quite low as indicated in S.L.C. pass rate and years taken to produce S.L.C. graduate i.e. 12.5 years.

The combined enrollment in 5 universities is estimated to be over 1,25,000, excluding the enrollment of affiliated campuses, out of which 25 percent are reported to be girls. Moreover, higher education has been regarded as monopoly of students from relatively richer household. According to Nepal living standard survey, only 6 percent of students come from the poorest, 50 percent households and only one percent comes from the poorest 25 percent, in higher education. The representation of female from the poorest 50 percent in higher education is virtually nil. The quality of higher education is very poor as indicated by pass rate and is particularly low in humanities and education where most (95%) of the students are enrolled.

The development of technical education and vocational training has not made progress as desired. Baidya (1998) reports that unemployment is increasing at the rate of 7.6 percent per year and New Era (1999) states that under employment is more serious problem than employment and is estimated to be in the range of 38.4 percent to 63.5 percent. Challenges faced by Technical Education and Vocational Training (TEVT) subsector are generally labor market information and standard classification system such as certification, skill testing, accreditation, quality control and professional development.

Conclusions and Recommendations

Since education is a basic human right of the people, educating them as per their need for the development of values, beliefs, attitudes and skills required for the function of society to meet challenges emerged in national and international context, is a fundamental function of the state. Access, quality , efficiency and relevance of Nepalese education at all levels have been matter of serious concern at various national and international forum. Focusing on educational issues, policies and programmes, concerned personalities of education field have suggested to explore newer and better ways of instruction so that there could be high participation of people at all

levels of education. So, there is an immediate need to have one more additional mode of instruction which can be able to cater to all groups of the people, especially children belonging to poor, disadvantaged and remote areas and hence education for the people can be perceived more accessible and equitable.

Distance Education mode of instruction, being cost effective and high coverage, could be thought of additional mode of instruction, if carefully analyzed, designed, developed and implemented. Countries of the world, either developed or underdeveloped, have given their attentions towards the development of DE through which newer technologies and materials can be utilized for making education better, qualitative, accessible and equitable. In view of the existing facilities, human resources and programmes, whatever the country has, and can manage, justifications and evidence cannot be produced in the favor of existing mode of instruction which proves satisfaction in providing educational opportunities at desired level.

The country has limited resources even though interests and concerns shown by international communities for the development of education in Nepal has always been inspirable and encourages. So, our attention, efforts and labors have to be focused on the development of open education with serious caution.

An act on open education based on focused group discussions, expert's inputs, vision of stakeholders, strong commitment of government, is inevitable. Following recommendations which might be helpful in preparing comprehensive open education act have been suggested, if they could be perceived appropriate, relevant and acceptable in wider discussions of present context.

To start with the development and implementation of open education system in Nepal there is a need to have at least vision in the years to come. Problems and issues emerged in the field of education have not solved and managed at once miracally throughout the world. Thinking on this, Nepal needs to have a vision of short term, medium term and long term of 5 years, 10 years and 15 years respectively.

For short term vision - utilization and mobilization of existing resources of DEC and further resourcing and restructuring with could be a good idea as it has gathered some informations, skills and experiences in distance education from two decades ago, even though human resources created once are almost dispersed and facilities built with foreign assistance are wearing out day-by-day. DEC has to be assigned for undertaking responsibility of awareness and enrichment programmes for mass education in addition to certification and recurrent teacher training. A National level council for open education, chaired by education minister and proper representation from stakeholders and experts for co-ordination and programme approval has to be created for wider participation, and to develop a system of regularization in providing education through media instruction. DEC should have adequate link with leading resource centres and it should be asked to complete the requirements and process for implementation of certification of school education to those who are willing to sit in school level examination after completing the process of DE system.

For medium term vision - As a medium term measure, open education programme should be developed and implemented as a supplement to the formal schooling and non- formal education

in a fulfledged manner with the introduction of wide utilization of media instruction such as audio conferencing and video conferencing. A strong mechanism of DE system can be expected to establish functional links with relevant national and international institutions for sharing resources, expertise and information. Financial autonomy for DEC should be given for selling its products (printed, audio/video materials) through which DEC can be further strengthened.

For long term vision - DEC should be perceived having converted into autonomous open university with mandate of conducting all education programmes including non- formal and formal schooling and higher education . An open university can be assumed as an autonomous professional institution specialized on distance education which will have provision of development of physical facilities, human resource development, expert exchange programme, statutory regulation, build organization setup, research and development (R &D) and functional linkage with relevant GOs, NGOs and INGOs. The government will have to encourage private sectors to initiate independent and complementary open learning system in the country.

The last, but not the least the government has to be very serious to concentrate its efforts towards the development of 15 year plan with clear statement of objectives, strategies and actions having high commitment to open education for drawing attention of those who are willing to support in this area.

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A Comparative Study of Cost and Efficiency of Public and Private Secondary Schools in Kathmandu District

– Bhoj Raj Sharma, Kafle*

Background

Public and Private School

There are two types of secondary schools in Nepal: public schools and private schools. In this article, public schools mean those schools, which are fully funded by the government. Schools are run in the private sector also. Private schools mean government-recognized schools. These schools generally started in Nepal after 1981 (Research Center for Educational Innovation and Development [CERID], 1993).

The government of Nepal has declared free education from grade 1 to grade 10. However, it has not provided adequate quota for teachers for public schools. On the other hand, the time on task by the teachers has been weakening (MOF, 1997; Nepal South Asian Centre [NSAC], 1998). The teachers in the public schools have worked like political workers (NSAC, 1998). Consequently, the quality of public secondary schools has decreased.

An analysis of School Leaving Certificate (SLC) results clearly shows that the private schools' output is higher than that of public schools (Ministry of Education, HMG/Nepal [MOE], 1998). Although private schools in Nepal are offering mostly the same courses as in the public schools, these schools have contributed more to the rise of the quality of education in comparison with public schools. The gap between these two types appears to be widening. In addition, the public sector has failed to learn from private schools. However, there is a remarkable growth in schools, teachers, and student numbers in the public and private schools.

Cost and Efficiency in Education

Determining the unit cost is very important for measuring internal efficiency and quality in education, as well as in formulating the funding policy of the government The internal efficiency reflects how effectively the educational system uses available resources to achieve specified educational outcomes. Also, it may be considered to have two dimensions: the relationship of what enters and what exits in various part of the sub-sector, and the relationship of quality to costs between entry and exit points (IEES, 1988).

Individual Costs and Institutional Costs of Education

Costs of education can be divided into two categories, (a) individual costs, and (b) institutional costs. The students or their parents increase individual costs of education. Individual cost is also known as private cost. The institutional cost of education is afforded by the institutional level,

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* DEO, Bardia District

1 (This article is based on the M. Phil. thesis submitted to the School of Education, Kathmandu, University in 1999).

whether the institution is a government or private or mixed. Both the individual and institutional costs of education are of high significance. The sum of both individual and institutional costs gives us the total social costs in education. While the institutional investment can provide the educational facilities, only individual efforts and investment will make it possible to use them to advantage (Tilak, 1997). In this article, the direct cost (parents' investment in both types of schools) analysis was undertaken.

Costs of Education at Current and Constant Prices

The costs of education, like any money-based statistic, can be expressed either at current (market) prices or at constant prices. When the costs of education are expressed at constant prices, they take care of price-inflation and thus represent the "real" costs of education. Particularly, when computing costs of education for a period of time, it is necessary to compute the costs of education at constant prices so that the changes in the value of money are taken into account (Tilak, 1997).

Objectives

The general objective of this article is to assess and compare the efficiency of public and private secondary schools in term of cost. The specific objectives of the article are as follows.

- To analyze and compare the internal efficiency of secondary schools.
- To explore per student cost in secondary schools.
- To compare the performance made by secondary schools in relation to the cost involved.
- To suggest possible measures to increase efficiency and performance in secondary schools.

Findings and Discussion

Background Information

Most of the private schools have been running on the rented building whereas all the public schools have their own buildings. Wide variations were found in the number of classrooms among the sample schools. The average class size ranged from 16 to 55. The average class size was smaller in private schools (16 to 28) than in the public schools (25 to 55). Most of the public and private schools had library facilities. Some of those schools had good stocks of books. However, the number of students using the library facilities was quite limited in both types of schools. Most of the sample schools (15 of the 17) had teachers with Masters degree qualification One private school and one public school had one teacher each with Ph.D. degree. All schools had at least one B.Ed. teacher. The number of B.Ed. pass teachers was higher in public schools than in the private schools.

The average expenditure for teachers' salary in the public schools was found to be Rs. 1,19,473 in 1997/98, whereas the average unit expenditure per teacher in private schools was Rs. 1,46,811. The average minimum pay scale in public schools (Rs. 2,246.9) was found to be higher than the average minimum pay scale in the private schools (Rs. 2,104.9). On the other hand, the maximum pay scale of teachers in the public school was less than in the private school.

There was a significant difference in the performance of the schools in the SLC examinations in different years for public schools, private schools in municipality and metropolitan city. However, the significance was not found in the VDC.

A very low percentage of grade 6-cohort students were able to attain the SLC examination. For example, in the year 1991/92 the number of students passed in the SLC examination in municipality was 90.9 percent, whereas it was only 72.7 percent when compared with grade 6 passed cohort. The dropout rate was found to be considerably higher in the public schools than in the private schools.

Internal Efficiency of Public Schools and Private Schools

Table 1 presents internal efficiencies in percentage for public schools, private schools, and all combined schools.

Table 1: Internal Efficiency of Public and Private Schools (in Percentage)

Years	Public Schools (n = 8)	Private Schools (n = 9)	All (n = 17)
1996/97	49.1	73.9	66.7
1995/96	41.9	71.3	55.0
1994/95	38.0	76.6	54.1
1993/94	31.5	85.8	53.4
1992/93	37.2	85.4	53.6
1991/92	45.0	87.2	60.9
1990/91	51.2	85.7	71.9

The internal efficiency of the public schools was found to decrease through the seven years 1990/91 to the year 1993/94 and increased over the years 1993/94 to 1996/97. In the years 1990/91 and 1991/92 there was no continuous trend, which may have been because of political disturbance. The efficiency was 45 in the year 1991/92 and it was 51.2 (the highest of the seven year) in the year 1990/91.

A remarkable difference can be observed in the comparison of internal efficiency of public and private schools. In the case of public schools the internal efficiency was less than 50 percent except in 1990/91.The efficiency varied from 31.5 percent to 51.2 percent. In private schools the internal efficiency varied from a high of 87.2 percent to a low of 71.3 percent.

Per Student Institutional Costs: Public and Private Schools

Public schools. Table 2 shows the expenditures in current price for one student in public schools over seven years. Data are presented on the number of students enrolled (NOSE), the unit costs (U COST) of each student, the number of students passed (NOSP), and the costs of students graduating (GCOST).

Table 2: Per Student Expenditures in Current Price, Public Schools (n = 8)

Years	Expenditures (Rs.)	NOSE	U COST (Rs.)	NOSP	GCOST (Rs.)
1997/98	1,17,48,718.00	2720	4,319.38		
1995/96	1,03,84,698.00	2758	3,765.30	1991	5,215.82
1994/95	80,75,584.00	2768	2,917.48	1976	4,086.83
1993/94	63,80,595.00	2478	2,574.90	1647	3,874.07
1992/93	65,68,009.00	2904	2,261.71	1606	4,089.67
1991/92	46,82,298.00	2363	1,981.51	1626	2,879.64
1990/91	48,65,156.00	2784	1,747.54	1991	2,443.57

On average and current price, the unit expenditure per enrolled student for public schools was Rs. 1748 in 1990/91 (047/48 B.S.) and Rs. 4,319 in 1997/98 (054/55). There was about 2.5 times increase in unit expenditure in 1997/98 as compared to 1990/91.

Table 3: Per Student Expenditures in Constant Price, Public Schools (n = 8)

Years	Expenditures (Rs.)	NOSE	U COST (Rs.)	NOSP	GCOST (Rs.)
1997/98	1,17,48,718.00	2720			
1995/96	1,03,84,698.00	2758	2,323.20	1991	3,218.20
1994/95	80,75,584.00	2768	1,934.30	1976	2,726.00
1993/94	63,80,595.00	2478	1,820.50	1647	2,739.00
1992/93	65,68,009.00	2904	1,716.60	1606	3,104.10
1991/92	46,82,298.00	2363	1,660.50	1626	2,413.10
1990/91	48,65,156.00	2784	1,747.50	1991	2,443.60

In constant price, unit expenditure based on enrollment was slightly increased throughout the years, though it decreased slightly in the year 1991/92. On the other hand, the unit expenditure based on graduation did not show any fixed trend. However, it increased by 1.3 times over the years from 1990/91 to 1995/96.

Private schools: The data indicate that the current price costs of the students graduating increased sharply over the seven years. In the 1990/91 year, the unit cost was Rs. 3656.81. By 1995/96 this had reached Rs. 11379.2, which represented a three-fold increase. In addition, the gap between the unit costs based on the number of students enrolling and the number of students passing increased considerably. In 1990/91 the difference was less than Rs. 200, but by 1995/96 the gap was over Rs. 1400. The average unit expenditure per student for private schools was Rs. 3497 in 1990/91 and Rs. 10931 in 1997/98. The average unit expenditure per student based on promoted student was Rs. 3657 in 1990/91 and was Rs. 11379 in 1997/98. The unit expenditure based on the number of student graduates also increased about 3.1 times in 1997/98 as compared to 1990/91.

Table 4: Per Student Expenditures in Current Price, Private Schools (n = 9)

Years	Expenditures (Rs.)	NOSE	U COST (Rs.)	NOSP	GCOST (Rs.)
1997/98	2,76,43,734.00	2529	10,930.70		
1995/96	2,55,69,119.00	2626	9,736.91	2247	11,379.230
1994/95	1,82,31,064.00	2253	8,091.91	2061	8,845.737
1993/94	1,21,26,310.00	1971	6,152.36	1712	7,083.125
1992/93	95,62,552.00	1681	5,688.61	1384	6,909.359
1991/92	60,05,869.00	1421	4,226.51	1358	4,422.584
1990/91	47,13,637.00	1348	3,496.76	1289	3,656.817

Table 5: Per Student Expenditures in Constant Price, Private Schools (n = 9)

Years	Expenditures (Rs.)	NOSE	U COST (Rs.)	NOSP	GCOST (Rs.)
1997/98	2,76,43,734.00	2529			
1995/96	2,55,69,119.00	2626	6007.70	2247	7,021.00
1994/95	1,82,31,064.00	2253	5364.90	2061	5,864.70
1993/94	1,21,26,310.00	1971	4349.70	1712	5,007.80
1992/93	95,62,552.00	1681	4317.70	1384	5,244.20
1991/92	60,05,869.00	1421	3541.90	1358	3,706.10
1990/91	47,13,637.00	1348	3496.80	1289	3,656.80

In constant price, unit expenditure based on both enrollment and promotion increased over the years. It nearly doubled over the years from 1990/91 to 1995/96.

Per Student Cycle Cost Public and Private Schools.

Table 6 shows per student private investment in the cycle years 1990/91-1994/95, 1991/92-1995/96, 1992/93-1996/97 and 1993/94-1997/98 for public and private schools.

Table 6: Per Student Cycle Cost, Private and Public Schools (n = 17)

School Type	1990/91-1994/95 Cycle (Rs.)	1991/92-1995/96 Cycle (Rs.)	1992/93-1996/97 Cycle (Rs.)	1993/94-1997/98 Cycle (Rs.)
Public (n = 7)	4,198.00	5,001.00	5,751.00	6,659.00
Private (n = 8)	26,291.00	31,479.00	36,319.00	43,585.00
Public/Private Ratio	6.3.00	6.30	6.30	6.70

Table 6 shows that the cycle cost for public and private school increased 1.6 and 1.7 times, respectively, in the five years period. The cycle cost of private school was 6.3 times that of public school in the cycle year 1990/91-1994/95. It remained constant until the cycle year 1992/93-1996/97. In the cycle year 1993/94-1997/98 the cycle cost of private school was 6.7 times that of the public school.

Therefore, the ratio (private/public) of per student cycle cost was constant (6.3) throughout the cycle years 1990/91-1994/95 to 1992/93-1996/97, though it was quite high (6.7) in the cycle year 1993/94-1997/98.

Per Student SLC Graduate Cycle Costs Public and Private Schools

In the study, the secondary school cycle was considered as from grade 6 to the SLC pass. Table 7 shows institutional expenditure for secondary cycle in the cycle years 1991/92-1995/96 in public and private schools. Data are presented on the number of SLC graduates' unit costs in current price.

Table 7: Average Units Cost for SLC Graduate by Types of Schools for Cycle Year 1991-92-1995/96 (n = 15)

School Type	Expenditures (Rs.)	No. of SLC Graduates	Unit Cost (Rs.)
Public (n = 7)	3,21,34,269.00	162	1,98,359.70
Private (n = 8)	3,38,02,625.00	255	1,32,559.30
All (n = 15)	6,59,36,894.00	417	1,58,122.00

Cycle cost for one SLC graduate was higher for public schools than the private schools. Although the unit expenditure per student in public schools was much less than the private schools, the cycle cost was found to be much greater in the public school. This reflects low pass rate and high enrollment in the public schools which resulted in the higher cycle cost

Per Student SLC Graduate Cost Grade 6 Cohort

This section presents institutional (school) expenditure in secondary education per SLC graduate based on grade 6 cohorts. Table 8 shows expenditures of the schools for the secondary cycle, in the cycle year 1991/92-1995/96 by types of schools. Data are presented on the number of students appeared (App) and graduated (P.NO.) in the SLC examination and costs.

Table 8

Grade 6 Cohort Per Student Expenditure by School Types for Cycle Year 1991/92-1995/96 (n = 10)

School Type	Expenditures (Rs.)	No. of SLC Graduates	Unit Cost (Rs.)
Public (n = 4)	3,38,02,625.00	88	3,65,162.10
Private (n = 6)	3,21,34,269.00	216	1,56,493.70
All (n = 10)	6,59,36,894.00	304	2,16,897.70

A comparison between public schools and private schools in term of investment made by the school for one student shows that for cycle year1991/92/-1995/96, public schools invested Rs. 3,65,162.10 whereas private schools invested Rs. 1,56,493.70for one student.

From these data it can be concluded that the expenditures for per SLC graduate (grade 6 cohort) by public and private school were not equal. The cycle expenditure for one student in public schools were 2.3 times higher than the private schools.

Conclusions

The public schools were better in physical facilities and number of trained teachers as compared to the private schools. There was not a fixed trend of performance among the public or the private schools. The internal efficiency of public schools increased over the years from 1990/91 to 1996/97, but there was not a fixed trend in private schools. However, the internal efficiency of the private schools was better than the public schools.

Public schools were raising about 50% of cost through fees from the students and other sources, despite the fact that education is made free of cost by the government. Certain rules and regulations did not govern private schools, so they raised fees on their own. Parents of the private schools paid more than one third of their childrens' education cost in headings other than the tuition fee.

Although the unit cost in the private schools was higher than in public schools the internal efficiency was also higher. In the public schools there was a trend toward increased unit costs as well as internal efficiency over the years from 1990/91 to 1996/97. The per student cost of education was much higher in private schools, but the cycle cost based on SLC graduates and grade 6 cohort was higher in public schools.

Lastly, the reasons behind the fluctuating condition of internal efficiency of private schools, despite the high cost to the parents and increasing the unit cost of students, need to be sorted out. Since the public schools have lower performance despite the physical facilities, trained teachers, and uniform pay scale, the reasons need to be sought out and the expenditure made by the government in such schools should be justified.

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Use of Technology in Distance Learning

- Ms. Sunita Malakar*

Distance learning is one of the most important educational innovations of the twentieth century. It is considered as one of the most important parts of the overall educational system. This system is gaining popularity day-by-day in developed and developing countries. Distance learning is, in fact, a resource-based learning. It is becoming an increasingly common form of learning in many countries of the world.

Today the world is overwhelmed with technological innovations. New types of technologies with possible application to education and training appear at ever accelerating pace. Educators of today face constant challenges of understanding the nature of technologies, their potential uses, strengths and weaknesses.

Distance learning relies heavily on technologies of delivery. Print materials, audio/video cassettes, broadcast radio, broadcast television, computer conferencing, electronic mail, interactive video, satellite telecommunications and multimedia computer technology are all used to promote student-teacher interaction and provide necessary feedback to the learner at a distance. Technologies as delivery systems have been so crucial to the growth of distance learning.

Moreover, the world of technology is being reshaped by global trends such as convergence, enhanced multimedia capabilities, ability to withstand environmental variations, increased mobility, reduced cost etc. These trends support transition across four generations in distance education models and associated delivery technologies. (Khan, 2001).

- First Generation: The correspondence model, e.g. Print
- Second Generation: The multi-media model, e.g. Print, Audiotape, Videotape, Computer-based learning (CML/CAL), Interactive video.
- Third Generation: The tele-learning model, e.g. Audio tele-conferencing, Video-conferencing, Audio-graphic Communication, Broadcast.
- Fourth Generation: The flexible learning model, e.g. Interactive multimedia, Internet-based access to WWW resources, Computer mediated communication.

The trend in technology used in distance learning is towards the direction of third and fourth generation delivery technologies. These generations of technology are changing the nature of learning also. However, cost is a critical determinant of technology use. Since, distance learning is the multi-media approach learning, it can be anticipated that institutions need to continue using second and third generation technologies till costs decline further.

Print

Print is the mainstay of many distance learning programmes. In recent years, the use of technology for design, development and distribution of printed materials has increased

* Deputy Director, DEC

considerably. Print can be described as the core medium for distance learning courses across the world. It is because the print material is the most important one due to certain inherent qualities of the medium itself. It is relatively cheap. Neither infrastructure nor any electricity, nor any machine is required for reading the message from the print. But the print material used in distance learning institutions is different from that used in the conventional system of education. They are generally "self-instructional" type of materials because distance learners are away from the face-to-face contact between them and the teachers. It is developed to meet all the learners' educational requirements and help them to learn on their own without much assistance from the others. This is an important factor in offering distance learning programmes in the developing countries. In order to derive maximum benefit from the print technology, one should make sure that the materials are self-instructional; the content is appropriate; its presentation is interesting to the learners; the subject matter is logically and gradually developed in simple language to motivate the learners to complete their courses. In the words of Holmberg, "By far the most important medium in distance education courses is the printed word. This applies to conventional correspondence study, as well as highly sophisticated multimedia presentations like courses of the open university." (Holmberg, 1985:62). Print medium has proved largely effective in cognitive, affective, and psychomotor domains of learning.

An important feature of print is its permanence in preserving information . It can be preserved by the learners and can be used at their own convenience.

There are some demerits of print materials as well. The use of print is limited to the literate only whereas the illiterate remain deprived due to the lack of skill of reading. Print does not normally provide for learner's active participation and does not allow immediate interaction between teacher-learner and learner-learner. Individualized instruction is difficult from the print materials. Moreover. there is no immediate feedback so teaching -learning suffers on both sides.

Radio

Radio as the second generation model has been widely used medium for educational purposes. This technology is second to print in both economy and extent of use in distance learning. It has three main advantages: improving educational quality and relevance, lowering educational costs and improving access to educational inputs to the mass including disadvantaged groups and can be carried from place to place. As a result, it is found that the open universities in the world have relied on it quite heavily, for example; in most developing countries such as Indonesia, Nepal, Maldives, South Africa and so on, radio is used in in-service training of teachers. Allama Iqbal Open University in Pakistan offers a wide range of educational courses through radio.

Radio thus has potential but at the same time it suffers from a number of limitations.

Radio is cheap and easily accessible even to economically weaker sections of the people. It has a wide coverage and enables the listener to listen to the programmes wherever they want to. It helps direct instruction for definite target groups. It motivates the learner to learn and promote thinking and their imagination.

Radio is one way process and not flexible medium. To learn satisfactorily it requires right motivation, guidance and supervision. Radio is not effective for subjects which need visual illustrations. There is no feedback so the queries of the learners cannot be attended immediately.

It is difficult to produce a radio programme of common utility for the heterogeneous masses such as school dropouts, illiterates, unemployed etc.

Television

Television, another often cited technology, is becoming a widely used medium due to the availability of satellite in many countries. China's satellite television-based multimedia education system is the largest in the world. Television is now being extensively used worldwide for education and training in two ways: broadcast and video cassette. Due to development in telecommunications it is now possible to use television interactively. Because of its visual feature and interactive nature, live interactive television can make a major addition to a distance training delivery system. Similarly, two way video conferencing has the potential to revolutionize training .The system is already in use in some distance education institutions in Europe and North America. However, its high cost may make it unavailable to developing countries (Chaudhary and Khan 1997). Indira Gandhi National Open University (IGNOU) uses two-way audio and one-way video teleconferencing system for training and teaching distance learners.

Television is an effective medium for spreading education because the visual language of television is extremely motivational, rich, expressive and powerful. It has a combination of audio and video components. Television when utilized on a large scale proves cost-effective and it can provide mass education to all the students, regardless of their age, socio-economic status, rural and urban background. Television instruction can save the time and effort of student and teacher. It reduces dependency on teachers at the same time makes available the effective teacher to the students.

Television has limitation of one-way communication. There is absence of active participation and lack of provision for feedback which fail to sustain the interest and enthusiasm of learners. Television is still costly and beyond the purchasing capacity of a common man and cannot become a medium of the masses, especially in rural and remote areas. There is a problem of pacing learning because the tele-teacher teaches at the speed which is suitable for average learner but do not care for individual differences.

Audio/Video Cassettes

The use of audio cassettes is becoming more popular. Many learners prefer it because the human voice can convey human feelings better than the printed words. Audio cassettes have several advantages over the radio programmes. They are simple to make, duplicate, store and distribute. Learners can control time, location and pace of learning. Audio cassette recorders are accessible, compact and portable. Duplication is easy and economic. However, there are some limitations as well. Audio cassettes have limited durability and more costly to prepare than print materials if professional quality is required. They are more useful when they form part of an integrated teaching packages.

Video cassettes are comparatively new and emerging technology. In comparison to broadcast, video cassettes are more effective for education and training. They are available when needed. It allows students control over the learning process. It is an individualized pace of learning type. But it has limited availability and access. It is more expensive than print and audio cassettes.

- The Audio/Video cassettes allow students to adjust the pace of their learning according to individual levels. Since each programme in A/V cassettes is divided into short sequences, learners can stop and replay the sections which are not clear to them and take notes of that they have seen or heard. They are not constrained by the fixed time slots.
- Audio/Video serves as an effective medium for teaching illiterate learners who depend on spoken words and visual images for communication.

Audio/Video cassettes have some constraints as well, such as sometimes the voice and visual images are not clear and the students fail to follow the cassettes. Moreover , there is no active participation and no provision of feedback. Distribution of video cassettes may be complicated by the variety of formats and systems which are essentially incompatible. Further, compared to the cheap transmission of broadcast television, video cassettes demand a relatively expensive infrastructure for packing and delivering to distance education learners.

Audio Conferencing

Audio conferencing is a kind of audio instruction. It can be audio-only or supported by enhanced data transmission-audio graphic conferencing. Audio-only conferencing typically utilizes the public telephone system to link together people at two or more locations. To enhance audio conferencing for larger groups, additional devices are used to reduce noise and interference. The audio-only conference might include telephone hand set, microphones and an audio bridge that interconnects multiple phone lines and control noise.

Audio graphic conferencing combines technologies for voice communication and visual component. It includes the electronic blackboard, still video technology, and the personal computer.

Audio conferencing is comparatively inexpensive to install, operate, use and maintain. It uses available telephone technology and can therefore reach many students. It is an interactive medium, allowing direct student and instructor participation. Learners have many opportunities for give and take with other students, the instructor and the outside experts. It can be very effective when used in combination with other media including print, video and computers.

Learners may encounter initial resistance until users become familiar with the equipment and how to use it effectively. It can be impersonal because it eliminates non-verbal cues and body language such as smiles, arm and hand movements etc.

Computer

Computers are very useful tool in providing effective training programmes. Research shows that computers, when used appropriately in instruction, enhance student learning, increase motivation, induce positive attitude and change. In addition, it is reported that computer assisted instruction not only provides individualized instruction and self-paced learning, but also frees instructors and administrators from rote and repetitive tasks. Furthermore, computer-based teacher training has some attributes, such as it is an interactive medium, can reduce learning time , makes learning flexible, provides immediate feedback and can practice, problem solving and simulation. However, there are some limitations in the widespread use of computers in distance learning in developing countries. It is because the cost of purchasing and operating

them is beyond the means of many distance learning institutions. Moreover, teachers are not adequately trained to maintain and use computers for instructional purposes.

There are several broad categories of computer application. They are Computer Assisted Instruction (CAI). In this the computer is used as a self-contained teaching machine to present discrete lessons to achieve specific but limited educational objectives. There are several CAI modes, which include drill and practice, tutorial, simulations, games and problem-solving. Computer Mediated Communication (CMC) describes computer applications that facilitate communication. It includes electronic mail (e-mail), computer conferencing etc.

Computer can facilitate self-paced learning. In the CAI mode, computers individualized learning, while giving immediate reinforcement and feedback. Computers are multimedia tools. With integrated graphic, print, audio and video capabilities, computers can effectively link various technologies. Computers are interactive. Computer technology is rapidly advancing and innovations are constantly emerging. Computers increase access. Local, regional and national networks link resources and individuals, wherever they might be.

Computer networks are costly to develop. Computer hardware and software market is a very competitive. The technology is changing rapidly. Widespreaded computer illiteracy still exists. There are many who do not have access to computers or computer networks. Learners must be highly motivated and proficient in computer operation before they can successfully function in a computer-based distance learning environment.

The Internet

The Internet is the largest and the most powerful computer network in the world. With access to the Internet, distance educators and learners can use e-mail to exchange messages or other information with people. Instead of being delivered by the postal service to a postal address, e-mail is delivered by Internet software through a computer network to a computer address.

World-Wide Web (WWW) is an exciting and innovative front-end to the Internet. The WWW provides Internet users with a uniform and convenient means of accessing the wide variety of resources available on the Internet.

Distance educators can use the Internet and WWW to help learners gain a basic understanding of how to navigate and take full advantage of the networked world into which they will be learning.

In using e-mail, feedback from the instructor can be received more quickly than messages sent by mail. Learners can read messages at their convenience and easily store them for later reference. Prompt response generally increases learner motivation and performance. The instructor can also provide links to information on the WWW that would be useful to learners in the class. Becoming familiar with the resources available on the Internet and the most effective ways to use them will be part of the instructional challenge.

Conclusions

The choice of technology is a complex one. Technologies come in many packages, but each must be scrutinized for its effect on the achievement of the learner, for its costs and for the environmental conditions necessary for its implementation. There are many instances of inappropriate use of technology in distance learning. Technology is introduced for a variety of

reasons, which have little to do with teaching and learning. Perhaps the most common introduction of technology is donor donated technology, which is free of cost. Some technology is introduced by enthusiasts who have specialized in the use of particular technology. Mostly instructional technologies are multifunctional and may be widely adapted to a variety of objectives, learners and subject matters, under the right circumstances.

Experience shows that no single technology is appropriate for all teaching functions and for all kinds of learners. Majority of the people living in rural areas have at least basic educational qualifications. Reaching them through a combination of text, audio/video etc. in a variety of formats is the only possible way of using them . However, for many of them, access to technology other than printed materials, radio, television etc. is another major problem. This limitation can be overcome if technological resources are made available at the work places and if tutorials or training centres or resource centres where all the concerned learners can utilize for their learning, are accessible.

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Teacher Training at a Distance in Nepal

- Arjun Kumar Ranjit*

History

The Distance Education Center was formerly known as Radio Education Teacher Training Project (RETTP), which was established in 1978 as a joint venture of HMG/Nepal and the U.S. Government. The Project came to an end in1989.

The Radio Education Teacher Training Project was initiated with a view of training untrained rural primary school teachers in Nepal through well-prepared radio lessons with self-instructional materials and periodic workshops. 72 districts of the country participated in the course so far and within a few years of its implementation 2944 under-SLC teachers were trained in B level training and issued mark sheets and certificates. The 10 month training course was developed on the concept of providing teachers with appropriate teaching methodologies and review of the content of primary school curriculum. The final external evaluation of the first phase found that although the targets for the teaching methods course were met, those teachers were in greater need of assistance in upgrading their knowledge of subject matter. Accordingly, in 1984 an agreement was signed between His Majesty's Government/Nepal and U.S AID/Nepal launching the RETT II Project – the purpose of which was to enrich the content knowledge of the under – SLC teachers and at the same time, assist them to pass the SLC (i.e. Matriculation) examination and become fully qualified primary teachers.

The RETT II was started with the goal of developing radio courses in English, Mathematics, Science and Nepali, the four subjects causing the most SLC failures. However, due to certain limitations only English lessons entitled "Radio Tuition" could be developed and broadcast. Initial Radio Tuition Programme was broadcast on May 4, 1986, and 493 trained teachers got opportunities to take this English tuition course.

As per the change in the government's policy of substituting the under – SLC teachers by the SLC ones, the DEC has been conducting training programmes for the SLC pass untrained primary teachers since 1988.

The Present State of Teacher Training at a Distance

In a mountainous country like Nepal where places are inaccessible and interaction among teachers is not possible, the concept of distance learning may prove fruitful. It is now felt that training through radio alone is not enough at the present situation. Hence, the Distance Education Centre (DEC) was formally set up in 1994 with a broader concept to expand the educational programme in various possible ways and to enhance the quality of education by conducting well-prepared and effective programmes on the massive scale.

In 1978 when the first radio training was initiated, the DEC designed its own curriculum to train primary school teachers which was endorsed by the Ministry of Education. Later, it was realized

* English Specialist/Scriptwriter, DEC

that there should be uniformity in training content of various organizations responsible for providing training to the primary school teachers of Nepal. Consequently, the government made a regulation to train primary school teachers based on the same content and curriculum. Based on this regulation, in present day context, the DEC uses the same curriculum to develop its materials. There are four packages of 1320 hours in the curriculum, each lasting for two and half months. The NCED conducts 1st and 4th packages and the DEC conducts 2nd and 3rd packages of training.

Objectives

The main objectives of the Centre are to :

- train the primary teachers through radio and other modes to make teaching/learning activities more effective,
- broadcast useful non-formal education programmes so that a maximum number of people from different communities could involve in educational activities, and
- conduct programme that will help make higher and school level education available to all and also to expose the learners to the wider educational world.

The following courses which form the ten-month programme are divided into four 2.5 month packages.

First 2.5 month package	hrs.	Second 2.5 month package	hrs.
Education Foundation I	45	Education Foundation II	45
Nepali	90	English	90
Mathematics	90	Environmental Science	90
Social Studies	60	Physical Education	30
Practice Teaching	35	Arts and Crafts	30
		Practice Teaching	35
Total	320	Total	320

Third 2.5 month package	hrs.	Fourth 2.5 month package	hrs.
Primary Education and Community Development	90	Child Development, Curriculum, Learning Theory	90
Nepali	35	English	35
Mathematics	35	Environmental Science	35
Social Studies	35	Physical Education	17.5
Practice Teaching	35	Arts and Crafts	17.5
		Practice Teaching	35

(ELECTIVES-CHOOSE ONE)	hrs.	(ELECTIVES–CHOOSE ONE)	hrs.
Classroom Organization	90	Evaluation Techniques	90
Non-Formal Education	90	Teaching/Learning	
Home Science	90	Material	90
		Physical Education	90
Total	320	Total	320

N.B. The total number of hours in each package is 330 (i.e. 320 hrs + 10 hrs for final test).

Programmes Conducted by the DEC

- **Primary Teacher Training:** The primary teacher training is being conducted through radio for the in-service teachers.
- **Magazine Show:** In addition to the normal lesson broadcast, this programme is conducted for about six minutes in between the two radio lessons. It includes teachers' questions and comments as well as items of topical interest.
- **Weekly Education Programme:** Besides broadcasting news and views on educational activities, a variety of interesting educational facts about non-formal education, population education, health education, agriculture education, environment education, female education, etc. which may prove useful to the teachers, students and community goes on air every week.

The Centre aims to expand its educational programmes in various possible ways.

Organisational Structure

To ensure the proper functioning, the DEC has four different working sections: Programme Development Section, Evaluation and Monitoring Section, Production Section and General Administration Section. There exist 36 positions of personnel in the Centre including 1 director, 3 deputies and 10 officers.

Advisory Committee

A 5-member advisory committee has been formed in order to have fruitful suggestions for the effectiveness of the programme.

Physical Facilities

The Centre has its own 22-roomed office building at Sano Thimi, Bhaktapur. It possesses two Recording Studios equipped with necessary sound equipment.

Primary Teacher Training

To conduct the training programme, the Centre uses three modes: i) Radio Scripts, ii) Self-instructional Material (SIM) and (iii) Contact Session.

1. **Radio Scripts:** Radio scripts based on the curriculum approved by the Ministry of Education, are prepared in the Centre. The DEC produces its audio programmes in house and sends them to the Radio Nepal for broadcasting.

2. **SIM and Radio Summary:** Self-instructional material and summary book of the radio lessons are distributed to the trainees free of charge so as to make learning more effective and easy to understand:
3. **Contact Session:** The trainees may find some lessons difficult to grasp or they may sometimes miss the radio lesson for some reasons. Keeping this fact in view, resource centers have been established in the relevant districts. With the help of the resource teacher, the trainees have to construct test items, instructional materials and lesson plans. Besides, they have to undergo teaching practice.

Programme Conducting Procedure

The entire training materials are prepared by the Centre. Script-writing, recording and production are done by the Centre. Sometimes professional script-writers are invited to prepare radio scripts as well. The recorded programmes are then given to the Radio Nepal for broadcasting. To implement the training programme, the District Education Office has an important role to play.

Resource Teacher (RT)

Resource teachers are appointed by the District Education Office. The resource teacher conducts contact session for the trainees at the resource centre. This session will help the trainees and the resource teacher to come across their views and also make them understand the lesson more clearly. Besides, demonstration of practice teaching and evaluation of the practical sessions are the responsibilities of the resource teachers.

Final Test

After completion of the training, the trinees are required to take a final test. The Centre conducts the theoretical test on the spot through the District Education Office and the evaluation of the practical aspect is done by the R.T. The successful trainees are awarded a training certificate along with mark-sheet. They receive training allowance as per the HMG's rules.

Problem of Teacher Training and Its Possibilities

The need for teacher training cannot be underestimated in the context of Nepal where 52% of the primary school teachers are still untrained (MOE, 1993). The institutions involved in training primary school teachers cannot alone produce the required number of trained teachers as envisaged in the Eighth Five Year Plan. Thus, it is essential to seek alternative approaches to support production of trained teachers to achieve the target.

Nepal is striving for quality education. A genuine aspect of the quality education is the training of teachers. Unless the teachers are trained, the quality in the classroom can hardly be sought. The attempts made by the MOE in training teachers have not met the required number set by HMG plan. In a study of the primary school teacher training, it is indicated that about 4500 new teachers are enrolled every year whereas about 5000 are trained annually.

The face-to-face training run by other institutions would not be able to reach all of the untrained in-service primary teachers in a mountainous country like Nepal. Moreover, it has some critical problems regarding substitute of teachers during the training period. The distance mode will be of a great help in the sense that teachers can participate in training course while continuing their school teaching duties. The distance mode has been adopted as the most cost-effective and only

feasible means of providing training to the S.L.C. pass primary school teachers. Similar may be the case with formal education (secondary/higher education) keeping in view the examples of other countries. Just a few years ago, during the session of Asia-Pacific Workshop on Teacher Training at a Distance (Seoul), the representative of Hong Kong was asked – why distance education for a country like Hong Kong having a small territory ? The answer was – the people of Hong Kong are so busy that they cannot afford time to sit in the classroom and have face-to-face education.

It is needful to explore the possibilities of using distance mode of delivery in training teachers. From our past experience we have learnt that we'll have to cope with some problems while training primary school teachers through distance mode, and donor support will be needed as well to expand its educational programme as far as possible. We should establish collaboration with other (donor) agencies, open schools/universities etc. taking the Nepalese situation into consideration. We have to exploit the existing resources and the expertise of our man-power, no matter what status he or she is in. Foreign consultants must not be totally relied on as we may have our own experts to rely on.

A Resource Teacher may sometimes find himself/herself in difficult position to answer some questions of the trainees in a particular subject which is not the resource person's main subject. Further, the trainees may sometimes miss the radio lesson for various reasons, e.g. in the hilly/mountainous region, it may take around 2 hours for some teachers to get home after the school is over, whereas the time for lesson broadcast is 5:30 p.m. Hence, aerogrammes and audio programmes based on the radio lessons should be developed. Audio cassettes will be dubbed and produced into required number for distribution to the trainees and resource centers. Similarly, aerogrammes which were once tried by the DEC and the result of which was very positive, should be developed so that the trainees can get an opportunity to contact with the DEC about their querries. A set of questions related with the training contents will be printed in the aerogrammes. They will be self-addressed and pre-stamped.