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Education Review Journal (ERJ) is a scholarly journal that incorporates research articles, review articles, and stories of experiences related to assessment of student achievement, performance audit, and other evaluation activities conducted by educational entities such as the Education Review Office (ERO) under the Ministry of Education and Sports as well as universities from within the country and abroad.

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Editorial

The Education Review Office (ERO) was established in 2010 AD with a broad aim of conducting independent assessments under the Ministry of Education and sports, providing evidence-based feedback to inform policy reforms, for the improvement of quality of school education. Since its establishment, the ERO has been conducting research activities regularly, which include: the National Assessment of Student Achievement (NASA) for grade 5, 8 and 10, the National Assessment of Reading and Numeracy (NARN) for grade 3, the Early Learning and Development Standards (ELDS) based assessment of Early Childhood Education and Development (ECED), the Performance Audit (PA) of schools and other education-related organizations, and research on contemporary educational issues. The findings from large-scale assessments, performance audits, and research studies have been disseminated through program wise reports, annual reports, dissemination programs, seminar presentations, and journal papers.

In addition to the aforementioned activities, ERO publishes its Education Review Journal (ERJ) annually. The 2026 issue, now available on the ERO website, comprises a total of 11 papers among which four are in Nepali and seven are in English language. Centered on the broad theme of assessment and testing for enhancing the quality of school education and educational institutions in the country, this issue presents scholarly contributions that address a wide range of academic and professional interests. The published papers are categorized into three broader areas: experience and opinion papers, review articles, and original research articles.

This volume features articles that examine the initiatives undertaken by the ERO since its establishment and reflect on these experiences to identify future directions. Other articles critically review ERO's major accomplishments, including the implementation of the National Assessment of Student Achievement (NASA), Performance Audit (PA), competency-based education and curriculum alignment, reflection of ERO practices in schools, possibilities of school quality accreditation, and other key activities within ERO's mandate. Furthermore, one of the articles incorporates assessment in higher education as an interlinked area. Some articles explore the existing practices, challenges, and barriers associated with the implementation of formative, non-cognitive, and other alternative assessments.

Publishing a scholarly journal is a collaborative endeavor that requires the dedicated efforts and equal commitment of many individuals at every stage of the publication process, from the call for papers to manuscript review, editing, proofreading, and final design. On this occasion, I would like to express my sincere gratitude to all the authors whose valuable contributions have made this issue possible. I am equally grateful to the reviewers, whose expert evaluations, constructive feedback, and thoughtful suggestions have been instrumental in enhancing the quality and scholarly standard of the published papers. I would also like to extend my heartfelt

appreciation to Prof. Dr. Bal Mukunda Bhandari, Chair of the English Subject Committee, and Prof. Dr. Bhupa Prasad Dhamala, whose expertise, meticulous guidance, and unwavering commitment throughout the editorial process were invaluable in bringing this journal to its present form.

Finally, I wish to express my deep appreciation to all the personnel of the ERO for their dedication and hard work. Their collective efforts have played a vital role in the successful publication of this journal.The ERO always welcomes constructive suggestions that could be instrumental in improving the quality of the journals in the days to come.

Chandra Kanta Bhusal
Editor-in-Chief
and
Executive Director

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विद्यालयको कार्यसम्पादन परीक्षणः सुधार यात्राको औजार

जयराम अधिकारी

शैक्षिक गुणस्तर परीक्षण केन्द्र

श्री जयराम अधिकारी, ORCID 0009-0003-1999-4017 शैक्षिक गुणस्तर परीक्षण केन्द्रको महानिर्देशक पदमा कार्यरत हुनुहुन्थ्यो। यस लेखको बारेमा थप कुरा बुझ्नु परेमा इमेल ठेगाना jayaram2066@gmail मा सम्पर्क गर्न सकिनेछ।

लेखसार

विद्यालय शिक्षाको गुणस्तर परीक्षणसमेतको कार्यजिम्मेवारीबमोजिम शैक्षिक गुणस्तर परीक्षण केन्द्रबाट सिकाइ उपलब्धि परीक्षणहरू, कार्यसम्पादन परीक्षणहरूलगायत शैक्षिक अनुसन्धानका कार्यहरू हुँदै आएका छन्। कार्यसम्पादन परीक्षणअन्तर्गत शैक्षिक निकाय र विद्यालयको कार्यसम्पादन परीक्षणका कार्य हुँदै आएका छन्। आ.व. २०८२/८३ मा सामुदायिक माध्यमिक विद्यालयको कार्यसम्पादन परीक्षण, प्रधानाध्यापकको नेतृत्व कार्यसम्पादन परीक्षण र स्थानीय तहको शैक्षिक सेवा प्रवाहको परीक्षण सञ्चालन गरिएको छ। परीक्षणका क्रममा यसको ढाँचा तथा साधनहरूमा सामयिक परिमार्जन गरी कार्य सम्पन्न गरिएको छ। यस आलेखमा विशेष गरी केन्द्रबाट भएका सामुदायिक विद्यालयको कार्यसम्पादन परीक्षणका हालसम्मको अध्ययनको निचोड, फलोअपका अनुभव तथा आ.व. २०८२/८३ मा विकसित तथा अद्यावधिक गरिएको कार्यसम्पादन परीक्षणको अवधारणा, साधन, परीक्षणका अनुभव र तिनको उपयोगका विषयमा चर्चा गरिएको छ। यस आलेख तयार पार्नका लागि केन्द्रबाट प्रकाशित-अप्रकाशित प्रतिवेदनहरू, परीक्षण ढाँचा तथा साधनहरू, अभिलेख, तथ्याङ्कको आधार लिइएको छ। साथै परीक्षण ढाँचा तथा साधन विकासका विभिन्न चरणमा भएका अन्तरक्रिया, कार्यसम्पादन परीक्षणको अनुगमन, फलोअपका क्रममा गरिएको विद्यालयको अवलोकन तथा

सरोकारवालासँगको सम्वाद, विमर्श तथा अन्तरक्रिया एवम् यी चरणमा संलग्न हुँदाको लेखकको अनुभवलाई समेत लेखनको आधार वा विधि बनाइएको छ। विद्यालयको कार्यसम्पादन परीक्षण प्रक्रियामा सरोकारवालाको सहभागिता, स्वसुधार, सहायता व्यवस्थापन र योजनाबद्ध सुधारको कार्यान्वयन, फलोअप, कार्यसम्पादनको उपल्लो स्तरको क्रमिक प्राप्तिजस्ता पक्षलाई सुधारका आगामी क्षेत्र मानी सुझाउका रूपमा समावेश गरिएको छ। परीक्षणका अनुभवका आधारमा आगामी दिनमा अनुसन्धानसँगै र सुधारका कार्य सञ्चालन गर्ने, क्रमिक स्तरोन्नतिको कार्य सञ्चालन गर्ने र संस्थाको शाख वृद्धिका लागि गुणस्तर वा मानदण्ड प्राप्तिको सुनिश्चितता यकिन गर्दै सोको प्रमाणीकरण गर्ने विषयका लागि कानुनी, कार्यक्रमिक तथा अभ्यासहरू अन्तरआबद्ध गर्नुपर्ने देखिएको छ।

मुख्य शब्दः कार्यसम्पादन परीक्षण, परीक्षक, कार्यसम्पादन स्तर, स्तर निर्धारण, क्रम निर्धारण, सुधार, स्वमूल्याङ्कन, बाह्य परीक्षण, प्रमाणीकरण

विषय प्रवेश

शिक्षा ऐन २०२८ (संशोधनसहित) को ७ख. बमोजिम विद्यालय शिक्षाको गुणस्तर परीक्षणसमेतको कार्य शैक्षिक गुणस्तर परीक्षण केन्द्रको जिम्मेवारी रहेको छ। केन्द्रबाट विद्यालय तथा शैक्षिक निकायको कार्यसम्पादन परीक्षण, विद्यार्थीको सिकाइ उपलब्धिको परीक्षण, बालबालिकाको विद्यालय तयारीको अध्ययन, विभिन्न परीक्षणका साधनहरूको विकास, समसामयिक शैक्षिक विषयमा अध्ययन हुँदै आएका छन्। कार्यसम्पादन परीक्षणअन्तर्गत विगतमा साविकका स्रोतकेन्द्र, जिल्ला शिक्षा कार्यालय, शैक्षिक तालिम केन्द्र, शिक्षा विकास निर्देशनालयको कार्यसम्पादन परीक्षण भएका छन् (शैक्षिक गुणस्तर परीक्षण केन्द्र [शैगुपके], २०७३ग; २०७३क; २०७२)। यस्तै कार्यक्रम विशेषको पनि कार्यसम्पादन परीक्षण भएको छ। स्थानीय तहको शैक्षिक क्षेत्रको कार्यसम्पादन परीक्षण, सेवाग्राही सन्तुष्टि अध्ययन भई विभिन्न प्रतिवेदन विकास भएका भएका छन् (शैगुपके, २०८२क)।

शैक्षिक गुणस्तर परीक्षण केन्द्रबाट आ.व. २०७४/७५ देखि आ.व. २०८१/८२ सम्मका वर्षहरूमा विभिन्न जिल्लामा गरी केन्द्रबाट ७७ जिल्लाका एसइइमा सहभागी ६,३७० ओटा सामुदायिक माध्यमिक विद्यालयको कार्यसम्पादन परीक्षण गरिएको छ (२०८३क; २०८२क)। यद्यपि परीक्षणका रूपमा निजी विद्यालय, नमुना विद्यालयलक्षित अध्ययनसमेत भएको देखिन्छ (शैगुपके, २०७३ग; २०७३क; २०७२)। आ.व. २०८२/८३मा सामुदायिक माध्यमिक विद्यालयको कार्यसम्पादन परीक्षणको स्वमूल्याङ्कनसहितको ढाँचा र साधन अद्यावधिक गरिएको छ। यस सिलसिलामा प्राप्त अनुभवका आधारमा विषयक्षेत्रमा सामयिक संशोधन गर्ने; स्तर निर्धारण, अङ्कनलाई वस्तुगत बनाउन रुब्रिक्स थप गर्ने; स्वसुधारका लागि स्वमूल्याङ्कनका विषय थप गरी परीक्षण ढाँचा र साधन विकास गरी स्वमूल्याङ्कनको अनलाइन प्रणाली विकास गरिएको छ (शैगुपके, २०८२च)। परिवर्तित परीक्षण ढाँचा र साधनबमोजिम केन्द्रबाट आ.व. २०८२/८३ मा सामुदायिक माध्यमिक विद्यालयको कार्यसम्पादन परीक्षण (१०० ओटा) गरिएको छ। यसै गरी प्रधानाध्यापकहरूको नेतृत्व कार्यसम्पादन परीक्षण (२०० प्रअ), स्थानीय तहबाट हुने शैक्षिक सेवा प्रवाहको कार्यसम्पादन परीक्षण (२४ स्थानीय तह) सम्पन्न भएका छन् (शैगुपके, २०८३)।

औपचारिक शिक्षामा विद्यालयले भूमिका महत्त्वपूर्ण रहन्छ। यसले व्यक्ति र समाजका शिक्षासम्बन्धी मूलभूत उद्देश्य पूरा गर्नुपर्ने मान्यता रहन्छ। विद्यालयले गर्ने शिक्षासम्बन्धी प्रयत्नलाई बालबालिकाको सिकाइ तथा विद्यालयको

प्रभावकारिताका सापेक्षमा मूल्याङ्कन गरिनुपर्छ। बालबालिकामा साक्षरता सिप, संज्ञानात्मक दक्षता, व्यावहारिक सिपको विकास, सामाजिकीकरण, नागरिकताको विकास, व्यक्ति तथा समाजको रूपान्तरण चेतनालगायतको विकासमा औपचारिक शिक्षाको अपेक्षित दायित्वलाई विद्यालय शिक्षाले पूरा गर्नुपर्छ। यसका लागि विद्यालयहरू प्रभावकारी रूपमा सञ्चालन गरिएको हुनुपर्छ। विद्यालयले शिक्षापद्धतिका मापदण्डको पालना, पाठ्यक्रमका अपेक्षित सक्षमताहरूको विकास, लगानी-प्रक्रिया र नतिजाको सन्तुलित प्राप्ति गरेको हुनुपर्छ। विद्यालयको कार्यसम्पादन परीक्षण शिक्षाका यिनै पक्षबाट निर्देशित हुने गर्छ।

कार्यसम्पादन परीक्षणका प्रतिवेदन र तिनको सार

केन्द्रबाट आ.व. २०६८/६९ बाट सुरु भई आ.व. २०७२/७३ सम्म विद्यालय (सामुदायिक र केही संस्थागत विद्यालय) तथा शैक्षिक निकायहरू, केन्द्रीय निकाय (शिक्षक किताबखाना, पाठ्यक्रम विकास केन्द्र, अनौपचारिक शिक्षा केन्द्र), क्षेत्रीय शिक्षा निर्देशनालय, जिल्ला शिक्षा कार्यालय, स्रोतकेन्द्रहरूको कार्यसम्पादनको परीक्षण भएको देखिन्छ (शैगुपके, २०७३)। शैक्षिक गुणस्तर परीक्षण केन्द्रबाट भएका विद्यालयको कार्यसम्पादन परीक्षणका विभिन्न प्रतिवेदन (२०७२, २०७३क, २०७३ग, २०७६, २०७७क, २०७८, २०७९क, २०८२ख, २०८२ग, र २०८३) प्रकाशित छन्। केही अध्ययनको विद्युतीय प्रकाशन (आ.व. २०७८/७९, सिन्धुली र बागलुङ) भएको छ (२०८३ख, २०८३ग)। समग्र प्रतिवेदन (प्रकाशित २०७९ख, र २०८३घ मसौदा), अध्ययन सार (२०७७ख) प्रकाशन, लगायत तथ्याङ्कीय प्रतिवेदन, जिल्लागत प्रतिवेदनसमेत बनी, प्रकाशित भएर सोबमोजिम सुझाउ दिने, छलफल र विमर्श सञ्चालन भएका छन्।

समग्रमा विद्यालयहरूको कार्यसम्पादनको अवस्था सामान्य छ। कुल ६३७० विद्यालयमध्ये १३ (०.५%) विद्यालयको उत्तम कार्यसम्पादन देखिन्छ। ८०% विद्यालयको कार्यसम्पादनको स्तर 'सामान्य', १८% विद्यालयको कार्यसम्पादन मध्यम स्तरको र १.५% विद्यालयको कार्यसम्पादन स्तर कमजोर देखिन्छ (२०८३घ)। यो नतिजामा विद्यालय, स्थानीय तह र जिल्लागत रूपमा भिन्नता ठुलो देखिन्छ (शैगुपके, २०७८, २०७९क, २०८३क)। प्रणालीगत दृष्टिकोण (System approach) का आधारमा गरिएको कार्यसम्पादन परीक्षणमा लगानी, प्रक्रिया र उपलब्धिको अवस्था तथा तिनीहरूबिचको कसिलो सम्बन्ध देखिन्न। अर्थात् विद्यालयको लगानी राम्रो हुँदा पनि राम्रो उपलब्धि देखिन्न। शिक्षण सिकाइ, नेतृत्व र सुशासन व्यवस्थापनका प्रक्रियाले उपलब्धि सुनिश्चित गरेको देखिन्न। विद्यालयको अवस्थिति (सुगम-दुर्गम, गाउँ-नगरपालिका, सामाजिक-सांस्कृतिक परिवेश), प्राप्त विरासत, स्रोतसाधन, नेतृत्व र समुदायको जागरुकताले कार्यसम्पादनको स्तर, अवस्थामा प्रभाव पारेको देखिन्छ।

अध्ययनमा लगानी क्षेत्रअन्तर्गत भवन, पूर्वाधार तथा भौतिक संरचना, शिक्षकको उपलब्धताको अवस्था मध्यम देखिन्छ। यद्यपि लगानी क्षेत्रकै विद्यालय समुदाय सम्बन्ध र समुदायको लगानीमा निकै सुधार आवश्यक देखिएको छ। प्रक्रियाका क्षेत्रमा नेतृत्व, व्यवस्थापन विषयमा कार्यसम्पादन केही राम्रो छ। शिक्षकको पेसागत विकासको अवस्था कमजोर छ। शिक्षकको कार्यसम्पादन मूल्याङ्कन फाराममा राख्नैपर्ने भएकाले प्रायः सबैले गर्ने गरेको देखिने भए पनि विद्यमान अवस्था सुधारका लागि कार्यमूलक अनुसन्धानको उपयोग भएको त्यति देखिन्न, र भएको अनुसन्धानको पनि उचित प्रचार प्रसार नहुने कारणले कमैलाई सो विषयको जानकारी हुने र सायद "उपयोग र परिवर्तन" तत्परता मा कमी भएर हुनसक्छ, अनुसन्धानपश्चात् अभ्यासमा परिवर्तन आउने तहको कार्यमूलक अनुसन्धान कमै भेटिन्छन्। विद्यार्थी मूल्याङ्कन र अभिलेखन, अतिरिक्त क्रियाकलाप सञ्चालन, प्रविधिमैत्री शिक्षण सिकाइको अवस्था कमजोर छ।

अनुमगन, सहायता व्यवस्थापन र लक्षित सुधार कमै भएको देखिन्छ । उपलब्धि वा नतिजाको क्षेत्रमा सिकाइ उपलब्धि, कार्यदक्षता, सेवाग्राही सन्तुष्टिका विषयमा सुधार जरुरी छ । विद्यार्थीको नियमितता र निरन्तरता बढाउने एवम् छाड्ने दर घटाउने विषयमा सुधार जरुरी देखिन्छ । धेरैजसो सामुदायिक विद्यालयमा हरेक वर्ष खास गरी तल्ला कक्षाहरूमा विद्यार्थी सङ्ख्या घट्दो क्रममा देखिएको छ । केन्द्रकै सिकाइ उपलब्धि परीक्षणका अध्ययनले देखाएअनुसार धेरैजसो विद्यालयको सिकाइ उपलब्धि वा नतिजा कमजोर छ, साथै सरोकारवालाको संस्थाप्रतिको विश्वास कमजोर छ । लगानी र प्रक्रियाको सम्बन्ध सिकाइ उपलब्धि वा नतिजामा हुने भए पनि यी ३ पक्षबिचको सन्तुलनको प्रणालीगत दृष्टिकोणअनुरूप काम हुन सकेको देखिन्न (शैगुपके, २०७३ख; २०७६; २०७९क; २०८२ख; २०८२ग; २०८३क) ।

सीमित पूर्वाधार र लगानी हुँदा पनि केही विद्यालयमा सिकाइ प्रकिया, अतिरिक्त क्रियाकलाप तथा समग्र सुधारका प्रयास भएका छन् । आधारभूत अवस्था सुनिश्चित गर्न लगानी बढाउनुपर्ने देखिन्छ । नतिजा र प्रक्रियामा निकै सुधार आवश्यक देखिन्छ । योजनाबद्ध सुधारको प्रयास, स्रोत विनियोजन, एकीकृत दृष्टिकोण तथा आबद्धता, अनुगमन, प्राविधक सहायता जरुरी देखिएको छ । परीक्षणबाट लगानी, प्रक्रिया र उपलब्धिका क्षेत्र, उपक्षेत्रगत अवस्थाको सूक्ष्म विश्लेषण गरी सुधार कार्य गर्नुपर्ने देखिन्छ । यसबमोजिम धेरैजसो सुधार विद्यालय तहमा नै हुने छन् । स्थानीय तह, प्रदेश र सङ्घ सरकारबाट गरिनुपर्ने सुधारका विषय पनि पहिचान भएका छन् । सोहीबमोजिम विद्यालय, स्थानीय तह, प्रदेश र सङ्घीय सरकारको तहमा गरिनुपर्ने सुधारका कार्यहरू सुझाइएको छ (शैगुपके, २०७३क; २०८२क; २०८२ख; २०८२ग; २०८३क) ।

विद्यालय तहमा शिक्षणसिकाइलाई योजनाबद्ध बनाउने, सिकाइयोग्य वातावरण बनाउने, सिकाइ प्रक्रियामा सुधार गर्ने, कक्षा व्यवस्थापन र मूल्याङ्कन प्रणालीमा सुधार गर्नुपर्ने देखिन्छ । यसै गरी विद्यालय व्यवस्थापन समितिको सक्रियता, सुधार प्रयत्न, वित्तीय तथा समाजिक परीक्षण, पारदर्शिता, गुनासो सुनुवाइजस्ता सुशासनका विषयमा ध्यान दिनुपर्ने देखिन्छ । विद्यार्थीको नियमित उपस्थिति, सिकाइमा सहभागिता र निरन्तरतामा सुधार गर्नुपर्ने देखिएको छ । सिकाइ उपलब्धिमा सुधार ल्याउने, विद्यार्थी लक्षित सहायता मिलाउने, कमजोर पक्षमा सुधार गर्ने, कार्यसम्पादनको स्वमूल्याङ्कन र निरन्तर सुधारलाई अगाडि बढाउने विषय आवश्यक देखिन्छ । प्रशासनिक, शैक्षणिक, मूल्याङ्कनलगायतका समग्र पक्ष एवम् सुधारका कार्यप्रयत्नको अभिलेख कमजोर रहेकोले यसमा सुधार जरुरी देखिएको छ । शिक्षक तथा प्रधानाध्यापकको कार्यविवरणबमोजिम सम्पादन गर्नुपर्ने काम प्रभावकारी बनाउनुपर्ने देखिन्छ । पूर्वाधार र सुविधा थप्ने, तिनको उपयोग र यसमार्फत नतिजामा रूपान्तरणको आधार बनाउनुपर्ने देखिएको छ । तोकिएका कार्यको सम्पादन, कानुनी आधारको पालना गर्ने, सुधारका योजना बनाई कार्यान्वयन गर्ने विषय आवश्यक देखिन्छ । महत्त्वपूर्ण विषयक्षेत्रका सूचकहरूको अवस्था र समयक्रममा भएको प्रगतिलाई सबैले देखिने गरी राख्ने र यसलाई पछ्याउने काम गर्न सकिने छ । सरोकारवालालाई सुधारमा संलग्न गराउने, आफ्नै स्रोत र प्रयासमै सुधार गर्न सकिने विषयको कार्यान्वयन गर्ने एवम् थप स्रोत खोजी गर्ने प्रयत्न पनि उत्तिकै जरुरी देखिन्छ । (शैगुपके, २०७२, २०७३क, २०७३ग, २०७६, २०७७क, २०७७ख, २०७९क, २०८२क, २०८२ख, २०८२ग र २०८३क)

स्थानीय तहले विद्यालयगत आवश्यकतामा आधारित योजना र स्रोत विनियोजना, प्रक्रिया पक्षमा सुधार, शिक्षकको पेसागत विकास र सहायता प्रबन्ध, अनुगमन, मूल्याङ्कन र तथ्याङ्क व्यवस्थापन गर्ने, सहभागिता बढाउने र लक्षित कार्यक्रम सञ्चालन गर्नुपर्ने विषय पहिचान भएका छन् । भौतिक सुविधा तथा पूर्वाधारको सुनिश्चित गर्ने, शिक्षक

व्यवस्थापन तथा मिलान गर्ने, आधारभूत अनुकूल अवस्थाको सुनिश्चित गर्ने काममा स्थानीय तहले जिम्मेवारी लिनुपर्ने देखिन्छ। कानुन, मापदण्डहरूको अनिवार्य परिपालना (Compliance) तथा शैक्षिक व्यवस्थापनका सबै पक्षमा ध्यान दिइनुपर्छ। शिक्षकको पेसागत विकासको पर्याप्त अवसर तथा कार्यस्थलमा आधारित प्राविधिक सहजीकरणको प्रबन्ध मिलाउनुपर्ने देखिन्छ। यसै गरी स्थानीय तहगत सिकाइ उपलब्धिको नतिजा विश्लेषण र तुलना गरी सुधारसँग जोड्नुपर्ने देखिन्छ। साथै स्थानीय तहले विद्यालयको कार्यसम्पादन परीक्षणको स्वमूल्याङ्कन, फलोअप तथा नियमित सुधारसँग जोड्नुपर्ने देखिन्छ। शैक्षिक सुधारको बहसमा कार्यसम्पादन परीक्षणका सूचना तथा प्रमाणहरूलाई लिन सकिन्छ। आफ्नै पहलमा परीक्षण सञ्चालन गरी विद्यालयहरूको अवस्थाबोध गर्ने, शैक्षिक कार्यक्रम सञ्चालन गर्ने, यसका सूचना तथा प्रमाणलाई प्रेरणा र प्रोत्साहनका कार्यक्रमसँग जोड्नुपर्ने देखिन्छ। स्रोत विनियोजन तथा स्रोत सुविधाको न्यायिक वितरण गर्नुपर्ने विषय पहिचान भएका (शैगुपके, २०७२, २०७३क, २०७३ग, २०७६, २०७७क, २०७७ख, २०७९क, २०८२ख, २०८२ग, र २०८३क) महत्त्वपूर्ण विषय हुन्।

प्रदेश तहमा विद्यालय शिक्षाको नीति, कार्यक्रम तथा पेसागत विकासका विषय हेर्ने निकायबाट स्रोत परिचालन, क्षमता विकास, तथ्याङ्क प्रणाली विकास गर्ने विषय प्राथमिकताका विषय हुन्। सङ्घ तहका निकायबाट परीक्षणको कानुनी आधार बनाउने, गुणस्तरसँग आबद्ध गर्ने, तथ्याङ्क प्रणाली बनाउने, कार्यक्रमसँग आबद्ध गर्ने, नवप्रवर्तन र सुधारका कार्य सञ्चालन गर्ने, लक्षित कार्यक्रम सञ्चालन गर्नेलगायत विषय पहिचान भएका विषय हुन्। सबै विद्यालयमा आधारभूत पूर्वाधार एवम् सुविधा पुऱ्याई शिक्षाका लागि अनुकूल वातावरण बनाइनुपर्छ। न्यायिक विकास तथा प्रोत्साहन एवम् सुधारसँग यी सूचना तथा प्रमाणलाई प्रयोग गर्नुपर्ने देखिन्छ। शिक्षा प्रणालीका प्राथमिकता, मूलभूत प्रावधान तथा कार्यक्रमहरू कार्यान्वयनको अवस्था, यसमा सघाउने वा बाधा पुऱ्याउने पक्षको पहिचान गरी परिपालनालाई बढाइनु पर्छ। तथ्याङ्क प्रणाली, आपसी आबद्धता, निरन्तर सुधारको यात्रामा यसलाई औजारका रूपमा विकास गर्ने काम महत्त्वपूर्ण देखिएको छ। लगानी र प्रक्रियामा सुधार पद्धतिलाई संस्थागत गर्ने, कानुनी आधार, गुणस्तर परीक्षण र सुनिश्चितता, असल अभ्यास प्रवर्धन, स्रोतविनियोजनसँग आबद्ध गर्ने विषय जरुरी देखिएको छ। प्रणालीगत सोचका साथ लगानी, प्रक्रिया र नतिजा वा उपलब्धि विषयको सन्तुलित विकास र अपेक्षित नतिजा प्राप्ति प्राथमिकताका विषय (शैगुपके, २०७२, २०७३क, २०७३ग, २०७६, २०७७क, २०७७ख, २०७९क, २०८२ख, २०८२ग, र २०८३क) हुन्।

कार्यसम्पादन परीक्षण भएका विद्यालयहरूको फलोअपको अनुभूति

केन्द्रबाट विद्यालयको बाह्य कार्यसम्पादन परीक्षणले के कस्तो प्रभाव पारेको रहेछ, सुधारका के कस्ता प्रयत्न भए भनेर थाहा पाउनुका साथै परीक्षणमा के कस्ता विषय समावेश गर्नु उचित हुनेरहेछ भनेर आफ्नै प्रणालीमा सुधारका लागि पनि शैक्षिक गुणस्तर परीक्षण केन्द्रले परीक्षणको केही समयपश्चात् ती विद्यालयलाई पछ्याउने काम (Follow up) जरुरी देखिएको छ। प्रमाणका आधारमा विभिन्न पक्ष, सूचकहरूमा तुलना गर्ने, आफ्नै संस्थाको विगतसँग वर्तमानलाई तुलना गर्ने, कार्यप्रयत्नको समीक्षा र स्वसुधार गर्ने परीक्षणको दिगो पद्धति बन्नुपर्छ। फलोअपले परीक्षणलाई सुधार कार्यसँग जोड्छ। समयबद्ध लक्ष्य तोकी तिनको प्राप्ति गर्ने वातावरण एवम् कार्य प्रतिबद्धता बनाउने र सुधारको जिम्मा लिने काम परीक्षण निकाय भन्दा पनि सम्बन्धित संस्थाकै हुने कुरामा दुईमत छैन। तर पनि यस्ता पछ्याउने व्यवस्थाले दुबै पक्षलाई थप जिम्मेवार बनाउन सहयोग गर्ने र अन्ततः प्रणालीको सापेक्षित सुधारतर्फ अग्रसर बनाउँछ। पछिल्ला तीन वर्षमा शैक्षिक गुणस्तर परीक्षण केन्द्रबाट कार्यसम्पादन परीक्षण भएका विद्यालयको फलोअपको सीमित कार्य भएका छन्।

आ.व. २०८१/८२ मा फलोअपका लागि विद्यालयलाई पुनः फाराम भर्न लगाई, विद्यालयको विगतको अवस्थासँग तुलना गर्ने र स्थानीय तहमा भएको कार्यक्रममा प्रस्तुति र छलफल गरिएको थियो। स्वमूल्याङ्कन मात्र गरी बाह्य सत्यापन नभएको नतिजामा सहभागी ४४ विद्यालयमध्ये ४० विद्यालयको कार्यसम्पादनको अङ्क बढेको देखिन्छ। सोमध्ये आधाभन्दा बढी विद्यालयको अङ्क १० देखि ३४ सम्म बढेको देखिन्छ। विद्यालयहरूमा सूचना प्रविधि, शिक्षण सिकाइ व्यवस्थापन, शिक्षकको पेसागत विकास तथा समुदाय विद्यालय सम्बन्धमा सुधार आएको देखिन्छ। यद्यपि विद्यालयमा थप सुधार जरूरी देखिएको छ (शैक्षिक गुणस्तर परीक्षण केन्द्र, २०८२क)।

आ.व. २०८२/८३ मा विद्यालय अवलोकन र अघिल्लो आ.व.मा कार्यसम्पादन परीक्षण भएका इलाम, डोटी र बैतडी जिल्लाका ५ स्थानीय तहमा भरिएको साधनलाई आधार मानी छलफल गरिएको छ। सूचकगत रूपमा कार्यसम्पादनको स्तर ० र १ अङ्कन भएका अर्थात् लगभग शून्य र अत्यन्त न्यून कार्यसम्पादन भएका विषयक्षेत्रमा लगभग एक वर्षको अवधिमा भएको सुधार, त्यसका लागि भएका प्रयत्न विषयमा छलफल गरियो। विशेष गरी विकट र विस्तारित भूगोलका विद्यालयमा भवन, भौतिक तथा शैक्षिक पूर्वाधार, शिक्षक जनशक्तिजस्ता लगानीका विषय अझै पनि कमजोर पाइएको छ। सुगम र दुर्गम दुवै स्थानमा रहेका अधिकांश विद्यालयमा शिक्षण सिकाइ प्रक्रिया, व्यवस्थापनका प्रक्रियाजन्य विषय तथा परिणाम वा उपलब्धि विषय कमजोर छन्। सूचकगत रूपमा कार्यसम्पादन अङ्क ० र १ प्राप्त गरेका क्षेत्रमा तत्काल सुधारका लागि कार्यहरू गर्नुपर्नेमा धेरैजसो विद्यालयमा सचेत, योजनाबद्ध, पर्याप्त प्रयास कमै देखिन्छ, केही विद्यालयले भने राम्रो प्रयत्न गरेको पनि देखिन्छ। विद्यालयमा विद्यार्थीलाई नियमित उपस्थित गराउने, विद्यालय छाड्ने दर घटाउने र सिकाइका दृष्टिले कक्षोन्नति गर्न नसिकने स्तरमा विद्यार्थी रहने अवस्थामा सुधार गर्ने विषयमा निकै प्रयत्न आवश्यक देखिन्छ। शिक्षकको उत्प्रेरणा, कार्यस्थलमा आधारित विविध अवसरसहितको पेसागत विकास, कार्यसमर्पण, सुधारको हुटहुटी, निरन्तर कार्यस्थलमा आधारित प्राविधिक सहायता व्यवस्थापनमा धेरै काम गर्नुपर्ने देखिएको छ। विद्यालयको प्रशासनिक, शैक्षणिक, सिकाइको मूल्याङ्कनलगायतका विषयमा अभिलेख धेरैजसो कमजोर देखिन्छ।

बाल विकास केन्द्र/कक्षामा सिकाइ कुना तथा सामग्रीको अवस्था, हरेक कक्षामा बुक कर्नर, शिक्षक र विद्यार्थीका लागि आधारभूत सामग्री व्यवस्था र तिनको नियमित प्रयोगका विषयमा पनि निकै सुधार आवश्यक देखिन्छ। पुस्तकालय, विज्ञान प्रयोगशाला, कम्प्युटर तथा सूचना प्रविधि प्रयोगशाला तथा उपकरणको पर्याप्तता र प्रयोगलाई ध्यान दिनुपर्ने देखिन्छ। पूर्वाधार, सुविधा विद्यालयमा उपलब्ध भएर पनि सिकाइमा प्रयोग नहुँदा तोकिएको कार्य गर्न नसक्ने, अकार्यात्मक र अर्थरहित (non-functional) बन्न पुगेका देखिन्छन्। गणित विषयको शिक्षण सिकाइमा सुधार गर्न गणित प्रयोगशालाको व्यवस्था, स्थानीय कला, संस्कृति र रहनसहन सिकाउने सङ्ग्रहालय तथा सामाजिक विषय प्रयोगशाला, भाषा शिक्षण प्रयोगशाला त कुनै कुनै विद्यालयमा मात्र भेटिन्छ। धेरैजसो विद्यालयमा शैक्षणिक योजना निर्माण र योजनाबद्ध शिक्षण सिकाइ, विद्यार्थी मूल्याङ्कनको सिकाइसँगको अभिन्नता र निरन्तरता, वैयक्तिक तहको सहजीकरण, मातृभाषामा आधारित सिकाइ सहजीकरणजस्ता मूलतः शिक्षक प्रयत्नमा गर्न सकिने विषयको अवस्था पनि असचेत र न्यून अभ्यासको अवस्थामा रहेको अनुभव हुन्छ। केही विद्यालयमा आंशिक राम्रा अभ्यास भएका छन्, तिनको निरन्तरता, सम्पूर्णता र विस्तार जरुरी देखिन्छ। स्थानीय पाठ्यक्रमको कार्यान्वयन, विद्यालय सुधार योजना, लेखा परीक्षण, सामाजिक परीक्षण, अभिभावक भेला, विद्यालय व्यवस्थापन समिति, शिक्षक अभिभावक सङ्घ, भौतिक तथा शैक्षिक पूर्वाधार र

सुविधा, शिक्षा विकासका कार्यक्रम, अवधारणा आदि अभिप्रायअनुरुपको स्तरमा कमै छन्; कमै संस्थागत भएको देखिन्छ। यिनलाई अपेक्षित कार्य गर्नसक्ने र अर्थयुक्त बनाउने थप प्रयत्न जरुरी देखिन्छ।

परीक्षणको नतिजा विषयमा सरोकारवालासँग छलफल गर्ने, सुधारको योजना बनाई कार्यान्वयन गर्ने, आवधिक समीक्षा गर्ने, कार्यप्रयत्न (initiations/interventions) हरूलाई मूलभूत क्षेत्र/कोर विषयमा केन्द्रित गर्ने, सिकाइ उपलब्धिमा सुधार गर्नेलगायत विषय प्राथमिक बन्नुपर्ने देखिन्छ। आधारभूत भौतिक तथा शैक्षिक पूर्वाधार र सुविधाहरूको विकासका लागि सरकारका तीन तहले सघाउनुपर्ने देखिन्छ। कक्षाकोठाको शिक्षण सिकाइ, शैक्षिक सामग्री विकास र प्रयोग, कार्यमूलक अनुसन्धान, विद्यार्थी सहायता तथा वैयक्तिक तहसम्मको सहजीकरण, योजनाबद्ध शिक्षण सिकाइलगायत विषय विद्यालय तहले नै सुधार गर्नपुर्ने तथा गर्नसक्ने विषय हुन्। विद्यमान स्रोतसाधनमा वा अन्यन्त न्यून स्रोतसाधन रहँदासमेत गर्न सकिने यी विषय जिम्मेवार पदाधिकारीले सम्पादन गर्नैपर्ने आधारभूत विषय हुन्। जिम्मेवार पदाधिकारीले विद्यालय समुदाय सम्बन्धलाई सुदृढ बनाई सामुदायिक पुँजी, स्रोत, सबल पक्षको पहिचान र परिचालन गरी सन्दर्भअनुकूल सुधारको माहोल बनाउनु आवश्यक हुन्छ। सुशासन, पारदर्शिता, गुनासो सुनुवाइ, वित्तीय अनुशासन, सामाजिक परीक्षणले औंल्याएका सुधारको कार्यान्वयनको विषय अझै पनि खटकिएको विषय हो। सिकाइसँगै मूल्याङ्कनलाई अगाडि बढाउने, निदानात्मक परीक्षण सञ्चालन गरी वैयक्तिक तहमा विद्यार्थीका लागि सिकाइ सहायता व्यवस्थापन गर्ने विषय सुदृढ बनाउनु जरूरी छ। औपचारिक विद्यालय शिक्षाको मूल दायित्व भाषिक तथा गणितीय साक्षरता, वैज्ञानिक सिप तथा अपेक्षित थप सिपहरूको विकास गर्ने अर्थात् पाठ्यक्रमका सक्षमताहरूको प्राप्ति हुने वातावरण बन्नुपर्छ।

अङ्कन वा स्तर निर्धारणका सूचनालाई संस्थाको सुधारसँग अनिवार्य जोड्ने विषय महत्त्वपूर्ण छ। यसका लागि विद्यालय तहका सबै जिम्मेवार पदाधिकारी अनिवार्य संलग्न भई निरन्तर प्रतिबद्ध एवम् कार्यसमर्पित हुनु जरुरी देखिन्छ। समयबद्ध लक्ष्य, सुधारको योजना, कार्यान्वयन व्यवस्थापन, स्रोत व्यवस्थापन गर्नु जरुरी छ। फलोअपलाई समय, साधन, कार्यप्रक्रिया तथा छलफलकाका विषयहरू, जिम्मेवार संयन्त्र, अभिलेख राख्ने, प्राथमिकता पहिचान गर्नेलगायत विषयमा व्यवस्थित रूपमा सञ्चालन गरिनुपर्ने अनुभूति भएको छ। हाल केन्द्रबाट अनुसन्धानको रुपमा परीक्षण सञ्चालन गर्दा विद्यालयको सुधारसँग यसलाई जोड्ने विषयमा सरोकारवालासम्म सन्देश प्रवाह कम भएको अनुभूति हुन्छ। परीक्षणमा संलग्न भई अङ्कन, स्तर र क्रम निर्धारणले विद्यालयमा क्षणिक उत्साह आएको भए पनि यसको निरन्तरता दिने कुनै कानुनी, कार्यक्रमिक आधार छैन। परीक्षणका विषयलाई निरन्तर पछ्याउने, शिक्षा क्षेत्रका विकास तथा सुधार कार्यक्रम, सहयोग, स्रोत विनियोजनसँग यसलाई आबद्ध गर्ने (connectedness), क्रमिक माथिल्लो स्तर प्राप्त गर्ने (gradual progress) र सोको प्रमाणीकरण गर्ने (certification) साधनका रूपमा कार्यसम्पादन परीक्षणलाई जोड्नुपर्ने विषय छलफलमा उठ्ने गरेका छन्। यी काम स्थानीय तहको नेतृत्वमा विद्यालय तहमा उपयुक्त कार्यसंस्कृति विकास गर्दै सम्पादन गरिनुपर्छ। यस विषयमा केन्द्रीय निकायको भूमिका प्राविधिक सहजीकरण, आधारशिला विकास, समग्र प्रतिवेदन विकास, नीति तथा कार्यक्रमिक आबद्धता आदि प्रमुख हुन्।

सामुदायिक विद्यालय कार्यसम्पादन परीक्षण ढाँचा तथा साधन २०८२

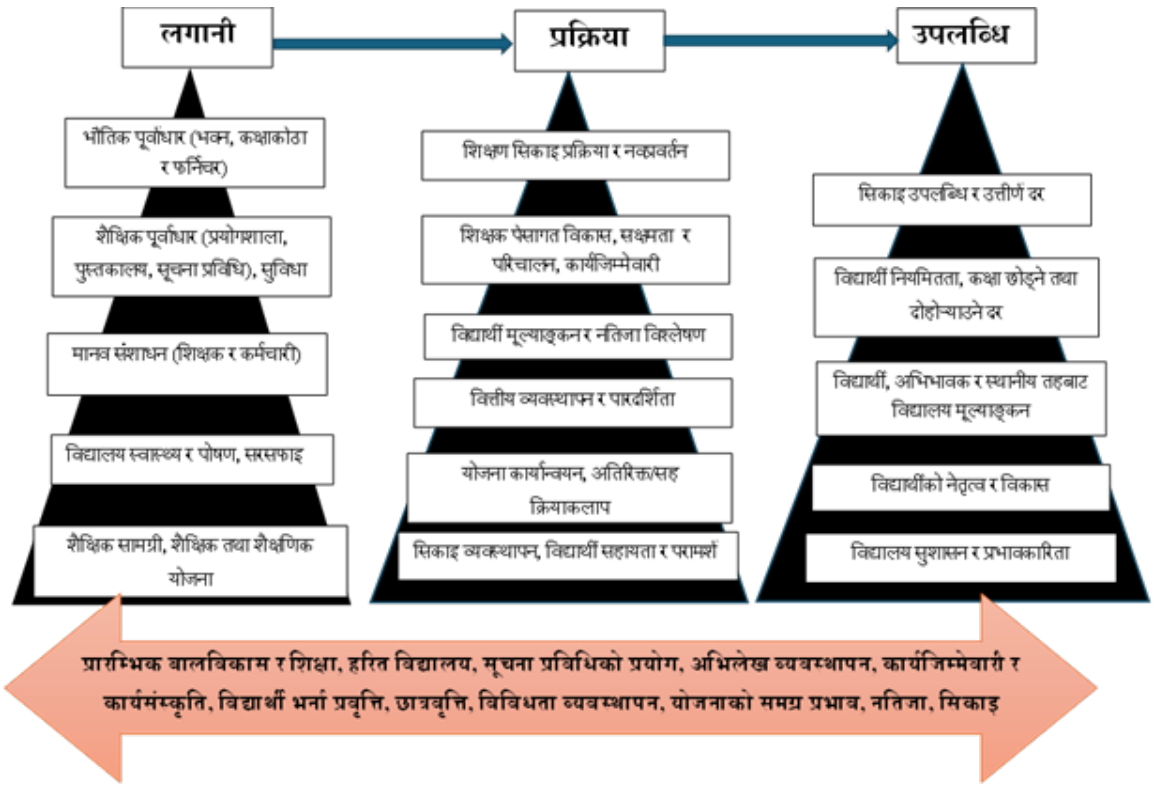
शैक्षिक गुणस्तर परीक्षण केन्द्रबाट मूलतः माध्यमिक तहका विद्यालय केन्द्रित भई कार्यसम्पादन परीक्षण गरिएको छ। यसका लागि लगानी, प्रक्रिया, नतिजा पक्ष समेट्ने प्रणालीगत दृष्टिकोण अवलम्बन गरिएको छ। परीक्षण ढाँचा तथा

साधन २०८२ ले यसको विषयक्षेत्र र सूचक थप विस्तार गरेको छ। यी पक्षअन्तर्गतका विषयहरूमा सूचक, रूब्रिक्सका आधारमा अवस्थाबोध गरी कार्य सम्पादन स्तर (Performance Level) निर्धारण गरिन्छ। परीक्षणपश्चात् परीक्षणमा सहभागी विद्यालयको सापेक्षित स्थान क्रम निर्धारण (Ranking) गर्ने व्यवस्था पनि गरिएको छ।

संवत् २०८२को सामुदायिक विद्यालयको कार्यसम्पादन परीक्षण ढाँचा र साधनमा पनि प्रणालीगत ढाँचामा विगतका धेरै विषयक्षेत्रलाई निरन्तरता दिई थप विषयक्षेत्र समेट्ने कार्य भएको छ। मापनका लागि रुब्रिक्स विकास गरिएको छ। विगतका साधनलाई थप प्रमाणमा आधारित बनाउने, विद्यालयलाई स्वमूल्याङ्कन अनिवार्य गराउने र सहभागितात्मक प्रक्रियाबाट विज्ञसहित परीक्षण गर्ने ढाँचा र साधन अद्यावधिक गरिएको छ (शैगुपके, २०७३ख, २०७७ग, २०८१ख, २०८१ग, २०८२ङ, र २०८२च)। बाह्य परीक्षणको प्रक्रिया विद्यालयको सहभागितासहित दुई जना विज्ञबाट हुने व्यवस्था मिलाइएको छ। विद्यालय शिक्षासम्बन्धी विद्यमान नीति, कार्यविधि तथा प्रावधानहरूसापेक्ष विगतको परीक्षण ढाँचा र साधनलाई अद्यावधिक गरी परीक्षणको प्रक्रियालाई सहभागितात्मक, विज्ञसमूहबाट हुने व्यवस्था मिलाइएको हो। यस परीक्षणमा प्रणालीगत दृष्टिकोणमा लगानी, प्रक्रिया र नतिजाका पक्षहरूलाई समेटिएको छ।

चित्र १

विद्यालयको कार्यसम्पादन परीक्षणका विषय क्षेत्रहरू



(स्रोतः शैगुपके, २०८२)

परीक्षणपूर्वको चरण, परीक्षणको चरण र परीक्षणपछिको चरण गरी तीन चरणमा गरिने मुख्य क्रियाकलापहरू पहिचान भएका छन्। परीक्षणको मूल चरणमा बाह्य परीक्षणका क्रममा केन्द्रबाट खटाइएको विज्ञबाट कक्षाकोठा, शिक्षण सिकाइ, पूर्वाधार, सुविधा एवम् कक्षाकोठाको शिक्षण सिकाइ, विद्यालयका क्रियाकलापहरू आदिको अवलोकन गर्ने; अभिलेख अध्ययन गर्ने, प्रअ, व्यवस्थापक, अभिभावक, विद्यार्थीलगायत सरोकारवालासँग अन्तरक्रिया गरी अवस्थाबोध, मूल्याङ्कन, अङ्कन जस्ता कार्य गरी परीक्षण गर्ने व्यवस्था गरिएको छ (शैगुपके, २०८२च)।

बाह्य परीक्षणका क्रममा विद्यार्थीको मूल्याङ्कन, अभिभावकको मूल्याङ्कन र स्थानीय तहको मूल्याङ्कनबाट ४ अङ्कका दरले हुने १२ अङ्क, विभिन्न ५० विषय क्षेत्र, उपक्षेत्रमा रुब्रिक्सका आधारमा १,२,३, ४ का दरले अङ्कन गर्दा हुने २०० अङ्क गरी कुल २१२ अङ्कमा प्राप्त अङ्कका आधारमा विद्यालयको कार्यसम्पादनको स्तर तलको तालिकाबमोजिम अनुकरणीय, राम्रो, सुधार गर्नुपर्ने र कमजोर गरी चार स्तरमा निर्धारण गर्ने व्यवस्था छ।

तालिका १

विद्यालयको कार्यसम्पादनको स्तर निर्धारणसम्बन्धी व्यवस्था

विद्यालयको स्तर	**प्राप्ताङ्क र प्रतिशत**
अनुकरणीय विद्यालय	९० प्रतिशत र सोभन्दा माथि (१९१ र सोभन्दा माथिको अङ्क)
राम्रो विद्यालय	७० प्रतिशत र सोभन्दा माथि र ९० प्रतिशतभन्दा कम (148 भन्दा बढी र १91 भन्दा कम अङ्क)
सुधार गर्नुपर्ने विद्यालय	५० प्रतिशत र सोभन्दा माथि र ७० प्रतिशतभन्दा कम (106 भन्दा बढी र १48 भन्दा कम अङ्क)
कमजोर विद्यालय	५० प्रतिशत भन्दा कम (१०६ भन्दा कम अङ्क)

(स्रोतः शैगुपके, २०८२)

सूचकगत एवम् समग्रमा कार्यसम्पादनको स्तरलाई परिभाषित गर्दा उत्कृष्ट अभ्यास भएमा, अन्य विद्यालयका लागि सिकाइयोग्य भए अनुकरणीय अभ्यास वा विद्यालय हुने छन्। सकारात्मक नतिजा देखिएका र थप सुदृढ गरी अझ प्रभावकारी बनाउनुपर्ने राम्रो अभ्यास वा विद्यालयका रूपमा लिइएको छ। यसै गरी आन्तरिक प्रयत्न र बाह्य सहयोगबाट स्रोत साधन र सुधार गर्नुपर्ने अवस्थाई सुधार गर्नुपर्ने अभ्यास वा विद्यालय मानिएको छ। तत्काल सुधार, कार्यप्रयत्न, निर्देशनात्मक कार्य आवश्यक पर्ने अभ्यास वा विद्यालय कमजोर भनी परिभाषित गरिएको छ। यी चार स्तर हरेक सूचकमा वा समग्रमा विद्यालयको कार्यसम्पादनमा हेर्नुपर्ने हुन्छ। सूचकगत रूपमा विद्यालयको स्तर फरक फरक रहन सक्छ, जसले सुधारका सूक्ष्म पक्षहरू पहिचान गर्न सघाउने छ।

परीक्षणमा स्वमूल्याङ्कनलाई सुधार, अवस्थाबोधसँग र बाह्य परीक्षणलाई स्तर (performance level) निर्धारण तथा समग्र क्रम निर्धारण (ranking) सँग जोडिएको छ। बाह्य परीक्षणबाट प्राप्त सूचनाले शिक्षा प्रणालीमा नीति, कार्यक्रम कार्यान्वयनको सूचना दिई नीति, कार्यक्रम तथा अभ्यासमा सुधारका विषयक्षेत्र औँल्याउने उद्देश्यमा सघाउने छन्।

कार्यान्वयन प्रक्रियाका दृष्टिले परीक्षणपूर्वको चरणमा विज्ञ तथा सरोकारवालाको विभिन्न कार्यशालामार्फत विकसित ढाँचा र साधन केन्द्रमा रहेको समितिबाट स्वीकृत गर्ने, समन्वय, पत्राचार, सूचना, सहभागिताका लागि आह्वान

र अभिमुखीकरण सञ्चालन गरिए। विद्यालयले अनलाइनमा विवरण प्रविष्टि गरेका छन्। केन्द्रबाट छनोट गरिएका प्रशासनिक र शिक्षण क्षेत्रका अनुभवी दुई विज्ञबाट स्थलगत रुपमा सत्यापनलगायत तोकिएका कार्य गरी कार्यसम्पादनको स्तर निर्धारण गरिएको छ। प्राप्त तथ्याङ्कका आधारमा प्रतिवेदन विकास, क्रम निर्धारण, सुधारका लागि सिफारिस गर्ने तथा फलोअपलगायतका थप कार्य गरिने छन्।

आगामी बाटोः कानुनी आधार, सुधार, फलोअप र प्रमाणीकरण

कार्यसम्पादन परीक्षणको कानुनी आधार तयार गर्ने, परीक्षणलाई सुधारसँग आबद्ध गर्ने, प्रगतिको फलोअपलाई निरन्तरता दिने, विद्यालयतहदेखि स्थानीय, प्रदेश तथा सङ्घीय निकाय संलग्न हुने, गुणस्तर तथा मानदण्डहरू प्राप्तिको सुनिश्चितता र प्रमाणीकरण गर्ने विषय आगामी यात्राका महत्त्वपूर्ण पक्ष हुन्।

हरेक विद्यालयको कार्यसम्पादन परीक्षणको स्पष्ट कानुनी आधार तय हुनु आवश्यक छ। कार्यसम्पादन परीक्षणपछि गर्नुपर्ने अन्य कामहरू केके हुन्? विद्यालयको कार्यसम्पादनको स्तर वा अवस्थाबोध भएपछि त्यसमा परिवर्तन ल्याउने सम्भावित चरण के हुन्छन्? यसका लागि कसले, कहिले, कसरी निरन्तरता दिने? समयबद्ध लक्ष्य, सो प्राप्तिको कार्यप्रयत्न र काम र परिणामको अभिलेख कुन कुन क्षेत्रमा रहनुपर्ने हो, कसरी देखिनुपर्ने हो? लगायत विषय प्रस्ट हुनुपर्छ। कार्यसम्पादन परीक्षण छुट्टै र एक पटक मात्र गरेर पुग्दैन। यसलाई विद्यालय सुधारको समग्र प्रक्रियाको एक औजारका रुपमा लिनुपर्ने हुन्छ। सामाजिक परीक्षण, विद्यालय सुधार योजना, शैक्षिक सत्रको योजनाजस्ता पक्षसँग जोडेर सबै विद्यालयले हरेक वर्ष कार्यसम्पादन परीक्षण गर्ने वा छुट्टै दुई वर्षजतिको अन्तरालमा शैक्षिक सत्रको सुरुमा परीक्षण सञ्चालन गर्न सकिन्छ। कार्यसम्पादनको बाह्य परीक्षण स्थानीय तहको अगुवाइमा गर्न सकिन्छ। यसरी स्वमूल्याङ्कन गर्ने वा बाह्य परीक्षणमा सघाउने काममा लागि संयन्त्रका रूपमा विद्यालयमा विद्यालय व्यवस्थापन सिमिति, शिक्षक अभिभावक सङ्घ, शिक्षक र विद्यार्थीसहितको सानो टोली उपयुक्त हुन्छ। नियमित रूपमा हरेक २-३ महिनामा संयन्त्रसहित शिक्षक, विद्यार्थी, विव्यस, शिअससहितको बैठकमा कार्यसम्पादनको अवस्था, कार्यप्रत्यत्न, प्राप्तिलगायत विषयमा समीक्षा गरिनुपर्छ। यस क्रममा आगामी २-३ महिनाका लक्ष्य, कार्यप्राथमिकता, प्रतिबद्धता निर्धारण गर्दै क्रमिक अगाडि बढ्नु उचित हुन्छ। यी विषयलाई संस्थागत गर्न विद्यालयको कार्यसम्पादनको आन्तरिक तथा बाह्य परीक्षण, सुधारसँगको आबद्धता र फलोअपको कानुनी आधार तयार गर्नुपर्ने हुन्छ।

कार्यसम्पादन परीक्षणमा स्वमूल्याङ्कन, बाह्य परीक्षण, फलोअपको संयोजन जरुरी छ। स्वमूल्याङ्कन र फलोअपले यसलाई कार्यसंस्कृतिसँग जोड्छ, स्वामित्वबोध गराउँछ। यसले कार्यसम्पादन परीक्षणलाई सुधारको यात्रामा लैजान सघाउँछ। विव्यस, शिअस, प्रअ, शिक्षकको नेतृत्व एवम् उत्प्रेरणामा यी कार्य हुनुपर्छ। स्वमूल्याङ्कनमा सहभागी संयन्त्र नै फलोअपका लागि जिम्मेवार हुनुपर्छ। बाह्य परीक्षण केन्द्रबाट सीमित सङ्ख्याका विद्यालयमा भए पनि मूलतः स्थानीय तहबाट सबै विद्यालयको हुनुपर्छ। बाह्य परीक्षण विज्ञबाट गहन अध्ययन, प्रमाण विश्लेषण, सरोकारवालाको विमर्श, प्राविधिक सहजीकरण गर्ने हुनुपर्छ। यसलाई स्थानीय तहभरको कार्यसम्पादनको स्तर जान्ने र त्यसमा सुधार गर्ने बहस र नीति, योजना तथा कार्यक्रमसँग आबद्ध गरिनुपर्छ।

परीक्षण, सुधारको कार्यान्वयन र फलोअपलाई विद्यमान शैक्षिक तथ्याङ्क प्रणाली, शिक्षा विकासका कार्यक्रमहरू, प्रोत्साहनसँग जोडिनुपर्ने (connectedness) विषयहरू छलफलमा उठेका विषय हुन्। कार्यसम्पादन

परीक्षणका साधन, फारामलाई शैक्षिक तथ्याङ्क प्रणालीसँग जोडिनुपर्छ । प्रणालीमा भएका तथ्याङ्क परीक्षणका साधनमा दोहोऱ्याएर भर्नुपर्ने झन्झट यसबाट कम हुने छ । तथ्याङ्कहरू एकीकृत हुने र विवरण छिटो तयार हुने छ । यससम्बन्धी अनलाइन प्रणाली सबल बनाउनुपर्ने देखिन्छ । परीक्षणपछि विद्यालयको नतिजा, अवस्थाबोध र प्राथमिकता किटान गरी शिक्षा क्षेत्रका विकास कार्यक्रम, पूर्वाधार तथा सुविधा व्यवस्था, सहायता, प्रोत्साहन, स्रोत विनियोजनसँग जोड्नुपर्ने देखिन्छ । साथै नमुना विद्यालय विकास, विज्ञान शिक्षा प्रवर्धनजस्ता कार्यक्रमहरूमा कार्यसम्पादन परीक्षण, स्तरोन्नति, गुणस्तर सुनिश्चितता र प्रमाणीकरणका विषय जोड्न सकिन्छ, जोड्नुपर्छ । परीक्षण भएपछि के हुन्छ? के पाइन्छ? भन्ने विषय अहिले छलफलमा उठ्ने गरेको छ । राम्रो कार्यसम्पादनलाई प्रोत्साहन वा कमजोर अवस्थामा सुधारका लागि न्यायिक विकासको अनुदान, विद्यालय वा शिक्षकलाई पुरस्कृत गर्ने काममा यसका सूचना उपयोग गर्न सकिन्छ ।

गुणस्तर सुनिश्चितता (assurance) र प्रमाणीकरण (certification) को यात्राको आधार कार्यसम्पादन परीक्षण बन्नसक्ने देखिन्छ । विषय क्षेत्रमा हुनुपर्ने उच्चतम् कार्यसम्पादन स्तर, विभिन्न स्तर रहने सूचकहरू निर्धारण गरिएका छन् । चरणबद्ध रूपमा माथिल्लो स्तर वा सूचकको प्राप्तिका लागि सघाउने, त्यसका लागि कार्यप्रयत्न गर्ने र गुणस्तर सुनिश्चित भएको प्रमाणित गरिनुपर्छ । यस्तो प्रमाणीकरणले सार्वजनिक शाख निर्माण गरी सुधारको वातावरण विस्तारमा मदत पुग्छ । कार्यसम्पादन परीक्षणलाई चरणबद्ध सुधार, गुणस्तर सुनिश्चितता र प्रमाणीकरणसम्म जोड्नुपर्ने देखिन्छ ।

निचोड

शैक्षिक गुणस्तर परीक्षण केन्द्रको कार्यअनुभवका आधारमा आ.व. २०८२/८३ मा विद्यालय, प्रधानाध्यापक र स्थानीय तहको शैक्षिक सेवा प्रवाह गरी तीनओटै कार्यसम्पादन परीक्षणको ढाँचा, सञ्चालन पद्धति र साधनमा परिमार्जन गरिएको छ । प्रअको नेतृत्व कार्यसम्पादन र विद्यालयको कार्यसम्पादन परीक्षणमा स्वमूल्याङ्कन गर्ने कार्य अनिवार्य गरिएको छ । यसबाट प्रअ, विद्यालय र व्यवस्थापक, अभिभावक, विद्यार्थीलगायतको सहभागिता बढ्न गई स्वप्रतिबिम्बन हुने र सुधारका सम्भावना खोजीमा मदत पुग्ने देखिन्छ । शैक्षिक गुणस्तर परीक्षण केन्द्रबाट हुने बाह्य परीक्षणमा त्यसको सत्यापन गर्ने, अन्तरक्रिया गराउने, कार्यसम्पादनको स्तर तय गर्ने, विद्यालयको क्रम निर्धारण आदि काम हुने छन् । यसबाट विद्यमान कानुन, मापदण्डहरूको कार्यान्वयनको सूचना प्राप्त हुने र सुधारका लागि मदत पुग्ने छ । केन्द्रबाट हुने विभिन्न परीक्षणहरू तथा कार्यक्रमिक प्रबन्धलाई एकीकृत रूपमा लैजाने, कानुनी आधार तयार पार्ने, तथ्याङ्क प्रणाली सुदृढ बनाउने र चरणबद्ध सुधार गर्ने, त्यसको फलोअप गर्ने, गुणस्तर सुनिश्चित र प्रमाणीकरण गर्ने चरणमा लैजाने विषयको कार्यान्वयन केन्द्रका आगामी कार्यभार हुन् ।

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विद्यार्थी सिकाइ उपलब्धि परीक्षणका प्राविधिक पक्षको अवधारणा र नेपालको अभ्यास

देवीराम आचार्य

शैक्षिक गुणस्तर परीक्षण केन्द्र

श्री देवीराम आचार्य, ORCID 0000-0002-7295-6699 शैक्षिक गुणस्तर परीक्षण केन्द्रको निर्देशक पदमा कार्यरत हुनुहुन्छ। यस लेखको बारेमा थप कुरा बुझ्नु परेमा इमेल ठेगाना deviramac@outlook.com मा सम्पर्क गर्न सकिनेछ।

लेखसार

विद्यार्थीको सिकाइस्तर परीक्षण फरक फरक उद्देश्यले गरिन्छ र सोही उद्देश्यअनुसार परीक्षणका प्रक्रियाहरू पनि फरक फरक हुन्छन्। राष्ट्रियस्तरमा गरिने सिकाइ उपलब्धि परीक्षण, क्षेत्रीयस्तरका परीक्षण तथा अन्तर्राष्ट्रिय परीक्षण सञ्चालनका आफ्नै प्रकारका विशिष्ट पद्धतिहरू रहेका छन्। यो आलेख शैक्षिक गुणस्तर परीक्षण केन्द्रबाट सञ्चालन गरिएका राष्ट्रिय स्तरको सिकाइ उपलब्धि परीक्षणका प्राविधिक पक्षहरूमध्ये मुख्य चारओटा पक्षको अवधारणात्मक जानकारी दिने उद्देश्यले तयार पारिएको छ। उपलब्धि परीक्षणको तथ्याङ्क विश्लेषण गर्न, विभिन्न वर्षको नतिजा तुलना गर्न र फरक फरक प्रश्नका सेटमा परीक्षा दिएका विद्यार्थीको नतिजालाई एउटै रुपमा प्रस्तुत गर्न आइटम रेसपोन्स थियरी (Item Response Theory) को प्रयोग गरिन्छ। यसको प्रयोगबाट प्रश्नको कठिनाइस्तरको आधारमा विद्यार्थीको अन्तरनिहित क्षमता बुझाउने थिटा मानको हिसाब गरिन्छ। हरेक विद्यार्थीको थिटा मानका आधारमा स्केल स्कोर निर्धारण गरी सोही स्केल स्कोरको वितरणका आधारमा सिकाइका विभिन्न तहमा पर्ने विद्यार्थीको प्रतिशत र उनीहरूले कुनै खास विषयमा के कस्तो सिकाइस्तर हासिल गरेका छन् भन्ने निर्धारण गरिन्छ।

***मुख्य शब्द**:* आइआरटी, थिटा मान, सिकाइस्तर, उपलब्धि परीक्षण, प्रवीणता स्तर

परिचय

विद्यार्थीले तोकिएको सिकाइ उपलब्धि हासिल गरे वा नगरेको कुरा निश्चित गर्न सिकाइको परीक्षण (Learning Assessment) गरिन्छ। सिकाइ उपलब्धि परीक्षणबाट प्राप्त भएका विद्यार्थीको सिकाइसम्बन्धी तथ्य, सूचना र जानकारीलाई व्याख्या गरी विद्यार्थीको सिकाइस्तरको निर्धारण गरिन्छ। विद्यार्थीको सिकाइस्तर परीक्षण विभिन्न उद्देश्यले गरिन्छ। यस्ता उद्देश्यहरू सिकाइस्तर परीक्षण गर्ने निकायअनुसार फरक फरक हुन्छ। सामान्यतया कक्षाकोठामा शिक्षकले गर्ने सिकाइस्तर परीक्षणको एउटै उद्देश्य सिकाइस्तर पहिचान गरी उनीहरूको सिकाइमा सुधार गर्न सहयोग गर्नु हो। विद्यालयले गर्ने सिकाइस्तर परीक्षणका उद्देश्य कक्षाकोठामा शिक्षकले गर्ने परीक्षणभन्दा केही फरक र केही समान पनि हुन्छन्। विद्यालयमा कक्षोन्नति गर्न, विद्यार्थी छनोट गर्न र सिकाइमा सुधार गर्न पनि सिकाइस्तर परीक्षण गरिन्छ। विद्यार्थीलाई कुनै खास कक्षा वा तह पूरा गरेको प्रमाणपत्र दिनका लागि र माथिल्लो तह अध्ययनका लागि विद्यालयभन्दा बाह्य निकायले पनि सिकाइस्तर परीक्षण गर्ने गर्छन्। नेपालको सन्दर्भमा कक्षा ८ मा स्थानीय तहले गर्ने आधारभूत तह उत्तीर्ण परीक्षा र कक्षा १० र १२ मा राष्ट्रिय परीक्षा बोर्डले गर्ने एसइइ र एसएलसीई यस्ता परीक्षणमा पर्दछन्, जसलाई सार्वजनिक परीक्षा भन्ने गरिन्छ। पाठ्यक्रममा आधारित, कुनै खास तहको अन्तिममा वा कक्षामा गरिने, सार्वजनिक चासो भएका, विद्यार्थीमा उच्चस्तरको दबाब सिर्जना गर्ने परीक्षाहरूलाई सार्वजनिक परीक्षाको रूपमा बुझिन्छ (Kellaghan & Greaney, 2020)। यसै गरी शैक्षिक गुणस्तर परीक्षण केन्द्रले गर्ने उपलब्धि परीक्षण बृहत् स्तरको अनुसन्धान हो। यसको उद्देश्य मुख्य गरी शैक्षिक प्रणालीको प्रभावकारिता र सिकाइस्तरको लेखाजोखा गर्नु हो। यस्तो परीक्षण केही खास कक्षामा, मुख्य विषयमा र नमुना छनोटमा आधारित भएर गरिन्छ।

विद्यार्थीको सिकाइस्तर परीक्षणका विभिन्न उद्देश्यमध्ये शिक्षा प्रणालीको प्रभावकारिता, विद्यार्थीको सिकाइस्तर तथा समग्र शैक्षिक प्रणाली (पाठ्यक्रम, शिक्षक तालिम, शैक्षिक कार्यक्रम आदि) कै परीक्षणको रूपमा कुनै खास तहमा, केही वर्षको अन्तरालमा, केही मुख्य विषयहरूमा मात्र नमुनाको रूपमा गर्ने सिकाइस्तर परीक्षणलाई सिकाइ उपलब्धि परीक्षणको रूपमा बुझिन्छ (Wagner, 2011)। यस्ता परीक्षणहरूले विभिन्न वर्षमा सिकाइस्तरमा भएको सुधारको अवस्था तुलना गर्ने, समग्र शैक्षिक प्रणालीकै अवस्था पहिचान गर्ने, सिकाइमा प्रभाव पार्ने विभिन्न तत्वहरूको जानकारी दिने, पाठ्यक्रममा गर्नुपर्ने सुधारका विषयमा र शैक्षिक नीति तथा कार्यक्रम निर्धारण गर्नका लागि सुझाव उपलब्ध गराउने गर्छन्। अनुसन्धानको रूपमा नमुना छनोट गरी केही वर्षको अन्तरालमा केही खास कक्षा र विषयको मात्र परीक्षण गरिने भएकाले यस्ता परीक्षाहरूको उद्देश्य समग्र शैक्षिक प्रणालीको सुधारमा केन्द्रित रहेको हुन्छ। यस्ता परीक्षाहरूको उद्देश्य विद्यार्थीको परीक्षा लिएर प्रमाणपत्र दिनु वा उत्तीर्ण र अनुत्तीर्ण छुट्टाउनु होइन, कुनै विद्यालयको स्तर निर्धारण गर्नु पनि होइन बरु यस्ता परीक्षाहरूको उद्देश्यमा Wagner (2011) ले उल्लेख गरेअनुसार, शैक्षिक प्रणालीका नीतिगत सुधारका विषयमा सुझाव दिने, शैक्षिक प्रणाली अनुगमनका मापदण्डहरू तय गर्नु, सिकाइका अन्तरसम्बन्धित पक्षहरूको खोजी गर्नु, जवाफदेहिताको प्रवर्धन गर्नु, सार्वजनिक चासो बढाउनु, नीतिगत सुधार तथा कार्यक्रम विकास र राजनैतिक विचार विमर्शका लागि तथ्याङ्क उपलब्ध गराउनु हुन्। यसप्रकारका विशिष्ट उद्देश्य हासिल गर्ने प्रयोजनका लागि विद्यार्थी सिकाइ उपलब्धि परीक्षणमा अन्य सार्वजनिक परीक्षाको तुलनामा विश्वसनीय तथ्याङ्कशास्त्रीय नमुना र अन्य प्राविधिक पक्षमा विशेष ध्यान दिने गरिन्छ। प्रश्न निर्माण, परीक्षण सञ्चालन र तथ्याङ्क विश्लेषणका विशिष्ट प्रक्रियाहरूको पालना गरिन्छ।

उद्देश्य र विधि

यो आलेखको उद्देश्य नेपालमा विद्यार्थी उपलब्धिको राष्ट्रिय परीक्षण प्रक्रिया र तथ्याङ्क विश्लेषण गर्ने केही खास प्राविधिक पक्षको व्याख्या गर्नु रहेको छ। यसमा सिकाइ उपलब्धि परीक्षणका सबै पक्षहरू समावेश छैनन्। यसमा खास गरी विद्यार्थीको सिकाइ उपलब्धि परीक्षणका प्राविधिक पक्षहरूमध्ये परीक्षणको आइटम रेसपोन्स थियरी (Item Response Theory), थिटा मान, स्केल स्कोर र सिकाइका तह प्रवीणता स्तरमा केन्द्रित गरिएको छ। यो लेख तयार गर्नका लागि सिकाइ परीक्षणसँग सम्बन्धित विभिन्न पुस्तक, अनुसन्धानमूलक लेखहरू, लेखकको आफ्नै कार्यअनुभव तथा विद्यार्थी सिकाइ उपलब्धि परीक्षणसँग सम्बन्धित अन्तर्राष्ट्रिय परीक्षणका (PISA/TIMSS) प्रतिवेदन तथा अन्य विभिन्न दस्तावेजको अध्ययनलाई आधार लिइएको छ।

सिकाइ उपलब्धि परीक्षणका विभिन्न तहहरू

सिकाइ उपलब्धि परीक्षणसम्बन्धी अध्ययनहरू विभिन्न तहमा हुने गर्छन्। यस्ता तहहरू मुख्यतया ३ ओटा रहेका छन् अन्तर्राष्ट्रिय, क्षेत्रीय र राष्ट्रिय।

(क) अन्तर्राष्ट्रियस्तरका परीक्षण: अन्तर्राष्ट्रिय सिकाइ उपलब्धि परीक्षणको रूपमा TIMSS, PISA and PIRLS मुख्य रुपमा रहेका छन्। सन् १९६४ मा First International Mathematics Study, र १९८०-८२ मा Second International Mathematics Study भएको थियो। यसै गरी सन् १९७०-७१ मा पहिलो र १९८३-८४ मा दोस्रो International Science Study भएका थिए। यसपश्चात् गणित र विज्ञानको एउटै परीक्षण सन् १९९५ बाट सुरु भयो। सन् १९९५ को अध्ययनमा ४५ देश सहभागी भएका थिए (National Center for Education Statistics, 2019)। यसपश्चात् Trends in International Mathematics and Science Study प्रत्येक ४ वर्षमा कक्षा ४ र ८ मा सञ्चालन हुने गरेको छ। पछिल्लोपटक सन् २०२३ मा भएको TIMSS अध्ययनमा ७१ देश सहभागी भएका थिए।

Progress in International Reading Literacy Study (PIRLS) सन् २००१ बाट सुरु भएको अर्को अन्तर्राष्ट्रिय परीक्षण हो। कक्षा ४ मा गरिने यो परीक्षणमा खास गरी पठनबोधमा केन्द्रित परीक्षण गरिन्छ। सन् २०२६ मा पछिल्लो पटक यो परीक्षण भएको छ। TIMSS र PIRLS - International Association for the Evaluation of Educational Achievement ले सञ्चालन गर्ने गर्छ।

Program of International Student Assessment- PISA अर्को महत्त्वपूर्ण अन्तर्राष्ट्रिय परीक्षण हो। यो सन् २००० बाट सुरु भएको हो र प्रत्येक ३ वर्षमा हुने यो परीक्षण १५ वर्ष उमेरका युवाहरूमा सिकाइका मापदण्ड पूरा गरे वा नगरेको आधारमा गणित, विज्ञान र पढाइको परीक्षण गरिन्छ। यो परीक्षण Organization for Economic Cooperation and Development (OECD) मार्फत सञ्चालन हुन्छ। सन् २०२२ मा भएको यो परीक्षणमा ८१ देशहरू सहभागी भएका थिए (OECD, 2023)। अन्तर्राष्ट्रियस्तरका यी परीक्षणहरूले विभिन्न देशको शिक्षाको अवस्था तुलना गर्ने र विश्वव्यापी रूपमा प्रतिस्पर्धी जनशक्ति उत्पादनका रणनीतिहरू तय गर्छन् र पाठ्यक्रम, शिक्षक व्यवस्थापन, विद्यालयको साधनस्रोतका सम्बन्धमा निर्णय गर्न उपयोग गरिन्छ।

केही देशहरू TIMSS, PISA, PIRLS सबै परीक्षणमा सहभागी हुन्छन् भने केही देशहरू क्षेत्रीय परीक्षणमा मात्र सहभागी हुन्छन्। विकासोन्मुख देशहरू लक्षित गरेर OECD ले PISA-D परीक्षण पनि गर्ने गरेको छ। दक्षिण एसियाका देशमध्ये भुटान PISA-D मा सहभागी भएको छ।

(ख) क्षेत्रीय स्तरका परीक्षणहरू : सिकाइ उपलब्धि परीक्षणहरू क्षेत्रीयस्तरमा पनि हुने गरेका छन्। Latin American Laboratory for Assessment of Quality in Education (LLECE), the Southern and Eastern African Consortium for the Monitoring of Education Quality (SACMEQ), and Program for the Analysis of Educational Systems of the CONFEMEN (Francophone Africa) countries (PASEC), Southeast Asia Primary Learning Metrics (SEA-PLM) केही क्षेत्रीयस्तरका सिकाइ उपलब्धि परीक्षणका उदाहरणहरू हुन (Clarke & Luna-Bazaluda, 2021)। विभिन्न देशको शैक्षिकस्तरको तुलना गर्न र शैक्षिक प्रणाली सुधारका लागि यस्ता परीक्षणहरू प्रभावकारी भएको पाइएको छ।

(ग) राष्ट्रियस्तरका परीक्षणहरू : विभिन्न देशहरूले आफ्नो सिकाइस्तर अन्तर्राष्ट्रियस्तरमा तुलना गर्नका लागि अन्तर्राष्ट्रिय परीक्षणमा सहभागी हुन्छन् (Kellaghan & Greaney, 2008)। यसैगरी आफ्नो देशको समग्र शैक्षिक अवस्था परीक्षण गर्न राष्ट्रियस्तरका उपलब्धि परीक्षणहरू पनि सञ्चालन गरिन्छ। अमेरिका विभिन्न अन्तर्राष्ट्रिय परीक्षणमा सहभागी हुन्छ र आफ्नै राष्ट्रियस्तरको उपलब्धि परीक्षण National Assessment of Educational Progress (NAEP) पनि निरन्तर सञ्चालन गर्छ। नेपालमा शैक्षिक गुणस्तर परीक्षण केन्द्र स्थापना भएपश्चात् सन् २०११ देखि भइरहेको National Assessment of Student Achievement-NASA राष्ट्रियस्तरको सिकाइ उपलब्धि परीक्षण हो। राष्ट्रियस्तरका यस्ता परीक्षणहरू विभिन्न देशमा रहेका छन र यस्तो परीक्षण गर्ने प्रचलन बढिरहेको छ। भारतले हरेक ३ वर्षमा National Achievement Study (NAS) सञ्चालन गर्ने गर्छ। अष्ट्रेलियामा The National Assessment Program – Literacy and Numeracy (NAPLAN) परीक्षण हुने गर्छ (Creswell et al. 2015)। भुटान, श्रीलंका, भियतनाम, अफगानिस्तान लगायत देशमा यस्ता परीक्षणहरू हुने गर्छन्। दिगो विकास लक्ष्य ४ को सूचक ४.१.१ को रिपोर्टिङ गर्ने प्रयोजन र देशको शैक्षिक अवस्थाको लेखाजोखा गर्नका लागि संसारभरि नै सिकाइ उपलब्धि परीक्षण गर्ने प्रचलन बढ्दो छ।

Educational Assessment Programs

International assessments (non-regional)	Regional assessments	Assessments of foundational skills
• **ePIRLS:** Progress in International Reading Literacy Study (online reading) • **LANA:** Literacy and Numeracy Assessment • **PIRLS:** Progress in International Reading Literacy Study • **PISA 2015:** Programme for International Student Assessment • **PISA D:** Programme for International Student Assessment for Development • **TIMSS:** Trends in International Mathematics and Science Study	• **LLECE:** Latin American Laboratory for Assessment of the Quality of Education • **PASEC:** The Programme for the Analysis of Education Systems • **PILNA:** Pacific Islands Literacy and Numeracy Assessment • **SEA-PLM:** The Southeast Asia Primary Learning Metrics • **SACMEQ:** The Southern and Eastern Africa Consortium for Monitoring Educational Quality	• **ASER:** Annual Status of Education Report • **EGMA:** Early Grade Mathematics Assessment • **EGRA:** Early Grade Reading Assessment • **UWEZO:** Uwezo Annual Learning Assessment

स्रोत : UNESCO Institute for Statistics, 2017

सिकाइ उपलब्धि परीक्षणका प्राविधिक पक्षहरू

विद्यार्थीको सिकाइ परीक्षण गर्ने सन्दर्भमा उद्देश्यअनुसार यसका विधि र पद्धतिहरू फरक फरक हुने गर्छन्। शिक्षकले गर्ने कक्षाकोठामा आधारित परीक्षा धेरै हदसम्म अनौपचारिक र लचिलो हुन्छ भने सार्वजनिक परीक्षा एउटा निश्चित विधिमा सञ्चालित हुन्छ। यसका अतिरिक्त अन्तर्राष्ट्रिय, क्षेत्रीय र राष्ट्रियस्तरमा हुने सिकाइ उपलब्धि परीक्षणको पद्धतिमा अन्य थुप्रै प्राविधिक पक्षहरू समेटिएका हुन्छन्। यस्ता परीक्षणको उद्देश्य विद्यार्थीको वास्तविक सिकाइ अवस्था र क्षमता पहिचान गर्ने, सिकाइका अन्तरसम्बन्धित पक्षहरूको विश्लेषण गर्ने तथा विभिन्न वर्षको नतिजालाई विश्वसनीय विधिबाट तुलना गर्ने र अन्तर्राष्ट्रिय परीक्षणबाट विभिन्न देशको सिकाइस्तरको श्रेणीकरण समेत गर्ने हुन्छ। यस्ता परीक्षणहरूमा खासगरी परिमाणात्मक अनुसन्धान ढाँचाको सर्भेक्षण विधिका अवधारणा प्रयोग गरिन्छ र त्यसमा पनि उपलब्धि परीक्षणका तथ्याङ्क विश्लेषणका आफ्नै खास प्रकारका पद्धतिहरू स्थापित गरिएका छन्।

परीक्षण साधन

सिकाइ उपलब्धि परीक्षणमा विद्यार्थीका लागि (विषयगत तथा पृष्ठभूमि), विषयगत शिक्षकका लागि र प्रधानाध्यापकका लागि पृष्ठभूमि प्रश्नावली गरी २ प्रकारका परीक्षण साधनको प्रयोग गरिन्छ। विद्यार्थीको सिकाइ उपलब्धिस्तरको परीक्षणका लागि परीक्षण गर्ने सम्बन्धित विषयका विषयगत प्रश्नहरू एकभन्दा बढी (नेपालमा ३ फरक सेट) फरक फरक सेटहरू प्रयोग गरिन्छन्। सिकाइसँग अन्तरसम्बन्धित हुने विद्यार्थीका वैयक्तिक, पारिवारिक, विद्यालय, शिक्षक र पढाइसँग सम्बन्धित अन्य प्रश्नावली विद्यार्थीका लागि, शिक्षकका लागि वैयक्तिक, पेसागत र विषयसँग सम्बन्धित प्रश्नहरू, तथा विद्यालयका साधनस्रोत, शिक्षण सिकाइ प्रक्रिया तथा अन्य विषयसँग सम्बन्धित प्रधानाध्यापकको प्रश्नावली प्रयोग गरिन्छ।

विषयगत परीक्षाका प्रश्नहरू निर्माण गर्दा पाठ्यक्रममा आधारित भई परीक्षण ढाँचाको आधारमा निर्माण गरिन्छ। विषयगत परीक्षणलाई गुणस्तरीय बनाउन यसका प्रश्नहरूलाई पूर्व परीक्षण (Pilot Testing) गरिन्छ। परीक्षण सञ्चालन ठिक अघिल्लो वर्ष सोही कक्षामा अध्ययनरत विद्यार्थीमा विषयगत परीक्षाका ५। ६ सेट प्रश्नहरू परीक्षण गरी ती प्रश्नहरूको विषयगत वैधता (Content Validity), विश्वसनीयता (Reliability), कठिनाइस्तर (Difficulty Level), विभेदीकरण क्षमता (Discrimination Index), बहुवैकल्पिक प्रश्नमा विकल्पको प्रभावकारितासमेत (Distractor Analysis) परीक्षण गरिन्छ (Wagner, 2011)। यसरी पूर्व परीक्षण गरिएका विषयगत प्रश्नहरू र अघिल्लो पटको अन्तिम परीक्षणमा प्रयोग भएका प्रश्नहरू समेत समावेश गरी अन्तिम परीक्षणको विषयगत प्रश्नहरूलाई अन्तिम रुप दिइन्छ। विषयगत विज्ञहरू सम्मिलित कार्यशाला र विषय समितिबाट यस्ता प्रश्नहरू स्वीकृत गरी वैधता प्रदान गरिन्छ। विद्यार्थीका विषयगत प्रश्नहरू फरक फरक एकभन्दा बढी सेट प्रयोग गरिन्छ जसले विषयगत वैधता सुनिश्चित गर्छ भने छोटो समयको परीक्षणले विद्यार्थीमा मानसिक दबाब सिर्जना हुँदैन। विषयगत परीक्षामा कुनै पनि पाठ्यपुस्तकबाट प्रश्नहरू नपर्ने कुरामा साबधानी अपनाइन्छ। परीक्षामा प्रयोग गर्ने प्रश्नहरू वस्तुगत र विषयगत दुवै खाले हुन्छन् र संज्ञानात्मक तहलाई समेत ध्यान दिई पाठ्यक्रमका सिकाइ उपलब्धिहरू मुख्य आधारको रूपमा रहेका हुन्छन्।

परीक्षण प्रक्रिया

यसप्रकारका सिकाइ परीक्षणहरू कुनै पनि कक्षाका सबै विद्यार्थीमा गरिँदैन । परीक्षण गर्ने समग्र भौगोलिक क्षेत्र (राष्ट्रिय उपलब्धि परीक्षणमा देश, क्षेत्रीय र अन्तर्राष्ट्रिय परीक्षणमा कुनै खास प्रदेश/प्रान्त वा शैक्षिक प्रणाली) तथा अन्य विभिन्न आधारमा नमुना छनोट गरिन्छ । परीक्षण गर्ने विद्यालयहरूको नमुना छनोटका लागि परिमाणात्मक अनुसन्धानका विभिन्न पद्धति तथा धेरै विद्यार्थी भएका विद्यालयको नमुना छनोटमा पर्ने सम्भावना बढी हुने गरी (Probability Proportional to Size-PPS) र विद्यालयमा विद्यार्थी छनोट गर्दा यादृच्छिक (Random Sampling) विधिको प्रयोग गरिन्छ । यदि कुनै कक्षामा ७५ जना विद्यार्थी छन् र उक्त विद्यालयबाट २५ जना विद्यार्थीको परीक्षण गरियो भने परीक्षणमा सहभागी हरेक एक जना विद्यार्थीले अन्य ३ जनाको प्रतिनिधित्व गरेको हुन्छ । यदि जम्मा २५ जना विद्यार्थी भएको विद्यालयबाट २५ जनाको परीक्षण गरियो भने उनीहरूले अन्य विद्यार्थीको प्रतिनिधित्व गर्दैनन् र यसले नमुनाको भार (Sample Weight) मा प्रभाव परेको हुन्छ । तसर्थ धेरै विद्यार्थी भएको विद्यालय नमुना छनोटमा पर्ने सम्भावना बढी हुन्छ । परीक्षणका लागि नमुना छनोटमा परेको एउटा विद्यालयमा एउटा मात्र विषयको परीक्षा सञ्चालन हुन्छ र एउटा विद्यार्थीले एउटा मात्र विषयको परीक्षा दिने गर्छन । एउटा विषयको एउटा कक्षामा एकभन्दा बढी फरक फरक सेट प्रश्नमा आधारित भएर विषयगत परीक्षा सञ्चालन हुन्छ । नेपालमा परीक्षा सञ्चालनका लागि प्रायजसो वाह्य व्यक्तिलाई परीक्षकको रूपमा खटाउने अभ्यास प्रचलनमा रहेको छ ।

तथ्याङ्क विश्लेषण

अन्य परीक्षाहरूमा सामान्यतया विद्यार्थीको नतिजा सुनाउने, ग्रेड सिट उपलब्ध गराउने तथा उत्तीर्ण र अनुत्तीर्णको प्रतिशत वा जिपिएअनुसारको वितरण प्रस्तुत गरिएको हुन्छ । सिकाइ उपलब्धि परीक्षणमा भने विद्यार्थीको उत्तीर्ण र अनुत्तीर्णको विषय हुँदैन । यसमा वैयक्तिक रुपमा कुनै पनि विद्यार्थीको नतिजालाई हेरिँदैन । सामान्यत: विद्यालयको नतिजा पनि हेरिँदैन तर केही देशमा राष्ट्रिय उपलब्धि परीक्षणमा विद्यालयको नतिजालाई राष्ट्रियस्तरसँग तुलना गरेर प्रतिवेदन तयार गर्ने अभ्यास पाइन्छ । क्षेत्रीय परीक्षण र अन्तर्राष्ट्रिय परीक्षणमा देशअनुसारका अलग अलग प्रतिवेदनहरू तयार गर्ने अभ्यास हुन्छ । यसका लागि परीक्षणमा सहभागी हुने क्रममा लिइएको नमुनाको आकार पर्याप्त र प्रतिनिधिमूलक हुन आवश्यक हुन्छ । यस्ता परीक्षणहरूमा विभिन्न वर्षको र विषयको नतिजालाई स्पष्टसँग तुलना गरिएको हुन्छ । नतिजा विश्लेषणमा प्रयोग हुने तथ्याङ्कशास्त्रीय मोडेलहरूबाट नतिजाको तुलना विश्वसनीय भएको हुन्छ । सिकाइ उपलब्धि परीक्षणको तथ्याङ्क विश्लेषणमा खासगरी परीक्षणको Item Response Theory को प्रयोगबाट विद्यार्थीको सिकाइ क्षमताको मापन गर्ने Theta Value र प्रतिनिधिमूलक नतिजाको अनुमान प्रस्तुत गर्ने Plausible Value निकालिन्छ । यस्तो तथ्याङ्क विश्लेषणमा हरेक विद्यार्थी र विद्यालयको Sample Weight को आवश्यकता पर्छ (Cresswell et al. 2015) ।

(क) Item Response Theory (IRT): IRT एउटा आधुनिक तथ्याङ्क शास्त्रीय मोडेल हो, जसले विद्यार्थीको अन्तर्निहित क्षमता (latent ability) र प्रश्नको कठिनाइ (Item difficulty) बिचको सम्बन्धको आधारमा विद्यार्थीको सिकाइ उपलब्धिको अनुमान गर्छ (Cresswell et al. 2015) । यसको प्रयोगबाट कुनै "विद्यार्थीले कति प्रश्नको सही उत्तर दियो र कति अङ्क प्राप्त गऱ्यो ?" भन्दा पनि "उसले कुन स्तरका (सजिला वा कठिन) प्रश्नको सही उत्तर दिन सक्यो?" भन्ने कुराका आधारमा तथ्याङ्क विश्लेषण गरिन्छ । यसमा व्यक्तिको क्षमता प्रश्नको कठिनाइस्तरमा निर्भर रहन्छ । IRT

मार्फत एउटा विद्यार्थीले कुनै खास प्रश्नको सही जवाफ दिने सम्भाव्यता उसको क्षमता र प्रश्नको कठिनाइमा कसरी निर्भर हुन्छ भनेर तथ्याङ्कशास्त्रीय मोडेल प्रयोग गरेर निकाल्ने गरिन्छ (Yu, 2010)। यसका लागि तथ्याङ्क विश्लेषणका थुप्रै सफ्टवेयरहरू विकास भएका छन्।

विभिन्न फरक फरक वर्षमा लिइएका वा फरक प्रश्न-पत्रका सेट भएका परीक्षाको नतिजा तुलना गर्न र त्यसलाई एउटै मानकबाट स्तर निर्धारण गर्न IRT प्रयोग गरिन्छ। यसका लागि केही सङ्ख्यामा अघिल्लो वर्षको परीक्षणमा प्रयोग भएका प्रश्नहरू प्रयोग गरिन्छ जसलाई साझा प्रश्नहरू (Anchor Items) भनिन्छ। यी साझा प्रश्नहरू एकै वर्षका फरक फरक सेटमा पनि हुन्छन् र ती साझा प्रश्नकै आधारमा Item Calibration गरिन्छ। यसकै माध्यमबाट, २०७९ सालको कक्षा ८ को गणितको नतिजा र २०८२ सालको कक्षा ८ गणितको नतिजाको उपलब्धिलाई विश्वसनीय तवरबाट तुलना गरिन्छ। यी दुई वर्षमा प्रयोग भएका प्रश्नको कठिनाइ फरक हुन सक्छ तर IRT को प्रयोगबाट प्रश्न सजिलै भएकै आधारमा सिकाइस्तर राम्रो देखिने वा सुधार भएको भन्न सकिँदैन। यसैगरी एउटा परीक्षामा प्रयोग गरिएका फरक फरक प्रश्नका सेटहरूको विश्लेषण गर्न र पृष्ठभूमिक प्रश्नावलीबाट मोडल विकास गर्नका लागि पनि IRT को प्रयोग गरिन्छ (Cresswell et al. 2015)। IRT को प्रयोगबाट विद्यार्थीको वास्तविक सिकाइस्तर निर्धारण गर्ने विधिको सानो उदाहरण तल प्रस्तुत गरिएको छ।

उदाहरणको लागि गणितमा दुईओटा प्रश्न सोधिएको छ।

प्रश्न १: ६+७+९ कति हुन्छ? (सजिलो प्रश्न)

प्रश्न २: x + ५ = १२ भए x को मान कति हुन्छ? (गाह्रो प्रश्न)

Classical Test Theory (CTT) मा, दुई विद्यार्थी (रिना र सुजन) ले जम्मा २ मध्ये १ अङ्क प्राप्त गरे भने (अर्थात् ५०% अङ्क) भने तिनीहरूको क्षमता बराबर मानिन्छ।

Item Response Theory मा भने यो भन्दा फरक तरिकाले विश्लेषण हुन्छ। IRT ले प्रश्नको कठिनाइका आधारमा विद्यार्थीको क्षमता आँकलन गर्छ।

- सुजनले सजिलो प्रश्न (प्रश्न १) मात्र सही गऱ्यो र गाह्रो प्रश्न (प्रश्न २) गलत गऱ्यो।
- रिनाले गाह्रो प्रश्न (प्रश्न २) मात्र सही गरिन र सजिलो प्रश्न (प्रश्न १) गलत गरिन।

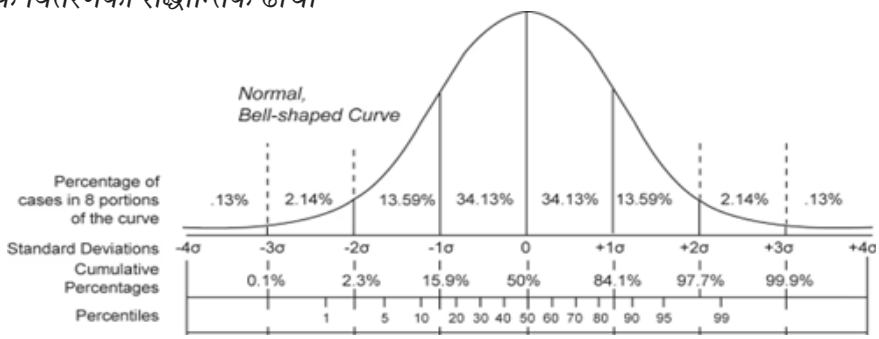
दुवैले प्राप्त गरेको अङ्क (१) ५०% भए तापनि, IRT ले रिनाको क्षमता (Latent Ability) सुजनको भन्दा बढी अनुमान गर्छ, किनभने रिनाले गाह्रो प्रश्न मिलाएकी छन्। IRT ले विद्यार्थीको क्षमतालाई एउटा स्केलमा मापन गर्छ, जसलाई प्रायः θ (थिटा) ले जनाइन्छ (Yu, 2010)। यो स्केलमा औसत क्षमताको मान '०' हुन्छ र त्यो भन्दा माथि वा तलको मानले क्रमशः बढी वा कम क्षमता भएको भन्ने जनाउँछ।

(ख) Theta (θ) : सामान्य भाषामा भन्दा, थिटा (θ) भनेको विद्यार्थीको "अदृश्य क्षमता" (Latent Ability/trait) हो, जसलाई हामी प्रत्यक्ष रूपमा देख्न सक्दैनौँ तर परीक्षाका प्रश्नहरूको उत्तरबाट अनुमान गर्न सक्छौँ। परम्परागत परीक्षणमा परीक्षामा विद्यार्थीले प्राप्त गर्ने अङ्क परीक्षामा सोधिएका प्रश्नमा उसले प्राप्त गरेको अङ्कको जोडफल हो तर थिटाको मान निकाल्दा परीक्षाका प्रश्नको कठिनाइस्तरका आधारमा निकालिन्छ। ठिक उत्तर दिएका प्रश्नहरूको कठिनाइस्तरका आधारमा कहिलेकाहीँ बराबर अङ्क ल्याउने मात्र नभई कम अङ्क ल्याउने विद्यार्थीको क्षमता

बढी पनि हुन सक्छ। थिटालाई सामान्यतया एउटा निरन्तर सङ्ख्यात्मक स्केल (continuous scale) मा नापिन्छ, जुन धेरैजसो अवस्थामा -४ देखि +४ सम्मको दायरामा (Standard Deviations in Normal Curve) हुन्छ (यद्यपि यो सैद्धान्तिक रूपमा अनन्तसम्म जान सक्छ)। प्रयोगका हिसाबले यसलाई लिइएको हो र यसले ९९.९९९९…. प्रतिशत ओगट्छ। थिटाको मान $\theta = 0$ मानिएको हुन्छ र यसलाई "सरदर क्षमता" (Average Ability) का रूपमा बुझिन्छ। यदि कुनै विद्यार्थीको थिटा मान (+1.5) छ भने उक्त विद्यार्थीको क्षमता औसतभन्दा माथि छ भन्ने बुझिन्छ र (-1.5) छ भने उक्त विद्यार्थीको क्षमता औसतभन्दा तल छ भन्ने बुझिन्छ। उदाहरणको लागि, कक्षा ५ को गणितको परीक्षामा सबै विद्यार्थीको औसत क्षमता $\theta = ०$ हो। यसमा रिनाको $\theta = +१.५$ छ भने, उनी गणितको राम्रो विद्यार्थी हुन् र सुजनको $\theta = -१.५$ छ भने, उनी गणितमा औसतभन्दा कमजोर विद्यार्थी हुन्।

चित्र १

तथ्याङ्क वितरणको सैद्धान्तिक ढाँचा



माथिको चित्रअनुसार तथ्याङ्क वितरणमा +-१ स्तरीय भिन्नताको क्षेत्रमा ६८ प्रतिशत वितरण रहेको हुन्छ। माथि चित्रअनुसार स्तरीय भिन्नता +४ देखि -४ सम्ममा ९९.९९९ प्रतिशत विद्यार्थी रहेका हुन्छन्। यसले खास गरी विद्यार्थीको सिकाइको वितरण देखाउँछ र औसतभन्दा धेरै विद्यार्थी कता रहेका छन् भन्ने सङ्केत गर्छ। तथ्याङ्क वितरणको सैद्धान्तिक ढाँचा वास्तवमा नमिल्न सक्छ। यसको आकार यदि धेरै विद्यार्थीको क्षमता औसतभन्दा कम छ भने माइनसतर्फ र बढी छ भने प्लसतर्फ ढल्किएको हुन्छ।

(ग) थिटा मान र प्रश्नको कठिनाइ (b) बिचको अन्तरसम्बन्ध

माथि नै उल्लेख गरिएको छ कि विद्यार्थीको क्षमता प्राप्ताङ्कले नभई उसले सही उत्तर दिएको प्रश्नको स्तरले निर्धारण गर्छ। यो सन्दर्भमा IRT को प्रयोगबाट विद्यार्थीको θ लाई प्रश्नको कठिनाइ (जसलाई 'b' ले जनाइन्छ) सँग प्रत्यक्ष तुलना गर्न सकिन्छ। सजिला प्रश्न सोधिएको परीक्षामा ८०% ल्याउने र गाह्रो प्रश्न सोधिएको परीक्षामा ६०% ल्याउने विद्यार्थीको θ एउटै (जस्तै, ०.५) हुन सक्छ भने दुवैको क्षमता बराबर हुन्छ।

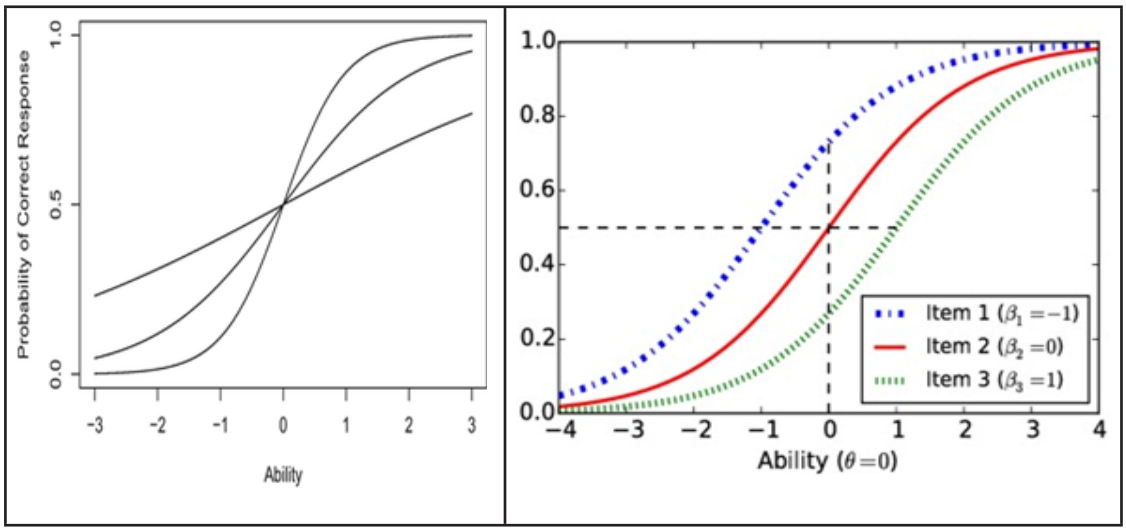
- यदि $\theta = b$ (अर्थात् परीक्षार्थीको क्षमता = प्रश्नको कठिनाइ) भए, विद्यार्थीले त्यो प्रश्नको सही उत्तर दिने सम्भावना ५०% हुन्छ।
- यदि $\theta > b$ (क्षमता कठिनाइभन्दा बढी) भए, विद्यार्थीले त्यो प्रश्नको सही उत्तर दिने सम्भावना ५०% भन्दा बढी हुन्छ।
- यदि $\theta < b$ (क्षमता कठिनाइभन्दा कम) भए, विद्यार्थीले त्यो प्रश्नको सही उत्तर दिने सम्भावना ५०% भन्दा कम हुन्छ।

- उदाहरणका लागि एउटा प्रश्नको कठिनाइ (b) = +१.० छ (यो औसतभन्दा गाह्रो प्रश्न हो)।
  अब, दुई जना विद्यार्थीमा:
- रिनाको θ = +२.० (धेरै सक्षम) → उनले यो प्रश्न सही गर्ने सम्भावना लगभग ८०-९०% हुन्छ।
- सुजनको θ = ०.० (सरदर क्षमता) → उसले यो प्रश्न सही गर्ने सम्भावना ३०-४०% मात्र हुन्छ (किनभने प्रश्न उसको क्षमताभन्दा गाह्रो छ)।

कुनै पनि प्रश्नको गुणस्तरमा उच्च क्षमता हुने विद्यार्थीले मिलाउने सम्भावना बढी हुने र कम क्षमता हुने विद्यार्थीले मिलाउने सम्भावना कम हुने गरी निर्धारण हुन्छ। यदि यस्तो छैन र कमजोर विद्यार्थीले मिलाउने तर राम्रा विद्यार्थी अर्थात् उच्च क्षमता भएकाले नमिलाउने भएको अवस्थामा त्यस्ता प्रश्नहरू यस प्रकारका उपलब्धि परीक्षणबाट हटाएर विश्लेषण गरिन्छ। यसका लागि Item Response Theory को प्रयोग मार्फत हरेक प्रश्नको Item Characteristics Curve हरू निकालेर हेरिन्छ। तलका दुई चित्रमा नमुना प्रस्तुत गरिएको छ।

चित्र २

प्रश्नको गुणस्तरीयताको रेखाचित्र



माथिको चित्रमा (X-axis): विद्यार्थीको क्षमता (Ability/Theta -) हो। (Y-axis): प्रश्न सही मिलाउने सम्भावना (Probability of Correct Response: देखि वा देखि) हो। विद्यार्थीको क्षमता बढ्दै जादा प्रश्नको सही उत्तर दिने सम्भावना बढ्दै जान्छ। थिटा (विद्यार्थीको क्षमतता) ० हुँदा उत्तर मिलाउने सम्भावना ५० हुन्छ भन्ने बुझिन्छ र सोहीअनुसार क्षमता घट्दै जादा सही उत्तर दिने सम्भावना घट्ने र बढ्दै जाँदा बढ्ने हुन्छ। सोहीअनुसार परीक्षामा सजिला प्रश्न सोधेर राम्रा नतिजा आउने सम्भावना आइआरटी मोडेलमा हुँदैन।

IRT को प्रयोगबाट Maximum Likelihood Estimation (MLE) वा Bayesian Estimation जस्ता जटिल तथ्याङ्कशास्त्रीय मोडेलको प्रयोग गरिन्छ र यसमा कुन विद्यार्थीले कुन-कुन प्रश्नको सही उत्तर दिन सक्यो र ती प्रश्नको कठिनाइ (b) (1PL-One-Parameter / Rasch Mode), विभेदीकरण क्षमता (a) (2PL-Two-Parameter

Model), र अनुमान (c) (3PL-Three-Parameter Model) समेतको मानका आधारमा θ को सबैभन्दा उपयुक्त मान निकाल्छ। परीक्षणमा प्रयोग गरिएका प्रश्नका आधारमा तथ्याङ्क विश्लेषणका उच्चस्तरका सफ्टवेयरमा उपयुक्त मोडेल (1PL, 2PL, or 3PL) को प्रयोग गरी यस्तो गणना गरिन्छ (Partchev, 2004)। नेपालको सन्दर्भमा परीक्षणका प्रश्नहरू वस्तुगत र विषयगत दुवै प्रकारका हुने भएकाले 2PL को प्रयोग गर्ने गरिएको छ।

(घ) Scale Score: स्केल स्कोर भन्नाले IRT को प्रयोगबाट आएको विद्यार्थीको 'वास्तविक क्षमता (θ)' लाई एउटा निश्चित स्थिर मापनदण्ड (benchmark) मा रूपान्तरण गरिन्छ (जस्तै: ०-५०० वा २००-८००)। माथि नै उल्लेख गरिएजस्तो थिटा मानका आधारमा स्केल स्कोर निर्धारण हुने हुनाले यसलाई परीक्षाको प्रश्नको कठिनाइस्तरले असर गर्दैन। एउटै क्षमता भएका दुई विद्यार्थीले फरक-फरक कठिनाइका दुई प्रश्नपत्रमा परीक्षा दिए पनि उनीहरूको स्केल स्कोर लगभग उस्तै आउँछ। पानीको तापक्रम मापन गर्न त्यसलाई सेल्सियस (०° देखि १००°) वा फरेनहाइट (३२° देखि २१२°) मा रूपान्तरण गर्छौं। यी दुवै 'स्केल स्कोर' हुन्। पानीको उम्लिने तापक्रम संसारभरि जहाँ पनि १००°C नै हो,। यसरी नै स्केल स्कोरमार्फत IRT को थिटा (θ=0) मानलाई (तापक्रमको 'वास्तविक मान' जस्तै) सबैले बुझ्ने भाषामा रुपान्तरण गरिन्छ। उदाहरणका लागि, एउटा विद्यार्थीले NASA मा ५२० स्कोर ल्यायो। यसको अर्थ:

- उसको θ (थिटा) = (५२० - ५००) / ५० = +**०.२** (औसतभन्दा अलि माथि)। (यहाँ ५० स्तरीय भिन्नता हो)
- उसले नेपालका ५५% विद्यार्थीलेभन्दा राम्रो प्रदर्शन गरेको छ (किनभने ५०० औसत हो)।
- उसले दुई/तीन चरणका गणितीय समस्या सजिलै समाधान गर्न सक्छ।
- तर यदि कुनै विद्यार्थीले स्केल स्कोर ३८० ल्यायो भने:
- उसको θ = (३८० - ५००) / ५० = -१.२ (औसतभन्दा निकै तल)।
- उसले आधारभूत तहका प्रश्न पनि गलत गर्न सक्छ।

सिकाइ उपलब्धि परीक्षणको नतिजालाई १०० प्रतिशतमा राख्दा केवल एउटा कक्षा वा वर्षको परीक्षा मात्र तुलना गर्न सक्छौं। तर जब हामीले धेरै वर्षको पूरै देशको, सातै प्रदेशको, फरक-फरक भौगोलिक क्षेत्रको शैक्षिक प्रगति कता जाँदै छ भनी धेरै वर्षसम्म पछ्याउन/(Track) गर्न चाहन्छौं, तब हामीलाई एउटा स्थिर र भरपर्दो 'स्केल' चाहिन्छ। ५०० स्कोर भनेको त्यही वैज्ञानिक र स्थिर स्केल हो, जसले अङ्क मात्र नभएर विद्यार्थीको वास्तविक क्षमता (Ability) को स्तर देखाउँछ। OECD ले PISA मा सन् २००० देखि एउटै स्केल (५००) को प्रयोग गरी नतिजा तुलना गर्दै आएको छ।

(ङ) प्रवीणताको तह (Proficiency Level): प्रवीणताको तह भन्नाले खासगरी माथि थिटाको मानलाई रुपान्तरण गरिएको स्केल स्कोरको व्याख्या हो। यसमा प्राप्त भएको अङ्कको भन्दा त्यो निश्चित अङ्क हासिल गर्ने विद्यार्थीहरूले सम्बन्धित विषयमा के के गर्न सक्छ वा सक्दैन" भन्ने कुरा बताउने सिकाइस्तरको सोपान (भर्‍याङ) हो। यसमा एउटा तह निर्धारण गरिन्छ र त्यो निश्चित तहमा पर्ने विद्यार्थीले सही उत्तर दिएका प्रश्नबाट उनीहरूले सम्बन्धित विषयमा के गर्न सक्छन् वा सक्दैनन् भन्ने निर्धारण गरिन्छ। यस प्रकारको सिकाइ तह निर्धारण गर्ने विभिन्न विधिहरू छन। Proficiency Level (Level 1, 2, 3...) कुन स्केल स्कोरबाट सुरु हुन्छ भन्ने "सीमाना (Border)" निर्धारण गर्ने अर्थात्, "कति अङ्क आयो भने Level 2 मान्ने र कति अङ्क आयो भने Level 3 मान्ने?" भन्ने निर्णय गर्नका लागि Cut-score र Bookmark

Method को प्रयोग गरिन्छ । सिकाइका तहअनुसारका प्रश्न निर्माण गर्ने प्रयोजनका लागि परीक्षणको ढाँचामा यसका तहअनुसारको व्याख्या गरिन्छ र परीक्षणको तथ्याङ्क विश्लेषणका क्रममा तथ्याङ्कका आधारमा यसलाई निर्धारण गरिन्छ । नेपालको सिकाइ उपलब्धि परीक्षणमा कक्षा ५ मा ४ ओटा स्तर र कक्षा ८ र १० मा ६ स्तरमा विभाजन गरिएको छ । कक्षा ८ को नेपाली विषयको ६ ओटा स्तरमा विभाजन गरिएको प्रवीणताको तहको उदाहरण तलको तालिका १ मा प्रस्तुत गरिएको छ ।

तालिका १

प्रवीणताको तह कक्षा ८ नेपाली

प्रवीणता तह	Score Range	व्याख्या
Level 1 (पूर्व आधारभूत)	<383	दिइएका अनुच्छेदको सीमित बोध गरी अनुच्छेदबाट सोधिएका के, कहाँ, को र कुन जस्ता सरल र सोझो उत्तर आउने प्रश्नको उत्तर दिन, सूची तयार गर्न र साधारण घटनाको क्रम मिलाएर सार्न ।
Level 2 (आधारभूत)	383-438	अनुच्छेदमा प्रयुक्त सूचनाको सामान्य बोध गर्न तथा सूचनाको पहिचान गरी सो का आधारमा प्रश्नको उत्तर दिन । नक्सामा प्रयुक्त चिन्हका आधारमा सही सूचना पहिचान गर्न । साधारण र सरल प्रकारका वाक्य वाक्य लेखन गर्न ।
Level 3 (प्रवीणता १)	438-494	अनुच्छेदको बोध गरी सोधिएका प्रश्नको कारण सहित उत्तर दिन, अप्रत्यक्ष सूचना पहिचान गर्न, सरल शब्दहरूको पर्यायवाची शब्द पहिचान गर्न, निर्देशन अनुसार ढाँचा मिलाई सामान्य स्तरको निर्देशित लेखन तथा सामान्य वाक्य रचना गर्न ।
Level 4 (प्रवीणता २)	494-549	अनुच्छेदको मुख्य विषय आसय पत्ता लगाउन । उपयुक्त शीर्षक चयन गर्न । निर्देशित जीवनी, प्रबन्ध/निबन्ध, कथा लेख्न । संवाद पूरा गर्न । दिइएका वाक्यमा उपयुक्त चिह्न प्रयोग र शुद्धाशुद्धि मिलाउन । चिठीको सामान्य स्तरको प्रत्युत्तर लेख्न र सामान्य स्तरको निवेदन तयार गर्न, चित्रको सामान्य लिखित वर्णन गर्न तथा वादविवादको विषयमा सामान्य तर्क प्रस्तुत गर्न ।
Level 5 (प्रवीणता ३)	549-605	दिइएका घटनाका आधारमा साधारण समाचार र निर्देशित कविता तयार गर्न । अनुच्छेदको विषयवस्तुको बोधसहित तुलना गर्न, सो अनुसार तर्क दिन, मूल्याङ्कन गर्न । अनुच्छेदको साराशं लेख्न । उपयुक्त चिह्नको प्रयोगसहित व्याकरणीक रुपमा शुद्ध वाक्य रचना गर्न ।
Level 6 (विशिष्ट)	605<	अनुच्छेदको पूर्ण बोध गरी त्यसमा प्रयुक्त पारिभाषिक/प्राविधिक शब्दको सन्दर्भगत अर्थ बताउन, अर्थ खुल्ने गरी वाक्यमा प्रयोग गर्न तथा उच्चस्तरीय व्यवहारिक लेखन क्षमता प्रस्तुत गर्न ।

(स्रोत: Education Review Office, 2018, p 116-117)

नेपालका अभ्यास र चुनौतीहरू

नेपालमा व्यवस्थित र नियमित रूपमा सिकाइ उपलब्धि परीक्षणको काम शैक्षिक गुणस्तर परीक्षण केन्द्रको स्थापना भएपश्चात् भयो र पहिलो राष्ट्रिय प्रतिनिधिमूलक उपलब्धि परीक्षण सन् २०११ मा कक्षा ८ मा सञ्चालन भयो । सिकाइ उपलब्धि परीक्षणका ४ वर्षका (सन् २०११ कक्षा ८, सन् २०१२ कक्षा ३ र ५, सन् २०१३ कक्षा ८ र सन् २०१५ कक्षा ३ र ५) तथ्याङ्क विश्लेषणमा Item Response Theory को सीमित प्रयोग गरिएको थियो । परीक्षणमा प्रयोग भएका प्रश्नहरूको विशेषता (ICC-Item Characteristics Curve) र थिटा मानको हिसाब गरी अन्तिम नतिजालाई औसत उपलब्धिमा प्रस्तुत गरिएको थियो । यसपश्चात् सन् २०१७ मा भएको कक्षा ८ को उपलब्धि परीक्षणको नतिजा विश्लेषणमा पूर्णतया Item Response Theory को प्रयोग गरियो र नतिजालाई स्केल स्कोर तथा सिकाइका तहमा व्याख्या गरियो । यसको उदाहरण माथि प्रस्तुत गरिएको छ । परीक्षणको समग्र डिजाइनमा आउने समस्याले प्रभावकारी तुलना हुन सकिरहेको छैन । सिकाइ उपलब्धि परीक्षणको नतिजालाई बुझ्ने, त्यसको व्याख्या गर्ने र

सोअनुसार सुधारका रणनीति तय गर्ने काम आशातित रूपमा हुन सकेको छैन । विभिन्न वर्षका नतिजालाई तुलना गर्ने र विद्यार्थीको वास्तविक क्षमतालाई प्रस्तुत गर्ने तथा अन्य पृष्ठभूमि प्रश्नावलीका आधारमा सिकाइमा प्रभाव पार्ने तत्त्वहरूको वारेमा गरिने यस प्रकारको उपलब्धि परीक्षणलाई यसका सरोकारवालासमक्ष प्रभावकारी रूपमा सञ्चार गर्न सकिएको छैन । संस्थाको आफ्नो कार्यक्षेत्र, मानव स्रोत व्यवस्थापनको पद्धति र उपलब्ध मानव स्रोतको क्षमता विकास तथा प्रयोग र नितरन्तरताजस्ता कारणहरूले गर्दा तथ्याङ्क विश्लेषण, नमुना छनोट, तथ्याङ्क व्यवस्थापनजस्ता विषयहरूमा केही समस्या देखिएका छन् । सिकाइ उपलब्धि परीक्षणको तथ्याङ्क विश्लेषणमा विज्ञहरू बजारमासमेत यथेष्ट मात्रामा नभएको अवस्था छ । सुरुका वर्षहरूमा बाह्य विज्ञ परामर्शदातामार्फत सहायता उपलब्ध भएको थियो र सोपश्चात् पनि विभिन्न तालिम र क्षमता विकासका कार्यकलाप भइरहेका छन्, यद्यपि सिकाइ उपलब्धि परीक्षण सञ्चालन, त्यसको तथ्याङ्क व्यवस्थापन र तथ्याङ्क विश्लेषणजस्तो उच्च प्राविधिक कामका लागि दक्ष जनशक्ति विकास प्राथमिकतामा हुनुपर्ने अवस्था देखिएको छ ।

निष्कर्ष

विद्यार्थीको सिकाइ परीक्षण यसको उद्देश्यअनुसार फरक फरक ढाँचामा गरिन्छ । उपलब्धि परीक्षण सञ्चालन गर्ने विधि, यसका साधन र तथ्याङ्क विश्लेषणका पद्धति विशिष्ट प्रकारको रहेको हुन्छ । अन्तर्राष्ट्रियस्तरमा समेत तुलनायोग्य बनाउने र सिकाइ परीक्षणलाई विश्वसनीय तथा वैध बनाउनका लागि तथ्याङ्कशास्त्र तथा परीक्षणको आधुनिक सिद्धान्त (IRT) को प्रयोग गरिन्छ । यसमा परीक्षणमा प्रयोग भएका प्रश्नको फरक फरक सेटको विश्लेषण→ प्रश्न सेटको संयुक्त तथ्याङ्क →नमुनाको भार→थिटा मान→स्केल स्कोर→Plausible value-र प्रवीणता तहको निर्धारण यसका मुख्य चरणहरू हुन् । यसले विद्यार्थीको वास्तविक सिकाइस्तरको मापन (थिटा मान) र सिकाइस्तरको व्याख्या गर्न सजिलो हुन्छ । विभिन्न वर्षको नतिजालाई विश्वसनीय तवरबाट तुलनायोग्य बनाउने र सिकाइका विभिन्न स्तरमा रहेका विद्यार्थीको समूह तयार गर्ने यसका मुख्य विशेषताहरू हुन् । थिटाको मानबाट सिकाइ क्षमता मापन र स्केल स्कोरमा रुपान्तरण गर्ने तथा त्यसको आधारमा सिकाइ विभिन्न तहहरूको व्याख्या गर्ने कार्य सिकाइ उपलब्धि परीक्षणको विशिष्ट कार्य हो । यसमा प्रयोग हुने विभिन्न तथ्याङ्कशास्त्रीय अवधारणा तथा जटिल ढाँचाले गर्दा यसका प्राविधिक पक्षहरूलाई बुझ्न कठिन भएपनि यसबाट विभिन्न वर्षको नतिजालाई विश्वसनीय रुपमा तुलना गर्न सकिन्छ ।

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विद्यालय कार्यसम्पादन परीक्षण: अभ्यास, चुनौती र सम्भावना

रुद्रहरि भण्डारी

श्री रुद्रहरी भण्डारी, शिक्षा तालीम केन्द्र धुलिखेलमा कार्यरत रही अधिकृतस्तर (दशौँ तह) पदबाट निवृत्त हुनु भएको हो। यस लेखको बारेमा थप कुरा बुझ्नु परेमा इमेल ठेगाना rhbhandari@gmail.com मा सम्पर्क गर्न सकिनेछ।

लेखसार

कुनै पनि देशको समग्र विकास र समृद्धिका आधारमध्ये एक त्यस देशको सार्वजनिक शिक्षा प्रणालीलाई लिने गरिन्छ । नेपालको सन्दर्भमा, नेपाल सरकारले विभिन्न वर्षमा विनियोजन गरेको कुल बजेटको प्रवृति अध्यन गर्दा करिब ११ प्रतिशत रकम शिक्षा क्षेत्रमा विनियोजन गर्दै आएको देखिन्छ। विभिन्न प्रयासबाट शिक्षा क्षेत्रमा धेरै उपलब्धि प्राप्त भए पनि सार्वजनिक विद्यालयहरूको सिकाइ उपलब्धि र कार्यक्षमता अपेक्षाकृत हुन नसकेको तथ्य शैक्षिक गुणस्तर परीक्षण केन्द्र (Education Review Office-ERO) लगायत विभिन्न अनुसन्धान प्रतिवेदनहरूले निरन्तर उजागर गर्दै आएका छन्। केन्द्रले गरेको विद्यालय कार्यसम्पादन परीक्षणमा देशभरका करिब ८० प्रतिशत सामुदायिक विद्यालयहरूको कार्यसम्पादन स्तर सामान्य स्तरको हुनु र सूचक अनुसार उत्कृष्ट विद्यालयहरूको सङ्ख्या अत्यन्त न्यून हुनुले शैक्षिक नीति, लगानी र कार्यान्वयनबिचको गहिरो खाडललाई प्रस्ट पार्दछ। विद्यालय सुधार योजना कार्यान्वयन र विद्यालयको रूपान्तरणकेन्द्री ज्यादा बनाउन नसकिनु, विद्यालय नेतृत्वले शैक्षिक रूपान्तरणभन्दा भौतिक पूर्वाधार निर्माणमा जोड दिएको र तीनै तहका सरकारले बजेट तथा कार्यक्रम विनियोजन तथा कार्यक्रम नतिजा सुधारका लागि पर्याप्त हुन नसक्नु चुनौतीका विषय हुन्। विद्यालयको कार्यसम्पादन परीक्षणमा लामो समयदेखि सुधारको आधार मानी शैक्षिक गुणस्तर परीक्षण केन्द्रले कार्य गरेको छ। यसै सन्दर्भमा, शैक्षिक गुणस्तर परीक्षण केन्द्रले आ.व.२०८२/८३ देखि लागु हुने गरी विद्यालयको स्व-मूल्याङ्कन र रुब्रिक्समा आधारित कार्यसम्पादन परीक्षण ढाँचा र साधनलाई कार्यान्वयनमा ल्याएको छ। यस ढाँचा र साधनमा परीक्षणलाई प्राविधिक मूल्याङ्कनको साधन मात्र नमानेर, स्थानीय, प्रदेश र सङ्घीय सरकारको स्रोत बाँडफाँट तथा बजेट प्रणाली र सुधार कार्यक्रम निर्धारण गर्ने जोड्ने 'भर्टिकल अलाइनमेन्ट' (Vertical Alignment) गर्ने आधारका रुपमा

विकास गर्नुपर्ने देखिन्छ। यसबाट सार्वजनिक शिक्षामा दिगो सुधार र उत्कृष्ट विद्यालय निर्माण गर्न सकिने निष्कर्षसहितको विश्लेषण यस लेखमा गरिएको छ।

मुख्य शब्द: सार्वजनिक शिक्षा, कार्यसम्पादन परीक्षण, विद्यालय सुधार योजना, बजेट र कार्यक्रम, स्व-मूल्याङ्कन रुब्रिक्स, शैक्षिक सुशासन, जवाफदेहिता।

विषय प्रवेश

शिक्षा नागरिकलाई साक्षर बनाउने, समाजको चेतनास्तरलाई उकास्ने एवम् राष्ट्रको आर्थिक, सामाजिक र राजनीतिक रूपान्तरणको ढोका खोल्ने आधार हो। नेपालको संविधान, २०७२ को धारा ३१ ले प्रत्येक नागरिकलाई आधारभूत तहसम्मको शिक्षा अनिवार्य र निःशुल्क तथा माध्यमिक तहसम्मको शिक्षा निःशुल्क पाउने मौलिक हकको सुनिश्चितता गरेको छ। संविधानले परिकल्पना गरेको समतामूलक र समाजवादउन्मुख राष्ट्र निर्माणको सोचलाई यथार्थमा परिणत गर्ने सबैभन्दा भरपर्दो माध्यम भनेको गुणस्तरीय शिक्षा हो। राज्यले यसै संवैधानिक दायित्वलाई पूरा गर्न कुल राष्ट्रिय बजेटको करिब १० देखि ११ प्रतिशतको हाराहारीमा शिक्षा क्षेत्रमा विनियोजन गर्दै आएको छ। यो लगानीको ठुलो हिस्सा शिक्षकको तलब भत्ता, भौतिक पूर्वाधार निर्माण, पाठ्यपुस्तक वितरण, छात्रवृत्ति, र दिवा खाजाजस्ता विभिन्न शीर्षकहरूमा खर्च हुँदै आएको छ। यद्यपि सार्वजनिक शिक्षाले समाजलाई दिनुपर्ने प्रतिफल, विद्यार्थीको सिकाइ उपलब्धि, र विद्यालयहरूको समग्र कार्यक्षमता अपेक्षित स्तरमा नभएको विषय पनि उठ्ने गरेका छन्। विद्यालयमा भएको लगानी र त्यसबाट प्राप्त प्रतिफलबिचको अन्तर पनि निकै देखिन्छ। अझै उल्लेख्य सङ्ख्यामा विद्यार्थीहरूले न्यूनतम सिकाइ उपलब्धि हासिल गर्न नसकेको, विद्यालयमा भर्ना भएका विद्यार्थीहरूले बिचमै पढाइ छाड्ने अवस्था अझै उल्लेख्य रहेकोलयायत अवस्थाले हाम्रा सामुदायिक विद्यालयहरूको अवस्थामा अझै निकै सुधार आवश्यक रहेको देखिन्छ।

शैक्षिक प्रणालीमा गहिरिँदो शैक्षिक सङ्कटलाई समाधान गर्न र विद्यालयहरूलाई सही बाटोमा ल्याउन भौतिक अनुगमन वा प्रशासकीय नियन्त्रण मात्र पर्याप्त हुँदैन (शिक्षा, विज्ञान तथा प्रविधि मन्त्रालय [शिविप्रम], २०७६)। यसका लागि विद्यालयहरूको प्राज्ञिक, प्रशासनिक र समग्र व्यवस्थापकीय पक्षको वैज्ञानिक र तथ्यपरक परीक्षण हुनु अनिवार्य ठानियो। यसैअनुरुप विद्यालयको कार्यसम्पादन परीक्षणको आवश्यकतालाई सम्बोधन गर्न शिक्षा ऐन २०२८ को आठौँ संशोधन (२०७३) ले दफा ७ (ख) बमोजिम एक कार्यगत स्वतन्त्रतासहितको विशिष्टीकृत निकायका रूपमा शैक्षिक गुणस्तर परीक्षण केन्द्रको कानुनी व्यवस्था गऱ्यो। यस केन्द्रको मूलभूत काम भनेको विद्यालय शिक्षाको गुणस्तरको वस्तुगत मापन गर्नु, विद्यार्थीको सिकाइ उपलब्धिको राष्ट्रिय स्तर निर्धारण गर्नु र विद्यालयहरूको समग्र कार्यसम्पादनको लेखाजोखा गरी शिक्षा प्रणाली सुधारका लागि नीति निर्माताहरूलाई प्रमाणमा आधारित पृष्ठपोषण उपलब्ध गराउनु हो। शैक्षिक गुणस्तर परीक्षण केन्द्र सञ्चालन निर्देशिका, २०७४ ले केन्द्रलाई विद्यालय र शैक्षिक निकायहरूको कार्यसम्पादन स्तरको नियमित परीक्षण गरी शैक्षिक सुशासन, पारदर्शिता र जवाफदेहिता सुनिश्चित गर्ने कार्यादेश प्रदान गरेको छ (शिविप्रम, २०७४)। केन्द्रले आफ्नो कार्यसम्पदनको क्रममा वा शिक्षकलाई दण्ड दिने, कारबाही गर्ने वा तर्साउने काम गर्दैन। बरु, यसले एउटा प्राज्ञिक ऐनाको रूपमा काम गर्छ, जसले विद्यालयलाई उसका सबल पक्षहरू देखाएर प्रोत्साहित गर्छ भने दुर्बल पक्षहरूलाई उजागर गर्दै सुधारका लागि स्पष्ट मार्गचित्र पहिल्याउन मदत गर्दछ।

केन्द्रबाट भएको विद्यालयको कार्यसम्पादन परीक्षण

शैक्षिक गुणस्तर परीक्षण केन्द्रले आफ्नो स्थापनाकालदेखि नै विद्यालयहरूको कार्यसम्पादनको परीक्षण गर्दै आएको छ। आर्थिक वर्ष २०६९/७० बाटै प्रारम्भिक रुपमा सुरु भएपनि आर्थिक वर्ष २०७३/७४ देखि सामुदायिक माध्यमिक विद्यालयहरूको कार्यसम्पादन परीक्षण नियमित र व्यवस्थित रूपमा सुरु गरिएको थियो। सुरुवाती वर्षहरूमा परीक्षणको साधन र दायरा केही साँघुरो भए तापनि समयक्रमसँगै यसलाई थप परिष्कृत र व्यापक बनाउँदै लगियो। आर्थिक वर्ष २०८१/८२ सम्म ७७ ओटै जिल्लाका कुल ६,३७० वटा सामुदायिक विद्यालयहरूको कार्यसम्पादन परीक्षण सम्पन्न भएको छ (शिविप्रम, २०८३)। यो सङ्ख्या नेपालको सार्वजनिक शिक्षा प्रणालीको प्रतिनिधित्व गर्ने एउटा बृहत् र विश्वसनीय नमुना हो।

यी ६,३७० सामुदायिक माध्यमिक विद्यालयहरूको समग्र नतिजालाई समग्रमा विश्लेषण गर्दा परीक्षण गरिएका विद्यालयको अवस्था अत्यन्तै कमजोर पाइएको छ। कुल परीक्षण गरिएका विद्यालयमध्ये जम्मा ०.५ प्रतिशत अर्थात् १३ वटा विद्यालयहरू मात्र 'उत्तम' (Excellent) श्रेणीमा पर्न सफल भएका छन्। यसै गरी, करिब १८ प्रतिशत अर्थात् १,१३७ विद्यालयहरू 'मध्यम' वा 'राम्रो' (Good) स्तरमा रहेका छन्। सबैभन्दा धेरै विद्यालय ८० प्रतिशत अर्थात् ५,१४० विद्यालयहरू 'सामान्य' (Fair) स्तरमै खुम्चिएका छन् भने करिब १.५ प्रतिशत अर्थात् ८२ विद्यालयहरू अत्यन्तै 'कमजोर' (Poor) अवस्थामा चलिरहेका छन् (शैक्षिक गुणस्तर परीक्षण केन्द्र [शैगुपके], २०८३)। अधिकांश सामुदायिक विद्यालयहरूमा लगानी पर्याप्त भए पनि त्यो प्रभावकारी नतिजामा रूपान्तरण भएको छैन। थोरै मात्र विद्यालयहरू उत्कृष्ट हुनुले हाम्रो नीतिगत व्यवस्थापन, कार्यान्वयन, संलग्न जनशक्तिको कार्यसम्पादन, विद्यालय नेतृत्व र व्यवस्थापन विषयमा प्रश्न उठेको छ।

आर्थिक वर्ष २०८१/८२ मा शैक्षिक गुणस्तर परीक्षण केन्द्रले नेपालका भौगोलिक रूपमा विविधतायुक्त पाँचवटा जिल्लाहरू- इलाम, जाजरकोट, जुम्ला, डोटी र बैतडीका कुल ४३० वटा सामुदायिक विद्यालयहरूमा सघन रूपमा कार्यसम्पादन परीक्षण सञ्चालन गरेको थियो। यो प्रतिनिधिमूलक परीक्षणको नतिजाले सार्वजनिक शिक्षाको कमजोर अवस्थालाई सङ्केत गरेको छ। परीक्षण गरिएका ४३० विद्यालयमध्ये कुनै पनि विद्यालय 'उत्तम' स्तर अर्थात् ९० प्रतिशतभन्दा माथि अङ्क ल्याउने श्रेणीमा पर्न सकेनन्। करिब २० प्रतिशत (८६ वटा) विद्यालयहरू 'मध्यम' स्तरमा देखिए भने झन्डै ८० प्रतिशत (३४२ वटा) विद्यालयहरू 'सामान्य' स्तरमा रहेको पाइयो। दुईओटा विद्यालय त 'कमजोर' स्तरमै रहेका छन् (शैगुपके, २०८२)। हाम्रा अधिकांश विद्यालयहरूमा लगानी पक्ष (Input) सन्तोषजनक बन्दै गएको छ, तर प्रक्रिया (Process) र उपलब्धि (Output) अत्यन्तै कमजोर छ। विद्यालयका भौतिक सुविधा र शिक्षक व्यवस्थापन र कक्षाकोठाहरू दैनिक रूपमा सञ्चालन भइरहेका छन्; तर ती कक्षाकोठामा हुनुपर्ने आधुनिक नवप्रवर्तन, प्रविधिमैत्री र बालकेन्द्रित सिकाइ, विद्यार्थीको सर्वाङ्गीण विकासको वातावरण, र विद्यालय प्रशासनमा सुदृढ सुशासनको अभाव देखिन्छ। कार्यसम्पादन परीक्षण सुरु गरेको झन्डै एक दशकभन्दा बढी अवधिमा विद्यालयको समग्र सम्पादनस्तरमा सुधार देखिएको छैन (शैगुपके, २०८२)।

विद्यालयको कार्यसम्पादन परीक्षणका आधार

केन्द्रबाट भएको कार्यसम्पादन परीक्षण प्रक्रियालाई वस्तुगत बनाउने कार्य भएको देखिन्छ । कुन विद्यालय उत्कृष्ट हो र कुन होइन भन्ने कुरा कुनै संस्था वा परीक्षकको वैयक्तिकताको आधारमा नभई निर्धारित वस्तुगत, मापनयोग्य र पारदर्शी सूचकहरूका आधारमा गरिएको छ । केन्द्रबाट गरिएको कार्यसम्पादन परीक्षणमा उच्च अङ्क प्राप्त गरी उत्कृष्ट विद्यालयको पहिचान बनाउनका लागि विद्यालयले प्रभावकारी कार्यसम्पादन गर्नुपर्ने मूलभूत सातओटा प्रमुख स्तम्भहरू पहिचान गरी प्रस्तुत गरिएको छ (शैगुपके, २०८२; २०८१) ।

पहिलो र महत्त्वपूर्ण स्तम्भ सिकाइमैत्री र सुरक्षित भौतिक पूर्वाधार हो । भौतिक वातावरणले शिक्षण सिकाइमा अवश्य प्रभाव पार्दछ । विद्यालयमा इँटा र सिमेन्टका पक्की भवन हुनुमात्र पर्याप्त मानिँदैन । प्रत्येक कक्षाकोठामा पर्याप्त प्राकृतिक प्रकाश र हावा सहज रूपमा आउने-जाने व्यवस्था हुनुपर्दछ, जसले विद्यार्थीलाई निद्रा लाग्ने वा उकुसमुकुस हुने अवस्थाबाट बचाउँछ । साथै, विद्यार्थीको उमेर, उचाइ र शारीरिक बनावटअनुकूलको फर्निचर (डेस्क र बेन्च) हुनुपर्दछ, जसले उनीहरूको ढाड दुख्ने वा लामो समय बस्दा शारीरिक विकासमा बाधा पुग्ने समस्या नहोस् । यसबाहेक, विद्यालयले समावेशी शिक्षाको अवधारणालाई पूर्ण रूपमा आत्मसात् गर्दै अपाङ्गता भएका विद्यार्थी र शिक्षकहरूका लागि विद्यालयका सम्पूर्ण पहुँच मार्गहरू, कक्षाकोठा, पुस्तकालय र शौचालयहरू अपाङ्गतामैत्री (च्याम्प, रेलिङ र ट्याक्टाइल पेभिङसहित) बनाएको हुनुपर्दछ । विद्यालय क्षेत्र बाह्य होहल्ला, सवारीसाधनको दुर्घटना र अन्य असुरक्षाबाट बच्नका लागि सुरक्षित घेराबार वा पर्खालले घेरिएको हुनुपर्दछ, ताकि बालबालिकाहरू निर्धक्क भएर सिक्न सकून् (शैगुपके, २०८२) ।

दोस्रो स्तम्भ खानेपानी, शौचालय र स्वच्छता (WASH) को समुचित व्यवस्थासँग सम्बन्धित छ । विद्यालयमा सरसफाइ र स्वच्छताको अवस्था कमजोर हुँदा विशेष गरी छात्राहरूको उपस्थिति दर घट्ने गरेको विभिन्न शैक्षिक अनुसन्धानहरूले देखाएका छन् । उत्कृष्ट विद्यालय बन्नका लागि छात्र र छात्राहरूका लागि पूर्ण रूपमा छुट्टाछुट्टै, पर्याप्त सङ्ख्यामा र दैनिक रूपमा सफा गरिने शौचालय हुनु अनिवार्य छ । प्रत्येक शौचालयको नजिकै वा भित्र निरन्तर पानी आउने र साबुनले हात धुने स्थानको व्यवस्था हुनुपर्दछ, जसले विद्यार्थीमा स्वास्थ्यसम्बन्धी असल बानीको विकास गराउँछ । अझ महत्त्वपूर्ण कुरा, किशोरी विद्यार्थीहरूका लागि महिनावारी स्वच्छता व्यवस्थापन अत्यन्त संवेदनशील विषय हो । विद्यालयमा स्यानिटरी प्याडको सहज र निःशुल्क उपलब्धता हुनुपर्ने र प्रयोग भइसकेका प्याडहरूको सुरक्षित विसर्जनका लागि वातावरणमैत्री इन्सिनेरेटर (Incinerator) मेसिन व्यवस्थित रूपमा नष्ट गरिएको यसका साथै, विद्यार्थीहरूको स्वास्थ्यलाई ध्यानमा राख्दै सुरक्षित वा त्यस्तै फिल्टर गरिएको पिउने पानीको पर्याप्त उपलब्धता र सहज पहुच हुनु अर्को अनिवार्य सर्त हो ।

तेस्रो स्तम्भ प्रविधि, पुस्तकालय र प्रयोगात्मक अभ्यासको सघनता हो । पाठ्यपुस्तकमा मात्र आधारित परम्परागत शिक्षण विधाले वर्तमान पुस्ताको आवश्यकता पूरा गर्न किमार्थ सक्दैन । तसर्थ, परीक्षणले विद्यालयमा एक व्यवस्थित र जीवन्त पुस्तकालयको खोजी गर्दछ । पुस्तकालय भनेको किताबहरू दराजमा सजाउने कोठा होइन; यो विद्यार्थीहरू दैनिक रूपमा जाने, नयाँ कुरा खोज्ने र पढ्ने थलो हुनुपर्छ । प्रत्येक कक्षामा 'बुक कर्नर' हुनुपर्ने र विद्यार्थीहरूले दैनिक प्रयोगमा ल्याउने, पुस्तकालयबाट साप्ताहिक रूपमा पुस्तक घरमा लगेर पढेको दुरुस्त अभिलेख हुनुपर्ने मापदण्ड

तोकिएको छ। त्यसैगरी, विज्ञान प्रयोगशाला पनि केवल उपकरणहरू प्रदर्शन गर्ने सङ्ग्रहालय नभई, विद्यार्थी आफैँले भौतिकशास्त्र, रसायनशास्त्र र जीवविज्ञानका प्रयोगात्मक कार्यहरू प्रयोग गर्ने जीवित प्रयोगशाला हुनुपर्छ। यसका अतिरिक्त, कक्षाकोठामा सूचना र सञ्चार प्रविधिको (ICT) उच्चतम प्रयोग गर्दै स्मार्ट बोर्ड, प्रोजेक्टर र इन्टरनेटको सहायताले श्रव्यदृश्य माध्यमबाट शिक्षण गरिएको हुनुपर्ने कुरालाई उत्कृष्ट विद्यालयको अनिवार्य सूचक मानिएको छ।

चौथो स्तम्भ आधार सुदृढ शिक्षण सिकाइ प्रक्रियाका प्रभावकारी योजना हो। एउटा कक्षाकोठाको सफलता र विद्यार्थीको सिकाइको शिक्षकको दक्षता, पूर्वतयारी र समर्पण हो। यसअन्तर्गत प्रत्येक शिक्षकसँग अनिवार्य रूपमा शैक्षिक सत्रको सुरुमै तयार पारिएको वार्षिक शैक्षणिक योजना, एकाइ योजना र दैनिक पाठयोजना हुनुपर्दछ र कक्षाकोठामा सोही योजनाअनुरुप शिक्षण हुनुपर्दछ। परम्परागत रूपमा शिक्षकले मात्र बोल्ने र विद्यार्थीले निष्क्रिय भएर सुन्ने शिक्षक केन्द्रित विधिलाई कम गर्दै नवप्रवर्तनकारी, विद्यार्थीको सहभागिता सुनिश्चित गर्ने बालकेन्द्रित विधि, र परियोजना कार्यमा आधारित सिकाइ (Project-based Learning) को अभ्यास हुनुपर्दछ। साथै, विद्यार्थीलाई आफ्नो स्थानीय संस्कृति र परिवेशसँग जोड्न स्थानीय पाठ्यक्रम र स्थानीय स्रोतसामग्रीको अधिकतम प्रयोग सुनिश्चित गरिएको हुनुपर्छ।

पाँचौँ स्तम्भ निरन्तर, निर्माणात्मक र उपचारात्मक मूल्याङ्कनसँग जोडिएको छ। त्रैमासिक वा वार्षिक परीक्षामा प्राप्त अङ्कको आधारमा विद्यार्थीको समग्र सिकाइको मूल्याङ्कन गर्ने परिपाटीमा परिवर्तन आवश्यक छ। उत्कृष्ट विद्यालयले प्रत्येक विद्यार्थीको व्यक्तिगत विकास, रुचि, र सिकाइको स्तरलाई समग्र रूपमा मापन गर्न व्यक्तिगत कार्यसञ्चयिका/पोर्टफोलियोको व्यवस्थापन गरेको हुनुपर्दछ। कक्षाकार्य, गृहकार्य, हाजिरी, र शिक्षकको निरन्तर अवलोकनका आधारमा निर्माणात्मक मूल्याङ्कन हुनुपर्छ। यस प्रक्रियामा सबैभन्दा महत्त्वपूर्ण पक्ष भनेको सिकाइमा पछि परेका विद्यार्थीहरूलाई समयमै पहिचान गरी उनीहरूका लागि अनिवार्य रूपमा विद्यालय समयअघि वा पछि उपचारात्मक शिक्षण वा अतिरिक्त कक्षाहरू सञ्चालन गरी त्यसका प्रमाणहरु संलग्न हुनु पर्दछ।

छैटौँ स्तम्भ शिक्षकको पेसागत विकास र कार्यमूलक अनुसन्धान हो। शिक्षा निरन्तर परिवर्तनशील क्षेत्र भएकाले शिक्षकले आफ्नो ज्ञान र सिपलाई निरन्तर अद्यावधिक गर्नुपर्छ। उत्कृष्ट विद्यालयमा शिक्षकहरूले प्राप्त गरेका तालिममा सिकेका आधुनिक सिपहरूलाई केवल प्रमाणपत्रमा सीमित नराखी कक्षाकोठाको शिक्षण सिकाइमा प्रत्यक्ष रूपमा प्रयोग गरेको हुनुपर्छ। कक्षाकोठाभित्र विद्यार्थीको सिकाइ वा व्यवहारसँग सम्बन्धित उत्पन्न हुने तत्कालिक समस्याहरू समाधान गर्नका लागि शिक्षक आफैँले वैज्ञानिक विधि अपनाएर कार्यमूलक अनुसन्धान (Action Research) गरेको र सोको प्रतिवेदन विद्यालय प्रशासनलाई बुझाएको तथा अभिलेख राखिएको हुनुपर्छ। यसका साथै, शिक्षकहरूबिच स्वस्थ शैक्षिक बहस हुने, सहकर्मी सिकाइ (Peer Learning) प्रवर्धन गर्ने र एकअर्काको कक्षा अवलोकन गरी रचनात्मक पृष्ठपोषण दिने प्राज्ञिक संस्कृति स्थापित भएको हुनुपर्छ।

सातौँ र अन्तिम स्तम्भ संस्थागत सुशासन, पारदर्शिता र जवाफदेहिता हो। विद्यालय समाजको ऐना र एक महत्त्वपूर्ण सामाजिक संस्था भएकाले यसको व्यवस्थापन पूर्ण रूपमा पारदर्शी र जनउत्तरदायी हुनुपर्छ। यसअन्तर्गत विद्यालय व्यवस्थापन समिति र शिक्षक अभिभावक सङ्घको बैठक नियमित रूपमा बस्ने मात्र नभई उनीहरू विद्यालयको समग्र शैक्षिक गुणस्तर सुधारमा प्रत्यक्ष रूपमा सक्रिय हुनुपर्छ। विद्यालयले प्राप्त गर्ने बजेट र खर्चको पारदर्शिताका लागि वार्षिक रुपमा अनिवार्य रूपमा समुदायको उपस्थितिमा सामाजिक परीक्षण (Social Audit) र तोकिएका लेखापरीक्षकबाट वित्तीय लेखापरीक्षण गराई सोको प्रतिवेदन नागरिक बडापत्र वा सार्वजनिक सूचना पाटीमार्फत

सार्वजनिक गरिएको हुनुपर्छ। यसबाहेक, अभिभावक र विद्यार्थीका गुनासाहरू सङ्कलन गर्न पहुँचयोग्य स्थानमा 'गुनासो सुनुवाइ पेटिका' राखिएको र प्राप्त गुनासाहरूलाई नियमित र गोप्य रूपमा खोली फर्स्यौट गर्न समिति निर्माण भएको हुनुपर्छ। यी सातओटै सूचकहरू जहाँ धेरैजसो कार्यान्वयन हुन्छन्, त्यो विद्यालय स्वतः उत्कृष्ट बन्छ। तर परीक्षणका अधिकांश सामुदायिक विद्यालयमा यी सूचकहरूको अवस्था कमजोर र यसको नतिजासँगको सम्बन्ध कसिलो नबनेको देखिन्छ।

विद्यालय सुधार योजनाको प्रभावकारिता

नेपालको शिक्षा प्रणालीमा नीतिहरूको कार्यान्वयनको पाटो अपेक्षित रूपमा कम प्रभावकारी हो कि भन्ने महसुस हुन्छ। शिक्षा तथा मानव स्रोत विकास केन्द्र/शिक्षा विभागद्वारा प्रकाशित विद्यालय सुधार योजना निर्माण स्रोत पुस्तिकामा प्रत्येक विद्यालयले आफ्नो पञ्चवर्षीय रणनीतिक र वार्षिक विद्यालय सुधार योजना (School Improvement Plan, SIP) निर्माण गर्दा विद्यार्थीको सिकाइ उपलब्धि, सामाजिक परीक्षण, सुशासनजस्ता विषयमा औंल्याइएका सूचकलाई मुख्य आधार बनाउने उल्लेख छ। यो नीति सिद्धान्ततः राम्रो, तार्किक र प्रमाणमा आधारित योजना तर्जुमाको उत्कृष्ट नमुना हो। यद्यपि यो निर्देशिकाको पालना गरी योजना निर्माण र सोको कार्यान्वयन अपेक्षित प्रभावकारी हुन सकेको छैन।

यसको प्रमुख कारण भनेको यथेष्ट अध्ययन, विश्लेषण र सरोकारवालाको सहभागिताबिना पुरानै योजनाको प्रयोग गरी विद्यालय सुधार योजना निर्माण गरिनु हो। अधिकांश सामुदायिक विद्यालयका प्रधानाध्यापक र व्यवस्थापन समितिले विद्यालय सुधार योजनालाई विद्यालयको वास्तविक शैक्षिक र भौतिक सुधार गर्ने रणनीतिक तथा जीवित दस्तावेजका रूपमा प्रयोग गर्न सकेका छैनन्। यो योजना केवल स्थानीय तह, प्रदेश सरकार वा सङ्घीय सरकारबाट आउने विभिन्न अनुदान (जस्तै: प्रति विद्यार्थी अनुदान, भौतिक निर्माण अनुदान वा आईसीटी अनुदान) प्राप्त गर्नका लागि प्रक्रिया पुऱ्याउन बुझाउनै पर्ने एउटा झन्झटिलो कागजी दस्तावेज मात्र बनेको अवस्था छ। कार्यसम्पादन परीक्षणमा के सम्म पाइएको छ भने धेरैजसो विद्यालयले आफ्नो वास्तविक अवस्थाको पहिचान नगरी SIP को मिति र तथ्याङ्क मात्र बदलेर तयार गर्ने गरेका छन्। कतिपय अवस्थामा त कुनै बाहिरी व्यक्ति वा संस्थासँग SIP पाइएको भन्ने सूचनासमेत देख्न सुन्न पाइन्छ। यसले गर्दा शैक्षिक गुणस्तर परीक्षण केन्द्रले औंल्याएका वास्तविक शैक्षिक समस्याहरू र विद्यालयले तयार गरेको योजनाबिच अन्तरसम्बन्ध प्रभावकारी हुन सकेको छैन।

विद्यालय वा सरोकारवालामा रहेको पूर्वाधारमा जोड दिने संस्कार पनि अर्को समस्या हो। शैक्षिक गुणस्तर परीक्षण केन्द्रको समग्र नतिजाको निष्कर्षले एउटा गम्भीर मनोवैज्ञानिक यथार्थलाई औँल्याएको छ। हाम्रो समाज र विद्यालय नेतृत्वले राम्रो विद्यालय भनेको ठुला, रङ्गीचङ्गी र पक्की भवनहरू भएको विद्यालयलाई मात्र बुझ्ने गरेका छन्। बजेटबिना वा अत्यन्तै कम लागतमा गर्न सकिने शैक्षिक सुधारका विषयहरू जस्तै: शिक्षकको नियमितता, विद्यार्थीको पोर्टफोलियो निर्माण, निरन्तर मूल्याङ्कनको अभ्यास, र पुस्तकालयको सदुपयोगजस्ता विषयहरुमा ओझेलमा परेका छन्। उदाहरणका लागि, यदि कार्यसम्पादन परीक्षणले कुनै विद्यालयको भौतिक भवन र कक्षाको अवस्था सन्तोषजनक रहेको तर पुस्तकालय, विज्ञान प्रयोगशाला र विद्यार्थीको सिकाइ उपलब्धि अत्यन्तै कमजोर रहेको तथ्याङ्क देखायो भने, विद्यालयको आगामी योजना र बजेट अनिवार्य रूपमा पुस्तकालय सुदृढीकरण र उपचारात्मक शिक्षणमा केन्द्रित हुनुपर्ने हो। तर, व्यवहारमा यो फरक रहेको छ। सरोकारवालाहरुमा भौतिक निर्माणलाई मात्र विकास मान्ने संस्कारले छोड्न नसक्नु हो। शैक्षिक सामग्री खरिद, शिक्षकको क्षमता अभिवृद्धि वा विद्यार्थीलाई अतिरिक्त कक्षा दिने जस्ता नदेखिने तर अपरिहार्य

शैक्षिक लगानी सधैँ उपेक्षित हुन्छन् । तथ्य र प्रमाणबिना गरिने यस्तो लगानीले सीमित स्रोत प्राथमिकताका क्षेत्रमा अभाव हुने अवस्था रहन्छ ।

नेपालको संविधानबमोजिम माध्यमिक तहसम्मको शिक्षाको एकल अधिकार स्थानीय तह (गाउँपालिका र नगरपालिका) मा रहेको छ । शैक्षिक गुणस्तर परीक्षण केन्द्रले हरेक वर्ष प्रतिनिधिमूलक रूपमा विद्यालयहरूको परीक्षण गरी विस्तृत प्रतिवेदन सार्वजनिक गर्ने तथा प्रदेश र स्थानीय तहका जनप्रतिनिधि एवम् कर्मचारीलाई राखेर अभिमुखीकरणसमेत गराउँदै आएको छ । तर, जुन गम्भीरताका साथ स्थानीय तहले यसको नीतिगत अपनत्व ग्रहण गरी नतिजालाई सुधारका लागि विद्यालय तहसम्म पुऱ्याउनु पर्ने हो, सो कमैमात्रमा भएको महसुस हुन्छ । अधिकांश गाउँपालिका र नगरपालिकाहरूमा यस्ता परीक्षण प्रतिवेदनप्रति अपनत्व विकास गराउनु चुनौती देखिन्छ । स्थानीय तहमा बजेट कार्यसम्पादनको परीक्षणले औँल्याएका विषयमा सुधारमा केन्द्रित हुनुपर्ने देखिन्छ । यस्तै प्रदेश सरकार र सङ्घीय सरकारले पनि आफ्नो वार्षिक नीति, कार्यक्रम र बजेट तर्जुमा गर्दा कार्यसम्पादन परीक्षणको तथ्याङ्कलाई आफ्नो मुख्य मार्गदर्शन बनाउनुपर्ने देखिन्छ । परिणामस्वरुप, राज्यले गर्ने लगानीलाई विद्यालयको वास्तविक आवश्यकता लक्षित बनाई सार्वजनिक शिक्षा सुधारको दिशामा अघि बनाउनुपर्ने देखिन्छ ।

कार्यसम्पादन परीक्षण साधन र पद्धतिको रूपान्तरण

शैक्षिक गुणस्तर परीक्षण केन्द्रले आर्थिक वर्ष २०८२/८३ देखि लागु हुने गरी अद्यावधिक, प्रविधिमैत्री परीक्षण साधन र मार्गदर्शन विकास गरेको छ । यो नयाँ साधनले विद्यालयको स्वमूल्याङ्कमार्फत सुधारको यात्राका लागि रूपान्तरणको नयाँ ढोका खोल्ने विश्वास गरिएको छ । स्व: मूल्याङ्कन र बाह्य परीक्षणको ढाँचा विकास भएको छ (शैगुपके,२०८२) ।

आ.व.२०८१/८२ सम्म गरिएको कार्यसम्पादन परीक्षण पूर्ण रूपमा बाह्य विज्ञ वा केन्द्रबाट खटाइएका परीक्षकहरूबाट मात्र हुने गरेको थियो । केन्द्रबाट वा जिल्लाबाट खटिएका विज्ञहरू विद्यालयमा पुगेर तोकिएअनुसारको दिन र साधन प्रयोग गरी परीक्षण हुने गरेको थियो । यसले गर्दा विद्यालय प्रशासन र शिक्षकहरूले यो परीक्षणलाई बाह्य पक्षबाट निरीक्षण वा अनुगमनका रूपमा मात्र लिने अवस्था थियो । बाह्य निकायबाट हुने परीक्षणमा राम्रो देखाउने प्रयत्न हुन्थे । कार्यसम्पादन परीक्षणको मार्गदर्शन २०८२ले बाह्य निर्भरतालाई तोड्दै 'विद्यालय स्व-मूल्याङ्कन' (Self-Assessment) लाई अनिवार्य र प्राथमिक सर्त बनाएको छ । अब प्रत्येक विद्यालयले आफैँले आफ्ना सूचकहरूको गहिरो समीक्षा गर्नुपर्छ । विद्यालयले आफ्नो वास्तविक अवस्थाको तथ्याङ्क अनलाइन प्रणाली (www.pamis.ero.gov.np) मा प्रविष्ट गर्नुपर्ने छ । आफू कुन सूचकमा कमजोर छु भन्ने कुरा जब विद्यालय नेतृत्व र शिक्षकहरूले स्व-मूल्याङ्कनमार्फत स्वीकार गर्दछन्, तब मात्र उनीहरूलाई नैतिक रूपमा त्यो अवस्था सुधार्न तथा आफ्नो विद्यालय सुधार योजनामा समावेश गर्न आन्तरिक दबाब पर्छ । विद्यालयले इमानदारीपूर्वक गरेको स्वमूल्याङ्कनको तथ्याङ्कलाई मात्र त्यसपछि केन्द्रबाट खटाइएका विज्ञहरूले स्थलगत रूपमा सत्यापन गरी कार्यसम्पादनको स्तर निर्धारण गरिने नयाँ प्रणालीको विकास गरिएको छ (शैगुपके,२०८२) ।

नयाँ परीक्षण साधनको अर्को महत्त्वपूर्ण पक्ष भनेको रुब्रिक्स (Rubrics) को प्रयोग हो, जसले मूल्याङ्कनमा वस्तुनिष्ठताको ग्यारेन्टी गर्दछ । पुरानो परीक्षण सूचक तथा साधनमा मूल्याङ्कन गर्दा नम्बर दिने प्रक्रियामा केही हदसम्म

मूल्याङ्कनकर्ताको विषयगत बुझाइ व्यक्तिगत धारणा रहन सक्थ्यो। तर नयाँ साधनले मूल्याङ्कनलाई शतप्रतिशत पारदर्शी र प्रमाणमा आधारित बनाउन प्रत्येक सूचकका लागि रुब्रिक्सको विकास गरेको छ। रुब्रिक्स भन्नाले कुनै पनि सूचकको अवस्थालाई अङ्कन गर्ने स्पष्ट, विस्तृत र व्याख्यात्मक मापदण्ड बुझिन्छ। यसअन्तर्गत प्रत्येक सूचकका लागि ४ वटा स्पष्ट स्तरहरू परिभाषित गरिएका छन्: १ अङ्क (कमजोर), २ अङ्क (सुधार गर्नुपर्ने), ३ अङ्क (राम्रो), र ४ अङ्क (अनुकरणीय)। उदाहरणका लागि, पुस्तकालयको सूचकलाई लिऊँ: यदि विद्यालयमा पुस्तकालय भनिएको एउटा कोठा मात्र छ तर त्यहाँ विद्यार्थीले पढ्ने पुस्तक नै छैनन् वा अत्यन्तै थोरै छन् भने त्यसले १ अङ्क पाउँछ। यदि पुस्तकालय छ, केही पुस्तक पनि छन् तर विद्यार्थीले घरमा लैजाने र पढ्ने व्यवस्था छैन भने त्यसले २ अङ्क पाउँछ। पुस्तकालय छ, पुस्तक पर्याप्त छन्, नियमित प्रयोग गरिन्छ तर पुस्तक वर्गीकरण, अभिलेख छैन भने त्यसले ३ अङ्क पाउँछ। तर यदि पत्रपत्रिकासहित पर्याप्त पुस्तक छन्, ई-लाइब्रेरीको व्यवस्था छ, विद्यार्थीको पढाइ संस्कृति उच्च छ र दैनिक रूपमा अधिकतम उपयोग हुन्छ भने मात्र त्यसले ४ अङ्क (अनुकरणीय) प्राप्त गर्दछ। यस प्रकारको स्पष्ट र वैज्ञानिक व्याख्याका कारण कुनै पनि प्रधानाध्यापक वा मूल्याङ्कनकर्ताले आफ्नो मनले अङ्क थपघट गर्न पाउँदैन (शैगुपके, २०८२)।

यसका साथै, नयाँ साधनमा सेवाग्राही सन्तुष्टि सर्वेक्षणलाई समावेश गरिएको छ। विद्यालयका मुख्य सरोकारवालाहरू- विद्यार्थी, अभिभावक र स्थानीय समुदायका प्रतिनिधिको आवाज/अङ्कनलाई पनि मूल्याङ्कनको आधार बनाइएको छ। यस सर्वेक्षणका लागि मात्र कुल मूल्याङ्कनमा १२ अङ्क छुट्याइएको छ। कुल २१२ पूर्णाङ्कमा गरिने यो समग्र मूल्याङ्कनले विद्यालयको समाजप्रतिको उत्तरदायित्व र वास्तविक सामाजिक साखलाई मापन गर्दछ (शैगुपके, २०८२)। त्यसै गरी, कुनै पनि संस्थाको सफलता त्यसको नेतृत्वमा निर्भर हुने भएकाले केन्द्रले प्रधानाध्यापकलाई थप जवाफदेही बनाउन छुट्टै प्रधानाध्यापक नेतृत्व कार्यसम्पादन परीक्षण' को सुरुवात पनि गरेको छ।

नीतिगत सुझाव र भावी कार्यदिशा

कार्यसम्पादन परीक्षणको साधन वैज्ञानिक र उत्कृष्ट भए पनि, यसबाट प्राप्त नतिजा र प्रतिवेदनलाई यदि राज्यको नीति निर्माण, योजना तर्जुमा र बजेट प्रणालीसँग प्रत्यक्ष रूपमा आबद्ध गर्नुपर्छ। नेपालको सार्वजनिक शिक्षामा वास्तविक रूपान्तरण ल्याउने र राज्यको स्रोतको सदुपयोग गर्ने हो भने परीक्षणले औँल्याएका कमजोर सूचकहरूलाई सुधार गर्न निम्नबमोजिमको चक्रीय प्रणाली र भर्टिकल बजेट एलाइनमेन्ट अनिवार्य रूपमा गरिनुपर्छ।

कार्यसम्पादन परीक्षण मार्फत स्व-मूल्याङ्कन, निरन्तर समीक्षा र SIP को चक्रीय प्रणालीलाई विद्यालयको दैनिक जीवनपद्धति बनाउनु उपयुक्त हुन्छ। यो चक्र तीन चरणमा पूरा गर्न सकिन्छ। चरण १ मा, विद्यालयले शैक्षिक वर्षको सुरुमै इमानदारीपूर्वक स्व-मूल्याङ्कन गरिसकेपछि आफू कुन कुन सूचकमा 'कमजोर' वा 'सुधार गर्नुपर्ने' स्तरमा परेको छ, त्यसको स्पष्ट, पारदर्शी र तथ्यगत सूची तयार गर्नुपर्छ। विद्यालय व्यवस्थापन समिति, शिक्षक स्टाफ, र अभिभावक प्रतिनिधिको संयुक्त बैठकले ती कमजोर सूचकहरूलाई सुधार गर्नका लागि आफ्नो आगामी ५ वर्षे वा १ वर्षे विद्यालय सुधार योजना (SIP) को मुख्य प्राथमिकता क्षेत्रका रूपमा घोषणा गर्नुपर्छ। चरण २ मा, रणनीतिक कार्यान्वयनअन्तर्गत, SIP मा राखिएका ती सुधारात्मक कार्यक्रमहरू (जस्तै: यो वर्ष छात्राहरूको शौचालयमा इन्सिनेरेटर राख्ने, वा शिक्षकहरूलाई प्रविधिमैत्री तालिम दिने) लाई विद्यालयले प्राप्त गरेको आन्तरिक र बाह्य स्रोतका आधारमा समयबद्ध ढङ्गले कार्यान्वयन

गर्नुपर्छ। चरण ३ मा, गुणस्तरीय समीक्षा र विश्लेषण हुनुपर्छ। अर्को वर्षको वार्षिक SIP बनाउनु अगाडि, विद्यालयले अघिल्लो वर्षका कमजोर सूचकहरूको अवस्थामा के कति सुधार भयो भनेर समीक्षा गर्नुपर्छ। यदि रुब्रिक्समा अघिल्लो वर्ष २ अङ्क पाएको सूचकले यो वर्ष पनि २ अङ्क नै पायो भने, सुधार किन भएन? विनियोजित बजेट कहाँ खर्च भयो? व्यवस्थापकीय कमजोरी कहाँ रह्यो? भन्ने कुराको खोजी गरी जिम्मेवारी तय गर्नुपर्छ। यो चक्र निरन्तर चल्नुपर्छ।

दोस्रो र सबैभन्दा महत्त्वपूर्ण पक्ष भनेको विद्यालयदेखि केन्द्रसम्मको बजेट र कार्यक्रमको भर्टिकल एलाइनमेन्ट हो। परीक्षणले औंल्याएका कतिपय गम्भीर विषय (जस्तै: आधुनिक आईसीटी ल्याब स्थापना, बहुतले भवनलाई अपाङ्गतामैत्री बनाउने वा खानेपानीको बृहत् प्रबन्ध मिलाउने आदि) विद्यालयको आफ्नो सानो आन्तरिक स्रोत वा समुदायको चन्दाका भरमा मात्र पूरा गर्न सम्भव हुँदैन। यस्तो अवस्थामा राज्यका तीनवटै तहको (स्थानीय, प्रदेश र सङ्घीय) बजेट प्रणाली कार्यसम्पादन परीक्षणको नतिजासँग जोडिनु अनिवार्य छ।

यस प्रक्रियामा स्थानीय तह (गाउँपालिका र नगरपालिका) को भूमिका सबैभन्दा निर्णायक हुन्छ। नेपालको सङ्घीय ढाँचामा विद्यालय शिक्षाको प्रत्यक्ष सञ्चालक र व्यवस्थापक स्थानीय सरकार हो। तसर्थ, गाउँपालिका वा नगरपालिकाले आफ्नो गाउँ/नगर सभाबाट वार्षिक शिक्षा बजेट र कार्यक्रम तर्जुमा गर्दा आफ्नो क्षेत्रभित्रका विद्यालयहरूबाट प्राप्त SIP र शैक्षिक गुणस्तर परीक्षण केन्द्रको कार्यसम्पादन परीक्षण प्रतिवेदनलाई अनिवार्य र कानुनी रूपमै मुख्य आधार बनाउनुपर्ने व्यवस्था गरिनुपर्छ। आवश्यकतामा आधारित बजेट विनियोजन हुनुपर्छ। उदाहरणका लागि, यदि 'क' विद्यालयको पुस्तकालय र विज्ञान प्रयोगशाला परीक्षणमा कमजोर देखिएको छ भने स्थानीय तहले उसलाई 'पुस्तकालय तथा प्रयोगशाला अनुदान' मात्र दिनुपर्छ। यदि 'ख' विद्यालयको खानेपानी र शौचालय अत्यन्तै जीर्ण छ भने उसलाई पूर्वाधार वा WASH अनुदानमा प्राथमिकता दिनुपर्छ।

विद्यालय कार्यसम्पादन परीक्षणमा प्रदेश सरकारको (सामाजिक विकास मन्त्रालय र शिक्षा तालिम केन्द्र) भूमिका पनि उत्तिकै महत्त्वपूर्ण रहन्छ। प्रदेश सरकारको कार्यक्षेत्र मुख्य रूपमा प्राविधिक सहयोग र शिक्षक क्षमता विकासमा केन्द्रित हुनुपर्छ। प्रदेश सरकारका शिक्षा तालिम केन्द्रहरूले वर्षभरिको तालिम क्यालेन्डर बनाउँदा ERO को प्रतिवेदनलाई आधार बनाउनु पर्छ। यदि प्रदेशभरिका अधिकांश विद्यालयहरूमा शिक्षकले कार्यमूलक अनुसन्धान र सुधार कार्य नगरेको वा निर्माणात्मक मूल्याङ्कनको सूचक कमजोर देखिएको छ भने, प्रदेशको बजेट र तालिमका स्रोत व्यक्तिहरू सोही राष्ट्रिय सूचक सुधार गर्नका लागि सम्बन्धित विषयका शिक्षकहरूलाई लक्षित गरेर परिचालित हुनुपर्छ।

सङ्घीय सरकारको मन्त्रालय र विभागले समग्र राष्ट्रिय शिक्षा नीति निर्माण र ससर्त अनुदानमार्फत स्थानीय तहलाई मार्गदर्शन गर्नुपर्दछ। शिक्षा मन्त्रालयले देशभरिको कार्यसम्पादन परीक्षणको समग्र तथ्याङ्कको सूक्ष्म विश्लेषण गर्नुपर्छ। यदि देशभरिका ६० प्रतिशत विद्यालयहरूमा प्रारम्भिक बाल विकास (ECD) को सिकाइमैत्री पूर्वाधारको सूचक कमजोर देखिएको छ भने, सङ्घीय बजेट तथा अन्तर्राष्ट्रिय दातृ निकायहरूबाट प्राप्त हुने वैदेशिक सहायता (जस्तै: विद्यालय शिक्षा क्षेत्र योजना- SESP) तिनै कमीलाई सम्बोधन गर्ने गरी ससर्त अनुदानका रूपमा स्थानीय तहमार्फत सिधै विद्यालयमा प्रवाह गरिनुपर्छ। सङ्घीय सरकारले पठाउने बजेट कुन सूचक सुधारका लागि हो भन्ने कुरा स्पष्ट रूपमा तोकिएको हुनुपर्छ।

निष्कर्ष

नेपालको सार्वजनिक विद्यालय शिक्षाले आम नागरिक र राज्यले अपेक्षा गरेअनुरूपको गुणात्मक फड्को मार्न नसक्नुको मूल कारण स्रोत, साधन वा बजेटको अभावमात्र होइन। प्राप्त भएको सीमित राष्ट्रिय स्रोतको सही पहिचान, प्राथमिकीकरण र रणनीतिक तथा वैज्ञानिक उपयोग गर्न नसक्नु पनि हो। कार्यान्वयन तहमा प्रभावकारी कार्यान्वयन हुन नसक्नु पनि हो।

शैक्षिक गुणस्तर परीक्षण केन्द्रद्वारा आ.व. २०८२/८३ मा विकसित कार्यसम्पादन परीक्षणको ढाँचाले एउटा उत्कृष्ट विद्यालय बन्नका लागि आवश्यक मूलभूत सूचकहरू, तिनको परीक्षण र प्राप्तिको यात्रा सङ्केत गरेको छ। आर्थिक वर्ष २०८२/८३ सालदेखि लागु गरिएको रुब्रिक्स र विद्यालय स्वमूल्याङ्कनमा आधारित नयाँ कार्यसम्पादन परीक्षण साधन केवल एउटा प्राविधिक सुधारको दस्तावेज मात्र होइन; यो सार्वजनिक शिक्षाको समग्र संस्कारलाई बदल्ने प्रस्थानविन्दु हो। यसले विद्यालय र शिक्षकलाई आफ्नै ऐनामा आफ्नो अनुहार हेर्न र आफ्ना कमजोरीहरू आफैँ स्वीकार गरी सुधिन नैतिक रूपमा बाध्य बनाउँछ। तर यो साधन र पद्धति त्यतिबेला मात्र सफल, सार्थक र नतिजामुखी हुन्छ, जतिबेला प्रत्येक विद्यालयले स्वमूल्याङ्कनबाट देखिएका आफ्ना कमजोर सूचकहरूलाई आफ्नो SIP मा प्राथमिकताका साथ समावेश गर्छ, अर्को वर्षको योजना बनाउनुअघि अघिल्लो वर्षको कार्यप्रगतिको निष्पक्ष समीक्षा गर्छ र स्थानीय, प्रदेश तथा सङ्घीय सरकारले तिनै कमजोर सूचकहरूलाई पूरा गर्ने गरी आफ्नो वार्षिक बजेट, कार्यक्रम र अनुदानको भर्टिकल एलाइनमेन्ट मिलाउँछन्। यसका लागि नीति र कार्यान्वयनको सामञ्जस्य मिलाइनुपर्छ। विद्यालयको भौतिक पक्षको सुधारका साथै, त्यहाँभित्रको पठनपाठन, शिक्षकको समर्पण र मूल्याङ्कन पद्धतिलाई बदल्नुपर्छ। कार्यसम्पादन परीक्षणका सूचकहरूलाई नै विद्यालय सुधारको मूल मार्गचित्र मानेर स्रोतको न्यायोचित र प्रमाणमा आधारित उपयोग गरेमात्र नेपालको सार्वजनिक शिक्षामा दिगो र गुणात्मक रूपान्तरण सम्भव छ। कार्यसम्पादन परीक्षण उत्कृष्ट विद्यालय निर्माण आधार बन्नुपर्छ।

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विद्यालयको शैक्षिक गुणस्तरको सुनिश्चितता तथा प्रत्यायनः अब लिनुपर्ने बाटो

हरिप्रसाद लम्साल

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लेखसार

वर्तमान प्रतिस्पर्धात्मक युगमा शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन स्तरीय शिक्षाको मानक, शैक्षिक संस्थाको साख बढाउने साधन र विद्यालय एवम् अभिभावकको सन्तुष्टिको आधार बन्दै गएको छ। शैक्षिक गुणस्तर तथा प्रत्यायन दुई फरक शब्द भए तापनि यी दुईबिच आपसी सम्बन्ध छ। यहाँ गुणस्तरले सुधार र सिकाइको उन्नत अवस्थालाई जनाउँछ भने प्रत्यायनले शैक्षिक संस्थाको न्यूनतम मापदण्ड प्राप्त गरी प्रमाणित गरेको अवस्थालाई जनाउँछ। प्रस्तुत लेखको मुख्य उद्देश्य नेपालको शिक्षा प्रणालीमा गुणस्तर सुनिश्चितता तथा प्रत्यायनको वर्तमान नीति तथा कार्यक्रम कार्यान्वयन अवस्था, अन्तर्राष्ट्रिय अभ्यास आदिको समीक्षा गर्दै विद्यालय शिक्षाको लागि गुणस्तर प्रत्यायनका लागि उपयुक्त मार्गचित्र प्रस्तुत गर्नु रहेको छ। लेख तयारीका क्रममा नीतिगत दस्तावेजहरूको पुनरवलोकन, सम्बद्ध पक्षहरूसँग छलफल एवम् अन्तरक्रिया र आइएसओ प्रमाणित विद्यालयहरूको स्थलगत अवलोकनजस्ता गुणात्मक विधिहरू अवलम्बन गरिएको छ। नेपालको उच्च तथा प्राविधिक शिक्षामा गुणस्तर सुनिश्चितता तथा प्रत्यायनका अभ्यासहरू भए तापनि विद्यालय शिक्षामा शैक्षिक गुणस्तर परीक्षण केन्द्रले कार्यसम्पादन परीक्षण गर्दै आएको छ। यस्तो कार्यसम्पादन परीक्षणमा लगानी, प्रक्रिया र उपलब्धिको आधारमा लेखाजोखा गरी विद्यालयको कार्यसम्पादनको स्तर र क्रम निर्धारण गर्ने कार्य भइआएको देखिन्छ। अन्तर्राष्ट्रिय तहमा विभिन्न देशहरूले उपलब्धि र बजारको मागमा आधारित मोडेल अपनाएका छन्। नेपालमा हालैका दिनमा निजीक्षेत्रको अगुवाइमा विद्यालयहरूले आइएसओ प्रमाणपत्र लिने प्रचलन बढेको देखिन्छ। तसर्थ नेपालको समग्र विद्यालय शिक्षाको स्तर उकास्नका लागि गुणस्तर सुनिश्चितता तथा प्रत्यायन प्रणालीलाई न्यूनतम आधार बनाई विद्यालयहरूमा निरन्तर आन्तरिक गुणस्तर सुधारको राष्ट्रिय पद्धति एवम् संस्कृति स्थापित गर्नु आवश्यक देखिन्छ।

मुख्य शब्दः कार्यसम्पादन परीक्षण, गुणस्तर सुनिश्चितता, गुणस्तर, प्रत्यायन, गुणस्तर सुनिश्चितता तथा प्रत्यायन, स्व-अध्ययन प्रतिवेदन

विषय प्रवेश

वर्तमान प्रतिस्पर्धात्मक र भूमण्डलीकृत युगमा शिक्षाको विकास र रूपान्तरणका लागि शैक्षिक गुणस्तर र प्रत्यायन दुई महत्त्वपूर्ण आधार स्तम्भ बनेका देखिन्छन्। शैक्षिक गुणस्तर सुनिश्चिततालेमुख्यतया शिक्षण-सिकाइ, विद्यार्थीको व्यवहारमा आउने सकारात्मक परिवर्तन र निरन्तर आन्तरिक सुधारको जीवन्त प्रक्रियालाई बुझाउँछ। अर्कोतर्फ, प्रत्यायन एउटा यस्तो बाह्य प्रमाणीकरण र आवधिक समीक्षा हो, जसले शैक्षिक संस्थाले तोकिएको न्यूनतम मापदण्ड, भौतिक पूर्वाधार, व्यवस्थापकीय एवम् प्रशासनिक पक्ष लगायतका पक्षहरू पूरा गरेको कुरालाई प्रमाणित गर्दछ। यी दुवै अवधारणा भिन्न देखिए तापनि आपसमा सम्बन्धित छन्, जहाँ बिनाप्रत्यायन शैक्षिक संस्थाले सामाजिक विश्वास पाउँदैन भने गुणस्तर सुनिश्चिततालाबिना प्रत्यायनको प्रमाणपत्र पाउन सकिन्न, साथै संस्थाको साख टिकाइरहन पनि सम्भव छैन।

यस लेखको मुख्य उद्देश्य नेपालमा शिक्षामा गुणस्तर सुनिश्चितता तथा प्रत्यायनको विद्यमान नीति तथा कार्यक्रम कार्यान्वयनको सङ्क्षेपमा समीक्षा गर्दै विद्यालय शिक्षाको सन्दर्भमा अन्तर्राष्ट्रिय मापदण्डअनुकूल हुने गरी भावी बाटो पहिल्याउनु रहेको छ। यसका लागि सरोकारवाला निकायहरूसँग छलफल, दस्तावेजहरूको पुनरवलोकन र विद्यालयहरूको स्थलगत अवलोकन जस्ता गुणात्मक अनुसन्धानका विधिहरू अवलम्बन गरिएको छ। यद्यपि, यो अध्ययन उपलब्ध सीमित कानुनी दस्तावेजहरू, निर्धारित समयसीमा र केही विद्यालयहरूको स्थलगत अनुभवमा मात्र आधारित रहेकाले यसका निष्कर्षहरूलाई पूर्ण रूपमा सामान्यीकरण गर्न नसकिए पनि यस विषयमा चासो राख्नेहरूका लागि लेख उपयोगी हुने विश्वास लिइएको छ।

शैक्षिक गुणस्तर तथा प्रत्यायनः अर्थ र अवधारणा

शैक्षिक गुणस्तर र प्रत्यायन दुई भिन्न अवधारणा भए पनि यिनीहरू एकअर्कासँग जोडिएका छन्। यिनको मर्म बुझ्न सर्वप्रथम यिनलाई पृथक् रूपमा विश्लेषण गर्नु आवश्यक हुन्छ। यिनीहरूको प्रकृति, उद्देश्य र कार्यान्वयनको तहलाई केलाएर हेर्दा मात्र यसको स्पष्ट तस्बिर सामुन्ने आउँछ।

आम रूपमा शैक्षिक गुणस्तर भन्नाले मूलतः विद्यार्थीको सिकाइ उपलब्धिलाई बुझ्ने गरिन्छ। विद्यार्थीको व्यवहारमा आएको सकारात्मक परिवर्तनलाई जनाउँछ। यसको अर्थ र परिभाषा यतिमा मात्र पनि सीमित हुँदैन। यसले शिक्षामा लगानीको रूपमा रहेका विभिन्न पक्षहरू, नीति, सुशासन, शिक्षकको योग्यता र क्षमता एवम् प्रभावकारिता, पाठ्यक्रमको व्यावहारिकता, विद्यार्थीको मूल्याङ्कन, अनुसन्धान र नवप्रवर्तनलगायत पक्षमा नियमित सुधार गर्न अपनाउने एक निरन्तर आन्तरिक प्रक्रियासमेतलाई जनाउँछ।

प्रत्यायन आफैँमा बाह्य प्रमाणीकरणको प्रक्रिया हो, जसले शैक्षिक संस्थाले निर्धारित न्यूनतम मापदण्ड (भौतिक पूर्वाधार, शिक्षक–विद्यार्थी अनुपात, पाठ्यक्रमको पूर्णता, परीक्षा प्रणाली, प्रशासनिक पारदर्शिता आदि) पूरा गरेको प्रमाणित गर्छ। यहाँ प्रत्यायनले एउटा लामो प्रक्रियापश्चात् यी पक्षहरू पुगेका छन् भनेर प्रमाणीकरण गरी प्रमाणपत्र दिनुलाई बुझाउँछ, जसलाई एउटा निश्चित अवधिमा गरिन्छ।

जाफारोभ (२०२४) का अनुसार उच्च शिक्षाको सन्दर्भमा यसलाई शैक्षिक स्तर कायम राख्न, विश्वव्यापी मान्यता प्राप्त गर्न र संस्थागत सुधारका लागि 'गुणस्तर सुनिश्चितता' (Quality Assurance) र प्रत्यायन (Accreditation)

महत्त्वपूर्ण मानिन्छन्। उनले प्रत्यायनलाई बाह्य निकायद्वारा गरिने आवधिक समीक्षा भनेका छन्, जसले संस्था वा कार्यक्रमको गुणस्तर प्रमाणित गर्दछ। साथै उनले गुणस्तर सुनिश्चितता एक निरन्तर चलिरहने आन्तरिक र बाह्य प्रक्रिया हो, जसले शिक्षण गुणस्तर र प्रशासनिक कार्यमा सुधार ल्याउन मदत गर्दछ भनी उल्लेख गरेका छन्।

शैक्षिक गुणस्तर तथा प्रत्यायनः औचित्य

के विद्यार्थीहरूले सिक्नुपर्ने विषयहरू सिकिरहेका छन् त? शिक्षा प्रणालीको केन्द्रीय प्रश्न यही हो। यसको सम्बन्ध गुणस्तरसँग रहन्छ। यससँगै अर्को पक्ष पनि छ। के हाम्रा शैक्षिक संस्था वा कार्यक्रमहरूले तोकिएका मापदण्ड पूरा गरी तोकिएको शैक्षिक उपलब्धि हासिल गराउन सक्षम छन् त? यस प्रश्नको उत्तर प्रत्यायनसँग जोडिन्छ। यसरी हेर्दा गुणस्तर विद्यार्थीको वास्तविक प्रगति र अभिभावक सन्तुष्टिको विषय हो भने प्रत्यायन मापदण्डको पालना र संस्थाको मान्यता, विश्वसनीयता र प्रमाणीकरण आदिसँग जोडिएको विषय हो।

अहिलेको समयमा शैक्षिक संस्थाले गुणस्तर सुनिश्चितताको प्रचार गरेरमात्र नपुग्ने भएको छ। बिनाप्रत्यायन राम्रो कार्यसम्पादन भएको शैक्षिक संस्थालाई पनि समाज र बाह्य पक्षले आधिकारिक मान्यता नदिन सक्छ। जस्तै कुनै शैक्षिक संस्था प्रत्यायन भएको अर्थात् प्रमाणीकरण भएको छ भन्नु र प्रमाणीकरण हुन बाँकी छ भन्नुमा सरोकारवाला वा बाहिरबाट हर्ने दृष्टिकोणमा धेरै फरक पर्छ।

गुणस्तरको सुनिश्चितता संस्था आफैँले गर्ने विषय हो। यो आफैँमा एक निरन्तर सुधारको प्रक्रियाको रूपमा रहन्छ। शैक्षिक संस्थाले आफ्नो सेवा, उत्पादन वा शैक्षिक क्रियाकलापलाई निर्धारित मापदण्डअनुसार निरन्तर सुधार गर्दै जाने प्रणाली हो। यसमा विगतका कार्यहरूको पुनरवलोकन वा समीक्षा, योजना निर्माण, कार्यान्वयन, मूल्याङ्कन र सुधारका चरणहरूको निरन्तर कार्यान्वयनलाई समेटिएको हुन्छ। यस प्रक्रियामा आन्तरिक मूल्याङ्कन, बाह्य मूल्याङ्कन, निरन्तर सुधार र सरोकारवालाहरूको सहभागिताजस्ता तत्त्वहरू महत्त्वपूर्ण मानिन्छन्। गुणस्तर सुनिश्चितता केवल त्रुटि खोज्ने वा कमजोरी देखाउने काम मात्र होइन, बरु सुधारका अवसर पहिचान गर्ने र संस्थालाई दीर्घकालीन रूपमा प्रतिस्पर्धी बनाउन सहयोग गर्ने प्रक्रिया हो।

शैक्षिक संस्थामा एक पटक पाएको प्रत्यायनको प्रमाणपत्रले सधैँ काम गर्छ भन्ने हुँदैन, किनकि प्रत्यायन प्रमाणपत्र प्राप्त शैक्षिक संस्थाको पनि विद्यार्थी सिकाइ कमजोर भयो त्यसले पनि क्रमशः विश्वास गुमाउन सक्छ। समयको अन्तरालमा उक्त संस्था थप कमजोर बन्दै जान सक्छ। नेतृत्व र व्यवस्थापकीय पक्षहरू कमजोर हुन सक्छन्।

यसरी गुणस्तर र प्रत्यायन जोडिन्छन्। एकअर्कासँग गाँसिन्छन्। प्रत्यायनले स्थापित गरेको न्यूनतम आधार पूरा गरेको सुनिश्चितता र शैक्षिक संस्थाको निरन्तर आन्तरिक सुधारले गुणस्तरलाई इङ्गित गरिरहेको हुन्छ। जब यी विषयहरू प्रमाणीकरण गरिन्छन्, अनि प्रत्यायन भएको मानिन्छ। जस्तैः प्रत्यायनले शैक्षिक संस्थासँग योग्य शिक्षक, पूर्वाधार र पाठ्यक्रमसहित न्यूनतम मापदण्ड पूरा भएको छ भनेर प्रमाणीकरण गर्छ भने गुणस्तरले विद्यार्थीले सिकाइलाई जीवनमा उतारेका छन् भनेर विश्वास र सन्तुष्टि दिलाएको हुन्छ।

शैक्षिक गुणस्तर र प्रत्यायनको विकासक्रमः राष्ट्रिय सन्दर्भ

नेपालमा गुणस्तरको अवधारणा शिक्षाको विकाससँगै सुरु भएको मानिन्छ। तर गुणस्तर सुनिश्चितता र प्रत्यायनको इतिहास भने त्यति लामो छैन। शिक्षा ऐन तथा नियमावलीमा दिइएका विभिन्न मापदण्ड तथा सूचकहरू, विभिन्न नीतिगत दस्तावेजहरूमा समाविष्ट सूचकहरू एवम् योजना तथा आयोजनामा समावेश गरिएका सूचकहरूका आधारमा नेपालमा शिक्षाको गुणस्तरका सूचकहरू स्वीकार गरिएको पाइन्छ। यी सबैलाई एकीकृत गर्ने प्रयास भए पनि त्यस्ता दस्तावेज सार्वजनिक भइसकेका छैनन्।

प्रारम्भिक चरणमा शिक्षा प्रणालीभित्र गुणस्तरलाई आन्तरिक मूल्याङ्कन, शिक्षक क्षमता, पाठ्यक्रम सुधारजस्ता पक्षसँग मात्र जोडिएको थियो। तर बाह्य निकायबाट औपचारिक प्रमाणीकरण गर्ने प्रक्रिया भने धेरै पछिमात्र प्रवेश पाएको हो। विशेषतः उच्च शिक्षा संस्थाहरूले अन्तर्राष्ट्रिय मान्यता प्राप्त मापदण्डसँग मेल खाने प्रयास गर्दा प्रत्यायनको अवधारणा विश्वविद्यालय अनुदान आयोगले सम्वत् २०७४ मा विनियमावली जारी गरेपछि संस्थागत रूपमै अगाडि बढेको देखिन्छ।

विद्यालय शिक्षाको सन्दर्भमा सम्बत् २०६३ मा विद्यालय स्तरीकरणको प्रयास भएको थियो, तर त्यसले निरन्तरता पाउन सकेन। यस विद्यालय अनुदान कार्यान्वयन निर्देशिकाले आठओटा उद्देश्य लिएकोमा चारओटा उद्देश्यहरू यस स्तरीकरणसँग जोडिएका थिए। यी उद्देश्यहरू अनुदान र विद्यालय कार्यसम्पादन एकआपसमा जोड्नुपर्ने, एकमुष्ठ अनुदानलाई प्रभावकारी रूपमा परिचालन गर्न प्रोत्साहन गर्ने, कमजोर विद्यालयलाई स्तर सुधार्न विशेष सहयोग उपलब्ध गराउने र विद्यालयलाई स्वअनुगमन तथा विश्लेषण गर्न अभिप्रेरित गर्ने विषयहरूसँग सम्बन्धित थिए। यसरी निर्देशिकाले विद्यालयलाई गुणस्तर सुधार, स्रोत परिचालन, र उत्तरदायित्वमा मजबुत बनाउन मार्गदर्शन गरेको थियो।

शैक्षिक गुणस्तर परीक्षण केन्द्र स्थापना भएपछि विद्यालय कार्यसम्पादन परीक्षण कार्यान्वयनमा ल्याइएको छ। कार्यसम्पादन परीक्षणको आधार विद्यालय स्तरीकरण हो। तसर्थ विद्यालय शिक्षामा प्रत्यायन प्रणाली चाहिन्छ, भन्ने बहसको सुरु विन्दु त्यही स्तरीकरणलाई मान्दा हुन्छ। तर विश्वविद्यालय अनुदान आयोग र प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद्ले उच्च शिक्षा र प्राविधिक क्षेत्रमा प्रत्यायनको कार्य गर्दै आएका छन्।

माथि चर्चा गरिएका नेपालका अभ्यासहरू एवम् नीतिगत पक्षहरूलाई देहायमा सङ्क्षेपीकरण गरिएको छ।

१. विश्वविद्यालय अनुदान आयोग र गुणस्तर सुनिश्चितता तथा प्रत्यायनः विश्वविद्यालय अनुदान आयोग ऐन, २०५० ले नेपालमा उच्च शिक्षाको स्तर निर्धारण र गुणस्तर कायम गर्ने मुख्य जिम्मेवारी विश्वविद्यालय अनुदान आयोगलाई सुम्पेको छ। शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन नियमावली, २०७४ बमोजिम आयोगले गुणस्तर सुनिश्चितताका लागि संस्थागत संरचना र प्रक्रियाको व्यवस्था गरेको छ। उच्च शिक्षामा गुणस्तरसम्बन्धी काम गर्न आयोगको अध्यक्षको अध्यक्षतामा शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन परिषद् गठन हुने व्यवस्था छ। शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन निर्देशिका, (२०८१) ले प्रत्यायन प्रक्रियालाई थप व्यवस्थित, विश्वसनीय र अन्तर्राष्ट्रिय मापदण्डअनुरूप बनाउन विस्तृत कार्यविधि निर्धारण गरेको छ।

यस प्रक्रियाको उद्देश्य गुणस्तर निर्धारण र प्रमाणीकरण हो। यस चक्रमा ४ चरणहरू हुन्छन्। यसले शैक्षिक संस्था र कार्यक्रम दुवैलाई समेट्छ। यसले विश्वविद्यालय तथा क्याम्पसहरूको गुणस्तर परीक्षण गरी प्रमाणीकरण गर्छ। विभिन्न आठ

ओटा आयामहरू जस्तै नीति तथा प्रक्रिया, पाठ्यक्रम, शिक्षण सिकाइ र मूल्याङ्कन, अनुसन्धान तथा विस्तार, पूर्वाधार, विद्यार्थी सहयोग, सूचना प्रणाली, तथा सार्वजनिक सूचना जस्ता पक्षहरूलाई समेटेर जम्मा १२० ओटा सूचकहरू र १०० पूर्णाङ्कमा उच्च शिक्षामा गुणस्तर सुनिश्चितता र प्रत्यायनको काम भइआएको छ।

२. चिकित्सा शिक्षा आयोग र प्रत्यायनसम्बन्धी व्यवस्था: World Federation for Medical Education (WFME) को Basic Medical Education Global Standard (2020 revision) लाई आधार मानी चिकित्सा शिक्षा आयोगले National Accreditation Standards for Quality Improvement विकास गरेको छ। जसलाई परीक्षणको रूपमा एमबिबिएस शैक्षिक कार्यक्रमबाट प्रत्यायन सम्बन्धी कार्य अगाडि बढाउन खोजेको विवरण दस्तावेजहरूबाट पाउन सकिन्छ। यसले निरन्तर शैक्षिक गुणस्तर सुधारलाई मुख्य लक्ष्यको रूपमा लिएको छ।

३. प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद् र प्रत्यायनसम्बन्धी व्यवस्था: प्राविधिक तथा व्यावसायिक शिक्षा र तालिमको गुणस्तर सुनिश्चित गरी सिपयुक्त र प्रतिस्पर्धी जनशक्ति तयार गर्न प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद् ऐन, २०४५ को दफा १६ ले दिएको अधिकार प्रयोग गरी "प्राविधिक शिक्षालयको स्तर निर्धारण तथा प्रत्यायनसम्बन्धी विनियमावली, २०८१" जारी गरिएको छ। शिक्षालयहरूको स्तर निर्धारण र प्रत्यायनका लागि परिषद्का सदस्य-सचिवको अध्यक्षतामा एक 'स्तर निर्धारण तथा प्रत्यायन समिति' रहने व्यवस्था गरिएको छ। अहिले शिक्षालय प्रत्यायनको प्रक्रिया सुरु भएको देखिन्छ। यसले प्राविधिक तथा व्यावसायिक शिक्षालयको सुशासन, भौतिक तथा सिकाइ स्रोत, मानव स्रोत, प्रशिक्षण, श्रम बजारसँगको समन्वय, विद्यार्थी सहयोग सेवा, तथा अनुसन्धान र विकासजस्ता पक्षहरूमा परीक्षण गरी निरन्तर गुणस्तर सुधारलाई प्राथमिकता दिएको छ। विभिन्न ९ चरणमा प्रत्यायन प्रक्रिया हुन्छ। यसमा जम्मा आयाम ७, सूचक ७३, उपसूचक ३००, पूर्णाङ्क ३०० रहेको छ।

४. नेपाल गुणस्तर तथा नापतौल मापदण्ड र आइएसओसम्बन्धी व्यवस्था: नेपाल गुणस्तर तथा नापतौल विभाग (Nepal Bureau of Standards and Metrology) ले ISO 9001 (2015), ISO 14001 (2015), ISO 22000 (2018) र ISO 21001 (2025) को सर्टिफिकेट दिने गर्दछ। ती मध्ये ISO 9001 ले QMS, ISO 14001 ले EMS, 22000 ले FSMS र ISO 21001 ले EOMS सम्बन्धी काम गर्छ। EOMS भनेको Educational Organizations Management System जसका लागि ISO ले International management system standard विकास गरेको छ। सन् २००७ मा विकास गरिएको गाइडलाइनलाई सन् २०१८ मा पुनः विकास गरिएको थियो। अहिलेको सन् २०२५ को स्ट्यान्डर्डस् यस सिरिजको दोस्रो भर्सन हो। यस प्रकारको प्रमाणपत्रका लागि कुनै पनि शैक्षिक संस्थाले संस्था र कार्यक्रमको प्रमाणीकरणका लागि निवेदन दिन सक्ने देखिन्छ।

५. विद्यालय शिक्षा र गुणस्तर प्रत्यायन सम्बन्धी व्यवस्था: विद्यालय तहको स्तरीकरणको औपचारिक सुरुआत सम्वत् २०६३ मा भएको भए तापनि कार्यान्वयनले निरन्तरता पाउन सकेन। अहिले शैक्षिक गुणस्तर परीक्षण केन्द्रले कार्यसम्पादन परीक्षणका कार्यहरू गर्दै आएको देखिन्छ।

- **विद्यालय अनुदान कार्यान्वयन निर्देशिका एवम् विद्यालय स्तरीकरण फाराम २०६३:** यो निर्देशिका सामुदायिक विद्यालयहरूलाई उपलब्ध गराइने अनुदानलाई थप व्यवस्थित, पारदर्शी र नतिजामुखी बनाउन जारी गरिएको थियो तर अहिले यो कार्यान्वयनमा रहेको देखिँदैन।

- **सामुदायिक विद्यालय कार्यसम्पादन परीक्षण मार्गदर्शन र साधन २०८२:** शैक्षिक गुणस्तर परीक्षण केन्द्रले सामुदायिक विद्यालयहरूको शैक्षिक, प्रशासनिक र व्यवस्थापकीय प्रभावकारिता अध्ययन गरी सुधारका लागि सुझाव दिन यो मार्गदर्शन ल्याएको देखिन्छ। कार्यसम्पादन परीक्षणको मुख्य उद्देश्य विद्यालयका सबल पक्ष र सुधार गर्नुपर्ने क्षेत्रहरूको पहिचान गर्नु, विद्यालयहरूको स्तर निर्धारण गर्नु, र प्राप्त पृष्ठपोषणका आधारमा नीति, कार्यक्रम तथा अभ्यासमा सुधार ल्याउनु रहेको छ। यसले विद्यालयलाई निरन्तर सुधारतर्फ अभिप्रेरित गर्दै गुणस्तर सुनिश्चितता र उत्तरदायित्वलाई मजबुत बनाउने लक्ष्य राखेको छ। प्रमाणमा आधारित पृष्ठपोषण उपलब्ध गराउन र विद्यालयहरूको कार्यसम्पादन स्तर तथा क्रम निर्धारण गर्न कार्यसम्पादन परीक्षण गरिआएको छ। यसमा स्वमूल्याङ्कनका १६ क्षेत्र रहेका छन्। बाह्य परीक्षणमा ती क्षेत्रलाई रूब्रिक्समा आधारित स्तरीकरणका ५० आधार तथा विद्यार्थी, अभिभावक र स्थानीय तहको मूल्याङ्कन गरी पूर्णाङ्क २१२ कायम गरिएको छ। यसले विद्यालयको भौतिक पूर्वाधार, खानेपानी र स्वच्छता, शैक्षिक पूर्वाधार, व्यवस्थापन, स्वास्थ्य तथा पोषण, जनशक्ति व्यवस्थापन, शिक्षक क्षमता विकास, प्रारम्भिक बालविकास, शासन र वित्तीय पारदर्शिता, पाठ्यक्रम र शिक्षण सिकाइ प्रणाली, अतिरिक्त गतिविधि, विद्यार्थी सहायता, मूल्याङ्कन, प्रश्नपत्र निर्माण, उत्तरपुस्तिका परीक्षण, तथा आन्तरिक क्षमता र उपलब्धिजस्ता पक्षहरूलाई समेटेर विद्यालयको समग्र कार्यसम्पादन परीक्षण गर्छ।
- **सामुदायिक विद्यालयका प्रधानाध्यापकको नेतृत्व कार्यसम्पादन परीक्षण साधन २०८२:** यसको मुख्य उद्देश्य प्रमाणमा आधारित भई सामुदायिक विद्यालयका प्रधानाध्यापकको नेतृत्व कार्यसम्पादन परीक्षण गरेर विद्यालयको स्तर निर्धारण गर्नु, शैक्षिक गुणस्तर अभिवृद्धिमा प्रधानाध्यापकलाई जिम्मेवार र उत्तरदायी बनाउनका लागि सुधारका क्षेत्रहरूको पहिचान गरी सहयोग गर्नु, तथा प्रधानाध्यापकले अपनाएका अभ्यासहरूको पहिचान र विश्लेषण गरेर नीति, कार्यक्रम लगायतका विषयमा पृष्ठपोषण प्रदान गर्नु हो। यसरी परीक्षणले विद्यालय नेतृत्वलाई पारदर्शी, उत्तरदायी र सुधारमुखी बनाउन मद्दत पुऱ्याउँछ। यसमा जम्मा आयाम ८, सूचक ६६, पूर्णाङ्क २१५ रहेका छन्। यसले विद्यालय नेतृत्वको गुणस्तर परीक्षण गर्छ। योजना निर्माण, शिक्षणसिकाइ नेतृत्व, सिकाइ वातावरण, सुशासन र वित्तीय व्यवस्थापन, पेसागत क्षमता, विद्यार्थी सुविधा, सिकाइ परीक्षण, र सरोकारवालाको मूल्याङ्कन जस्ता पक्षहरूमा प्रधानाध्यापकको कार्यसम्पादनलाई स्वमूल्याङ्कन तथा बाह्य परीक्षणमार्फत मूल्याङ्कन गरिन्छ।

यसरी नेपालमा विश्वविद्यालय अनुदान आयोगले निश्चित मानकका आधारमा उच्च शिक्षामा शैक्षिक संस्थाहरूको गुणस्तर प्रत्यायन एवम् प्रमाणीकरण गरिआएको छ। चिकित्साशास्तर्सँग सम्बन्धित कार्यक्रमहरूको गुणस्तर प्रत्यायन गर्ने कार्य चिकित्सा शिक्षा आयोगले तयारी गर्दै छ भने प्राविधिक तथा व्यवसायिक कार्यक्रमहरूको गुणस्तर प्रत्यायन प्राविधिक शिक्षा तथा व्यवसायिक तालिम परिषद्ले सुरु गरेको छ। शैक्षिक गुणस्तर परीक्षण केन्द्रले विद्यालय र प्रधानाध्यापकहरूको कार्यसम्पादन परीक्षण गर्दै आएको छ। विद्यालय शिक्षाको सन्दर्भमा हालका केही वर्षहरूमा केही शैक्षिक संस्थाहरूको आइएसओलगायत वैदेशिक संस्थाले प्रदान गर्ने गुणस्तर मापन एवम् प्रमाणीकरण गरेको पनि पाइन्छ।

शैक्षिक गुणस्तर र प्रत्यायनको विकासक्रमः अन्तर्राष्ट्रिय सन्दर्भमा

यस भागमा केही मुलुकका अभ्यासहरूबारेमा चर्चा गरिएको छ। इलेन एल-खावासको पुस्तक "Accreditation in the USA" का अनुसार अमेरिकामा २० औं शताब्दीको सुरुमा शिक्षण संस्थाहरूबिच शैक्षिक स्तरमा एकरूपता ल्याउन र विद्यार्थी स्थानान्तरण सहज बनाउन गैरसरकारी निकायहरूमार्फत प्रत्यायन प्रणालीको सुरुआत भएको देखिन्छ

(एल-खावास, २००१)। यसमा खास गरी दुई खालका निकायहरू संलग्न भएको पाइन्छ। पहिलो समूहमा संस्थाको प्रत्यायन गर्ने निकायहरू पर्छन् भने दोस्रो समूहमा कार्यक्रमको प्रत्यायन गर्ने निकायहरू पर्छन्। यी दुवै निकायहरूले संस्थागत स्वअध्ययन, स्थलगत निरीक्षण र आवधिक पुनरवलोकन गरी तीनओटा मुख्य प्रक्रियाहरू अपनाएको देखिन्छ। समयक्रममा सन् १९८० को दशकदेखि भने यस प्रणाली भौतिक स्रोत र सङ्काय सङ्ख्याजस्ता लगानी अर्थात् इनपुटबाट परिवर्तन भई विद्यार्थीको वास्तविक सिकाइ र नतिजा अर्थात् आउटकममा आधारित बन्न पुग्यो, जसलाई सङ्घीय सरकारले आर्थिक सहयोगसँग जोडेको देखिन्छ। वर्तमान समयमा अनलाइन शिक्षा र नाफामूलक संस्थाहरूको उदयले यस प्रक्रियामा नयाँ चुनौतीहरू थपे पनि अमेरिकी अभ्यासले संस्थागत सुधारका लागि स्वतन्त्र विशेषज्ञहरूको मूल्याङ्कन र आन्तरिक स्वमूल्याङ्कनको महत्त्वलाई स्थापित गरेको देखिन्छ।

यसैगरी नेल्सन डुआर्टे र रिकार्डो भार्डास्का (२०२३) को अनुसन्धानमूलक लेखले अमेरिका, बेलायत, चीन, जापान, भारत र जर्मनीसहित १० देशका प्रत्यायन प्रणालीको तुलनात्मक समीक्षा गर्दै हार्वे र ग्रीनका पाँच आयामहरू (असाधारण, पूर्णता, उद्देश्यका लागि उपयुक्तता, लगानीको प्रतिफल र रूपान्तरणकारी - Exceptional, Perfection (or consistency), Fitness for purpose, Value for money, and Transformative) लाई मुख्य आधार मानेको छ। ऐतिहासिक रूपमा दोस्रो विश्वयुद्धपछि जापानले सन् १९४७ मा Japan University Accreditation Association (JUAA), बेलायतले सन् १९९७ मा Quality Assurance Agency for Higher Education (QAA), थाइल्यान्डले सन् २००० मा Office for National Education Standards and Quality Assessment (ONESQA) र भारतले सन् १९९४ मा National Assessment and Accreditation Council (NAAC) मार्फत व्यावसायिक शिक्षालाई बजारको मागसँग जोड्दै प्रत्यायन कार्यलाई अघि बढाएका छन्। देशगत रूपमा बेलायत र जर्मनीमा गुणस्तरका आधारमा सरकारी अनुदान दिइने, चीनमा सरकारी परियोजनाहरू सञ्चालन हुने र जापानमा निजी संस्थाहरूलाई बढी स्वायत्तता दिइने अभ्यास छ।

समग्रमा, पहिलो पटक प्रत्यायन लिन चाहने र नयाँ पाठ्यक्रमहरू सन्चालनका लागि अनुमति माग गर्नका लागि भने यो प्रक्रिया केही जटिल र समय खपत गर्ने देखिन्छ, तथापि वर्तमान बजारीकरण अर्थात मार्केटाइजेसनको युगमा विकसित मुलुकहरूले शैक्षिक गुणस्तर, पारदर्शिता र राष्ट्रिय-अन्तर्राष्ट्रिय विश्वसनीयता कायम राख्न प्रत्यायनलाई नै गुणस्तर मापनको सबैभन्दा प्रभावकारी माध्यम मानेका छन्।

विद्यालय शिक्षामा अन्तर्राष्ट्रिय अभ्यास भने अलि फरक छ। माथि नै भनिसकियो कि शिक्षामा गुणस्तर प्रत्यायनको ऐतिहासिक सुरुवात १८ औं शताब्दीको अन्त्यबाट सुरु भएको पाइन्छ। १९ औं शताब्दीमा यसले अलि विशिष्ट रूप धारण गर्न पुग्यो। यसको सुरुआत भने अमेरिकाबाट भएको पाइन्छ। सुरुआती समयमा विद्यालयहरूले न्यूनतम स्वीकृत मापदण्डहरू पूरा गरे नगरेको सुनिश्चित गर्न स्वतन्त्र गैर-सरकारी संस्थाहरू मार्फत अनुगमन र मूल्याङ्कन गर्ने परिपाटी थियो। शैक्षिक कार्यक्रमको प्रत्यायन अमेरिकाबाट सुरु भए तापनि औद्योगिक तथा अन्य क्षेत्रमा अन्तर्राष्ट्रिय गुणस्तर मापनका लागि सन् १९४६ मा बेलायतमा २५ देशका विज्ञहरूको छलफलबाट 'ISO' को अवधारणा विकास भयो, जसले सन् १९४७ देखि सर्टिफिकेट प्रदान गर्न थाल्यो।

अमेरिकामा केन्द्रीय शिक्षा मन्त्रालयको प्रत्यक्ष भूमिका नहुने भएकाले त्यहाँको शिक्षा विभागले सरकारी निकायबाट अनुगमन गर्नुको सट्टा स्वतन्त्र तेस्रो पक्ष (गैर सरकारी निकाय) लाई प्रत्यायनको जिम्मेवारी सुम्पने नीति

अपनाएको छ। यसै अन्तर्गत प्रतिष्ठित गैरसरकारी संस्थाहरूले अमेरिकी विद्यालयको मात्र नभई विश्वका १०० भन्दा बढी देशमा सञ्चालित अन्तर्राष्ट्रिय स्कुलहरूको पाठ्यक्रम र समग्र गुणस्तर मापन गरी प्रमाणीकरणको काम गर्दै आएको पाइन्छ। यो मान्यतासम्बन्धी प्रक्रिया पूरा हुन सामान्यतया १२ देखि १८ महिना लाग्ने र यसको अवधि ५ देखि ७ वर्षको हुने गर्दछ।

गुणस्तरको सुनिश्चितता सम्बन्धमा सम्पूर्ण गुणस्तर व्यवस्थापन (Total Quality Management, TQM) एवम् सिकाइ सङ्गठन (Learning Organization) जस्ता अभ्यासहरूले शिक्षाका क्षेत्रमा पनि गुणस्तरका मानकहरू तय गर्ने कार्यमा सहयोग गर्न सक्ने भएकोले तिनका बारेमा सङ्क्षेपमा समीक्षा गरिएको छ।

टोटल क्वालिटी म्यानेजमेन्टको विकास औद्योगिक क्रान्तिसँगै साधारण निरीक्षणबाट सुरु भई सन् १९२० को दशकमा वाल्टर सेवार्टको साङख्यिकीय गुणस्तर नियन्त्रणसम्म पुगेको देखिन्छ। दोस्रो विश्वयुद्धपछि अमेरिकी विशेषज्ञहरू डब्ल्यु. एडभार्ड्स डेमिङ र जोसेफ जुरानले जापानी उद्योगहरूको पुनरुत्थानका लागि गुणस्तरका आधुनिक सिद्धान्तहरू सिकाए, जसबाट जापानीहरूले 'काइजिन' (निरन्तर सुधार) र क्वालिटी सर्कल जस्ता विधिहरू विकास गरे। सन् १९८० को दशकमा जापानी उत्पादनको लोकप्रियताका कारण अमेरिकाले यस दर्शनलाई टोटल क्वालिटी म्यानेजमेन्ट अर्थात 'TQM' को नाम दियो र अर्मान्ड फेगेनबामको अवधारणाअनुसार गुणस्तरलाई सम्पूर्ण कर्मचारी र प्रक्रियाको साझा जिम्मेवारीका रूपमा स्थापित गरियो।

यसै ऐतिहासिक जगलाई शिक्षा क्षेत्रसँग जोड्दै सालिस (२००२) ले TQM लाई शैक्षिक संस्थामा सकारात्मक परिवर्तन ल्याउने दर्शन र पद्धतिका रूपमा व्याख्या गरेका छन्। उनले शिक्षामा नैतिक, व्यावसायिक, प्रतिस्पर्धात्मक र उत्तरदायित्व गरी चारवटा प्रेरक तत्वहरू पहिचान गर्दै विद्यार्थी सन्तुष्टि, दूरदर्शी नेतृत्व, सामूहिक कार्य र स्वमूल्याङ्कन जस्ता उपकरणहरू मार्फत निरन्तर गुणस्तर सुधारमा जोड दिन्छ।

शैक्षिक गुणस्तर र संस्थागत विकासका लागि पिटर एम. सेन्जले आफ्नो पुस्तक "The Fifth Discipline" मा "सिकाइ सङ्गठन" (Learning Organization) को अवधारणा प्रस्तुत गरेका छन्। सेन्जका अनुसार एक सफल सङ्गठनले सिकाइमा आउने बाधाहरूलाई हटाई निरन्तर नयाँ अवसरहरू पहिचान गर्ने र गतिशील रूपमा क्षमता विकास गर्ने वातावरण निर्माण गर्दछ। यसका लागि उनले पाँचओटा मुख्य सिद्धान्तहरू अघि सारेका छन्, जसमा 'व्यक्तिगत निपुणता' (Personal Mastery), 'मानसिक ढाँचाहरू' (Mental Models), 'साझा परिकल्पना' (Shared Vision) र 'सामूहिक सिकाइ' (Team Learning) पर्दछन्। यी सबैका बिच उनले पाँचौं अनुशासनको रूपमा 'प्रणालीगत सोच' (Systems Thinking) लाई राखेका छन्, जसले कुनै पनि समस्यालाई टुक्रा टुक्रामा नहेरी एकअर्कासँग जोडिएको एउटा पूर्ण प्रणालीको रूपमा बुझ्न सिकाउँछ र सङ्गठनलाई सशक्त एवम् प्रतिस्पर्धी बनाउन मार्गनिर्देश गर्दछ।

यी दुवै अवधारणाले विद्यालय शिक्षाको सन्दर्भमा गुणस्तरका मानकहरू तय गर्न सहयोग गर्छन्। यिनै मानकहरूले प्रत्यायनको मानक बनाउन भूमिका निर्वाह गरेका हुन्छन्। तसर्थ यी विषयहरूलाई यहाँ उठाइएको हो।

नेपालमा शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायनमा देखिएका चुनौती र अवसर

नेपालमा वि.सं. २०६३ सालतिर विद्यालयको स्तरीकरण कार्य थालनी गरिएको भए तापनि यसले सार्थक निरन्तरता पाउन सकेन। अहिले उच्च शिक्षामा प्रणालीगत रूपमा प्रत्यायनसम्बन्धी कार्य अगाडि बढेको छ। भरखरै प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद्ले पनि यस प्रत्यायनसम्बन्धी कार्यलाई अगाडि बढाएको छ। नेपाल गुणस्तर तथा नापतौल विभागले पनि विद्यालय शिक्षामा आइएसओ प्रणाली भित्र्याई कार्यारम्भ गरेको छ।

शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायनका बारेमा शिक्षाका क्षेत्रमा जे जति मात्रामा बहस पैरवी हुनुपर्ने हो सो भएको छैन। सरकारतर्फबाट पनि यसको औचित्य र महत्त्वका बारेमा बुझाउन सकिएको छैन। धेरै शैक्षिक संस्थाहरूले यसमा सहभागी भएर के पाइन्छ भन्ने प्रश्न सोधे भने अन्यथा नमान्दा हुन्छ। शैक्षिक संस्थामा स्रोत साधनमात्र नभई जनशक्ति र पूर्वाधारको कमी छ। शैक्षिक संस्थामा वित्तीय दिगोपन पनि कमजोर अवस्थामा रहेको छ।

स्रोत र साधनको अभावमा सन्चालित शैक्षिक संस्थाहरू के गरेमा स्रोत पाइन्छ भन्नेमा लाग्नु पर्ने अवस्था छ। तसर्थ संस्थाहरू भएको मापदण्ड पालना र गुणस्तरको सुनिश्चितता गर्ने कार्यमा जति मात्रामा उत्साह देखिनु पर्ने हो सो देखिँदैन। यसको वास्तविक मर्म बुझ्नभन्दा पनि स्रोत साधन लिने र विद्यार्थी भर्ना बढाउने माध्यम बनिरहेको छ।

मुलुकको शैक्षिक प्रणालीलाई अन्तर्राष्ट्रिय रूपमा समकक्षी बनाउन प्रत्यायन प्रणाली आवश्यक मात्र नभई अनिवार्य पनि हुन्छ। विभिन्न मुलुकमा तय गरिएका मापदण्डहरूसँग तुलनायोग्य हुने भएकोले तिनलाई समेत आधार मान्न सकिएमा हाम्रा शैक्षिक संस्थाहरू अन्तर्राष्ट्रिय स्तरमा प्रतिस्पर्धी देखिन सक्छन्। यस प्रक्रियाले शैक्षिक संस्थालाई सुधारका लागि उत्प्रेरित गर्ने हुनाले गुणस्तर सुधारमा थप बल पुग्दछ। अहिले केही शैक्षिक संस्थाहरू आइएसओ लिन रुचि देखिएको सन्दर्भमा विद्यालय शिक्षामा पनि राष्ट्रिय प्रत्यायन प्रणाली अवलम्बन गर्नु आवश्यक भइसक्यो। यस प्रणालीले स्थानीय स्तरमा प्रतिस्पर्धा र जागरण भित्र्याउने देखिन्छ।

विद्यालय शिक्षामा औचित्य

विद्यालय शिक्षामा शैक्षिक गुणस्तर सुनिश्चितता र प्रत्यायनको औचित्य अत्यन्त देखिन्छ। यसले विद्यालयलाई केवल स्तर निर्धारण गर्ने औपचारिक प्रक्रिया मात्र होइन, निरन्तर सुधारतर्फ अभिप्रेरित गर्ने प्रणालीको रूपमा काम गर्छ। प्रत्यायनमार्फत विद्यालयका सबल पक्ष र कमजोरीहरू पहिचान हुन्छन्, जसको आधारमा नीति, कार्यक्रम र अभ्यासमा सुधार ल्याउन सकिन्छ। यसले विद्यालयलाई पारदर्शी, उत्तरदायी र विश्वसनीय बनाउँछ, विद्यार्थीहरूको सिकाइ उपलब्धि बढाउँछ, र समुदायसँग विद्यालयको सम्बन्धलाई मजबुत बनाउँछ। अन्ततः, गुणस्तर सुनिश्चितता र प्रत्यायनले विद्यालय शिक्षालाई प्रतिस्पर्धी, समावेशी र दीर्घकालीन रूपमा टिकाउ बनाउन आधार तयार गर्छ। साथै अन्तराष्ट्रियरूपमा समकक्षी बनाउन पनि सहयोग गर्छ।

अबका दिनमा अवलम्बन गर्नुपर्ने उपायहरू

सर्वप्रथम विद्यालय शिक्षामा शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायनमा सम्बन्धमा साझा धारणा बनाई नीतिगत स्पष्टता ल्याउनु आवश्यक छ। मन्त्रालय पद्धतिभित्रमात्र नभई समग्र शैक्षिक प्रणालीमा साझा दृष्टिकोण र धारणा निर्माण गर्नुपर्छ। यसले नीति, कार्यान्वयन र मूल्याङ्कनमा एकरूपता ल्याउँछ। तत्पश्चात् विगतका अभ्यास र हालका अनुभवलाई आधार मानेर मापदण्ड र सूचकहरू तय गर्न आवश्यक छ।

साथै प्रक्रियागत स्पष्टता पनि चाहिन्छ। विद्यालयका प्रधानाध्यापक, शिक्षक, अभिभावक र अन्य सरोकारवालाहरूको बुझाइमा प्रक्रियागत स्पष्टता चाहिन्छ। यसले भ्रम हटाउने मात्र होइन, सबैलाई जिम्मेवारीबोध गराउने काम गर्छ। विद्यालय र सम्बन्धित निकायहरूको संस्थागत क्षमता विकासमा ध्यान दिनु आवश्यक छ। यसका लागि तालिम, प्राविधिक सहयोग र व्यवस्थापन दक्षता अभिवृद्धि गर्नुपर्छ।

प्रत्यायनको प्रक्रिया र मापदण्डका विषयमा हाल प्रयोगमा रहेका आधारमै अगाडि बढ्न सकिन्छ। तर, यसलाई अझ गहन र विस्तृत बनाउन जोड दिनु आवश्यक छ। मापदण्ड पहिले नै प्रयोगमा ल्याइसकिएको हुँदा अब यसको गहिरो विश्लेषण र विस्तार महत्त्वपूर्ण हुन्छ।

यस प्रक्रियाको नतिजालाई यदि अनुदान प्रदान गर्ने आधार वा अन्य प्रोत्साहनसँग जोड्न सकिएन भने विद्यालयहरूले यसमा कम चासो देखाउन सक्छन्। विद्यालय तहमा नै आवश्यक तत्परता जगाउन नसकेमा प्रत्यायन कार्यक्रमलाई प्रभावकारी रूपमा अगाडि बढाउन कठिन हुनसक्छ।

साथै जबसम्म यसको नतिजालाई जवाफदेहिता बहन गर्ने संयन्त्रसँग जोड्न सकिँदैन, शैक्षिक संस्थाहरूले यसलाई संवेदनशील रूपमा लिन सक्दैनन्। विद्यालयहरूले आवश्यक तत्परता नदेखाएमा शैक्षिक गुणस्तर परीक्षण केन्द्रले चाहेर मात्र पनि यस कार्यक्रमलाई अगाडि बढाउन सम्भव हुँदैन।

गुणस्तर परीक्षण, क्षमता विकास, र संस्थागत सुधारका लागि बजेट तथा कार्यक्रममा आवश्यक व्यवस्था गर्नुपर्छ। जनशक्ति र प्रविधिको संयोजन उपयुक्त ढङ्गबाट गरिनुपर्छ।

यसमा साथमा विद्यालय शिक्षामा शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन र प्रमाणीकरण गर्दा निम्न पक्षहरूमा ध्यान दिनु आवश्यक देखिन्छः

१. **प्रत्यायनको स्वरूपः** सामान्यतया प्रत्यायन बाह्य निकायबाट गरिन्छ। तर नेपालको सन्दर्भमा विश्वविद्यालय अनुदान आयोग र प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद्जस्ता निकायहरुले तहाँको संरचना भित्रै समिति बनाएर कार्यान्वयनमा ल्याएको अवस्था छ। बाह्य निकायको अवधारणा स्वायत्त ढङ्गबाट निर्णय लिन सकियोस् भन्ने आशयमा आएको भए पनि विद्यालय शिक्षाको सन्दर्भमा शैक्षिक गुणस्तर परीक्षण केन्द्रबाट नै यस्ता कार्यहरू गर्नु उपयुक्त हुन्छ। मुख्य परीक्षकको व्यवस्था नहुन्जेलसम्म विज्ञहरू सम्मिलित समितिको संरचनामा जानु उपयुक्त हुन्छ।

२. **संस्थागत क्षमता विकासः** शैक्षिक गुणस्तर परीक्षण केन्द्रभित्र थप व्यवस्थाहरू गर्नु आवश्यक छ। यसको कार्यप्रकृति, तथ्याङ्क प्रविष्टि, विश्लेषण आदिलाई ध्यानमा राख्दा संस्थागत क्षमता विकास र प्राविधिक जनशक्ति व्यवस्थापन अपरिहार्य हुन्छ। यस केन्द्रभित्र अहिलेको प्रविधिसहित काम गर्ने सक्षम टिम गठन गरिनु आवश्यक हुन्छ। भएकै शाखालाई काम दिएर यसलाई प्रभावकारी रूपमा अगाडि बढाउन सहज नहुन सक्छ। शाखासँग जोडिएको टिमले अनलाइन प्रणाली विकास गरी काम गर्नुपर्छ। किनकी विद्यालयको स्वमूल्याङ्कन अनलाइनमा प्रविष्टि गर्न पाउने व्यवस्था गरिनुपर्छ। विद्यालय आफैँले भरेको अनलाइनबाट नतिजा एवम् सुधार गर्नु पर्ने पक्षहरू यकिन हुने ढङ्गबाट प्रणालीको विकास गरिनुपर्छ। यही टिमले विज्ञको सूची बनाउने र उनीहरूलाई परिचालन गर्नुपर्छ।

३. **वस्तुनिष्ठता र विश्वसनीयताः** समग्र प्रक्रियालाई वस्तुनिष्ठ र विश्वसनीय बनाउन शैक्षिक गुणस्तर परीक्षण केन्द्र नै प्रत्यायन हुनु आवश्यक हुन्छ। यसले वैदेशिक संस्थाहरूसँग समझदारीको अवधारणामा जानु उपयुक्त हुन्छ। जनशक्तिका लागि पेसागत र वैयक्तिक आचारसंहिता चाहिन्छ। यसमा संलग्न विज्ञहरूको हकमा पनि यहि लागु हुन्छ। तसर्थ यसको विधि, प्रक्रिया, आचारसंहिताको व्यवस्था र पालना, सेवासर्त आदिका विषयमा स्पष्ट मापदण्ड आवश्यक हुन्छ। शैक्षिक गुणस्तर परीक्षण केन्द्रले टोटल क्वालिटी म्यानेजमेन्ट र लर्निङ अर्गनाइजेसनका तत्त्वहरूबाट पाठ सकेर आफूलाई विकसित गर्ने सोचमा जानुपर्छ।

४. **बहस पैरबी र विद्यालयलाई सहयोग**: विद्यालयहरूलाई यस प्रक्रियामा उत्प्रेरित गर्नु अत्यन्त आवश्यक हुन्छ। यदि सहभागिताबाट खासै फरक नपर्ने देखियो भने विद्यालयहरूको चासो घट्न सक्छ। त्यसैले राम्रो प्रदर्शन गर्ने विद्यालयलाई प्रोत्साहन गर्ने नीति आवश्यक हुन्छ। यस्तो व्यवस्थाले सार्वजनिक विद्यालयहरूलाई यस प्रक्रियामा सहभागी हुन मनोवैज्ञानिक दबाब पनि सिर्जना गर्छ। निजी विद्यालयहरूलाई पनि यस अवधारणामा समेट्नु आवश्यक छ।

यो प्रक्रिया केवल विद्यालयको स्तर निर्धारण गर्ने कार्य मात्र नभइ संस्थालाई निरन्तर सुधारका लागि उत्प्रेरित गर्नु हो भनेर बुझाउनु आवश्यक हुन्छ। यसले विद्यालयलाई आफ्नै कार्यसम्पादन समीक्षा गर्न, कमजोरी पहिचान गर्न र सुधारका उपायहरू अपनाउन प्रेरित गर्न सक्नुपर्छ। प्रत्यायन प्रमाणपत्रले संस्थाको साख र हैसियत बढाउँछ, तर प्रमाणपत्र प्राप्ति मात्र ध्येय राख्दा निरन्तर सुधारको यात्रामा अवरोध आउन सक्छ।

५. **प्रणालीको विकास र प्रविधिको प्रयोग**: यस प्रक्रियालाई सहज बनाउन यसलाई अनलाइन प्रणालीमा लैजानु जरुरी हुन्छ। प्रविधिको प्रयोग गर्नुपर्छ। जब यसलाई शिक्षा तथा मानव स्रोत विकास केन्द्रको IEMIS (Integrated Educational Management Information System) सँग जोडिन्छ, त्यहाँ उपलब्ध तथ्याङ्क स्वतः प्रयोग गर्न सकिन्छ। यसले काम सजिलो मात्र होइन, तथ्याङ्ककको सही र वस्तुनिष्ठ प्रयोगलाई पनि सुनिश्चित गर्छ।

६. **स्थानीय तहसँगको सहकार्य**: शैक्षिक संस्थासँग निरन्तर अन्तरक्रिया, सहयोग र फिडब्याक आवश्यक हुने भएकोले शैक्षिक गुणस्तर परीक्षण केन्द्रले स्थानीय तहमा यो विषय हेर्ने व्यक्ति एवम् शाखाको क्षमता विकास गरी यस्ता काम तहाँबाट हुने व्यवस्था मिलाउनुपर्छ। प्राविधिक सहयोगका लागि प्रदेश तहमा क्षमता विकास गर्न सकिन्छ। केन्द्रबाट मात्र सबै विद्यालयमा कार्यान्वयन गर्ने दायित्व लिँदा सो पूरा गर्न सम्भव छैन। त्यसैले प्रदेश र स्थानीय तहलाई यस प्रक्रियामा संलग्न गराउनु मात्र नभई उनीहरूको अपनत्व विकास गर्न सक्नु पर्छ। यसले प्रत्यायनलाई संस्थागत सुधारको साझा जिम्मेवारी बनाउँछ।

शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन मापदण्डमा समेट्नु पर्ने विषयहरू र आयामहरू

गुणस्तर प्रत्यायन मापदण्डमा के कति आयाम र विषय समावेश गर्ने भन्ने बारेमा नेपालमै भएका अभ्यासमा पनि खासै एकरूपता देखिएन। विद्यालय शिक्षामा विगतमा भएका र हाल कार्यान्वयनमा रहेका प्रावधानहरूको अभ्यासलाई मध्यनजर गरी देहायका आयामहरू प्रयोग गर्दा उपयुक्त हुने देखिन्छ।

विद्यालय पूर्वाधारसम्बन्धी पक्षमा विद्यालयको भौतिक संरचना, खानेपानी, शौचालय र शैक्षिक पूर्वाधारलाई ध्यान दिनुपर्छ। साथै सिकाइसम्बन्धी पक्षमा विद्यार्थीको स्वास्थ्य, पोषण, सुरक्षा, प्रारम्भिक बालविकास र शिक्षा, साथै विद्यार्थी सहायता र परामर्शलाई समावेश गर्न उपयुक्त हुने देखिन्छ भने शिक्षकसम्बन्धी पक्षमा सक्षमता, पेसागत विकास, अनुसन्धानको प्रयोग, सुपरिवेक्षण र सहयोग आदिमा जोड चाहिन्छ।

यसैगरी पाठ्यक्रम र शिक्षण सिकाइ प्रणालीमा शिक्षण क्रियाकलाप, सह अतिरिक्त गतिविधि, परीक्षा तथा मूल्याङ्कनमा साथमा व्यवस्थापनसम्बन्धी पक्षमा योजना तर्जुमा, कार्यान्वयन, अनुगमन, प्रधानाध्यापकको नेतृत्व, टिम वर्क, द्वन्द्व व्यवस्थापन, जनशक्ति व्यवस्थापन र विद्यालय समुदाय सम्बन्धलाई समावेश गर्न उपयुक्त हुन्छ।

सुशासनमा नीति तथा निर्णयको प्रभावकारिता, आन्तरिक नियन्त्रण, सूचना प्रणाली, सूचनाको सार्वजनिकीकरण, प्रविधिको उपयोग र जवाफदेहिताको पालना महत्त्वपूर्ण हुन्छन् भने अन्ततः प्रभावकारितामा विद्यार्थीको सिकाइ उपलब्धि, आन्तरिक सक्षमता र नवप्रवर्तनात्मक कार्यहरूलाई मूल्याङ्कन गरिन्छ। यसरी यी सबै आयामहरूले विद्यालय शिक्षामा गुणस्तर सुनिश्चितता र सुधारलाई व्यवस्थित ढाँचामा अघि बढाउन सहयोग गर्न सक्छन्।

विद्यालय शिक्षामा गुणस्तर सुनिश्चितता र प्रत्यायनको प्रक्रिया र यसअन्तर्गत विभिन्न साधनहरू प्रयोग गर्नुको मुख्य प्रयोजन विद्यालयको सबल पक्ष र कमजोरी पहिचान गरेर निरन्तर सुधारतर्फ केन्द्रित गर्नु हो। यस प्रक्रियाको केन्द्रमा विद्यालयको पूर्वाधार, शिक्षक क्षमता, विद्यार्थी सहायता, पाठ्यक्रम र सिकाइ प्रणाली, व्यवस्थापन, सुशासन तथा सिकाइ उपलब्धि जस्ता आयामहरूमा हुन्छ। यसले विद्यालयलाई प्रमाणमा आधारित मूल्याङ्कनमार्फत पारदर्शी, उत्तरदायी र सुधारमुखी बनाउन मद्दत गर्छ। यसका साथै नीति, कार्यक्रम र अभ्यासमा आवश्यक परिवर्तन ल्याउन पृष्ठपोषण प्रदान गर्छ। अन्ततः यसको प्रयोगले विद्यालय शिक्षालाई व्यवस्थित, गुणस्तरीय र दीर्घकालीन रूपमा टिकाउ बनाउने लक्ष्य राख्छ।

प्रत्यायनमा प्रयोग गरिने सूचकहरू मौखिक व्याख्या वा बुझाइमा मात्र आधारित हुनुभन्दा पनि तथ्य र प्रमाणले पुष्टि गर्ने खालका हुनु उपयुक्त हुन्छ। यसले विद्यालयको वास्तविक स्थिति देखाउन मदत गर्छ र परिणामलाई विश्वसनीय बनाउँछ। तसर्थ प्रत्यायनका सूचकहरू बनाउँदा सकेसम्म वस्तुगत र मापन गर्न सकिने खालका सूचकहरू तयार गर्नुपर्छ। विद्यालयले आफैँ भरेर आफ्नो अवस्थाको आकलन गर्न सक्ने सूचकहरू विकास गर्न सकियो भने प्रत्यायन प्रक्रिया अझ पारदर्शी बन्न सक्छ।

निष्कर्ष

गुणस्तर सुनिश्चितता विद्यालयभित्र हुने दैनिक रूपमा हुने आन्तरिक प्रक्रिया हो, साथै यो जीवन्त प्रक्रिया पनि हो, गुणस्तर सुनिश्चितता जसको केन्द्रमा विद्यार्थीको वास्तविक सिकाइ र सिप विकास रहन्छ। प्रत्यायन भनेको त्यही प्रक्रियाको एउटा बाह्य प्रमाणीकरण हो, जसलाई निश्चित समयमा गरिन्छ। अर्थात एउटा निश्चित समयमा लिइने तस्बिर हो। प्रत्यायनको सफलता भनेको डकुमेन्टेसन मात्र होइन; यसले शिक्षालाई गुणस्तरीय र अन्तर्राष्ट्रिय प्रतिस्पर्धी बनाउन सक्छ कि सक्दैन भन्नेमा निर्भर छ। दुवैलाई एकसाथ एवम् अलगअलग ढङ्गमा पनि बुझ्नुपर्छ। दुवैलाई मिलाउने राम्रो अभ्यास भनेको प्रत्यायनलाई न्यूनतम आधार बनाउने र त्यसमाथि निरन्तर गुणस्तर सुधारको संस्कृति खडा गर्न जोड्नु हो।

नेपालमा विद्यालय शिक्षामा समेत शैक्षिक गुणस्तर सुनिश्चितता तथा प्रत्यायन अति आवश्यक भइसक्यो। शिक्षाका क्षेत्रमा भइरहेका हालका अभ्यासहरूलाई केलाएर भइरहेको अभ्यासमा थप परिमार्जन गरी विद्यालय शिक्षामा समेत सुरु गर्न सकिन्छ। तर विद्यालय शिक्षामा यस अवधारणा कार्यान्वयनका लागि कानुनी पूर्वाधार, संस्थागत पूर्वाधार, व्यवस्थापकीय क्षमता, अनलाइन प्रणालीको विकास, जनशक्तिको व्यवस्थापन, प्रविधिको प्रयोग आदिमा जोड दिनुपर्छ। तत्कालका लागि यस कार्यलाई अगाडि बढाउन शैक्षिक गुणस्तर परीक्षण केन्द्रभित्र विज्ञ सम्मिलित समिति वा यस्तै संरचना आवश्यक हुन्छ। यसले स्वायत्व रूपमा काम हुन्छ भन्ने विश्वास दिलाउन सक्नुपर्छ। साथै प्रदेश र स्थानीय तहको अपनत्व विकासमा पनि उत्तिकै मात्रामा ध्यान दिनु आवश्यक छ।

सन्दर्भ सामग्री

शिक्षा विभाग। (२०६३)। *विद्यालय सञ्चालन अनुदान निर्देशिका २०६३*। शिक्षा विभाग।

शैक्षिक गुणस्तर परीक्षण केन्द्र [शैगुपके]। (२०८२)। *सामुदायिक विद्यालय कार्यसम्पादन परीक्षण मार्गदर्शन र साधन*। शैक्षिक गुणस्तर परीक्षण केन्द्र।

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Basic Level Teachers' Perception of Assessment for Learning (AfL)

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Abstract

Assessment for learning (AfL) is an integral part of everyday instruction as it is embedded in daily instruction. This study aims to explore the basic-level teachers' perceptions about assessment for learning. This paper has followed a qualitative research method using a semi-structured interview schedule as an information collection tool. Six teachers who were teaching at the Basic Level were selected purposely from three community schools of Kathmandu district. The interviews covered socio- demographic data, perceptions towards AfL, teaching styles, personal experience using AfL, and challenges towards using AfL. An inductive analysis was used to allow for the patterns and themes to emerge. The findings of the study showed that most of the teachers were unfamiliar with the concept of AfL and found that some teachers had negative perceptions about AfL, along with its tools like portfolios, project work, and homework.

Lack of AfL-related training for teachers, insufficient materials, resources, and infrastructure also seems to be a great challenge for teachers. This study has revealed the necessity to conduct training related to AfL for the teachers who are teaching at the Basic Level and need to provide sufficient materials for the effective implementation of AfL.

Keywords: teachers' perceptions, assessment for learning, education system, learning outcomes

Introduction

Assessment for learning (AfL) is recognized as an integral part of everyday classroom instruction at the basic level of education in many developing countries, like Nepal. It is an important component of any teaching-learning process. Students need to be given assessments and follow-ups frequently to boost educational progress in the teaching and learning process. It is a key instrument to ensure quality education. AfL is an ongoing activity of gathering and interpreting information about student learning that is used in making different plans for the improvement of students' learning. The main purpose of AfL is the improvement of students' learning. There is a change in the social expectation of assessment with the increase in students' achievement. Assessment needs to improve students' learning by motivating their learning. According to Earl and Steven (2006 p.7), assessment can enhance students' motivation for learning through the following ways:

a. Assessment can enhance the students' learning by emphasizing progress and achievement rather than failure
b. Similarly, it can provide feedback to move learning forward
c. Assessment, on the other hand, can reinforce the idea that students have control over and responsibility for their own learning,
d. It also helps build confidence in students so that they can and need to take risks
e. Finally, assessment provides scaffolding that students need to genuinely succeed.

The above points state that assessment is a friend, not a foe, for learning. These points also indicate that assessment for learning (AfL) occurs throughout the learning process. Teachers can use AfL as an investigative tool to identify what their students know and can do, and what confusion, perceptions, or gaps they might have. AfL fuels teachers by aligning their instruction with the goals of targeted outcomes. Similarly, it tries to identify the particular learning needs of students or groups. It also helps to select materials and adapt them to instruction. Creating

differentiated teaching strategies and learning opportunities to help individual students move forward in their learning. Finally, teachers can employ AfL to provide immediate feedback and direction to students. Furthermore, AfL can be regarded as of high quality if teachers use it to make decisions about students' learning. In the words of McMillan (2010, p.42), AfL has the following features:

a. It is the process of several components, not simply a specific test or other assessment
b. It is used both by teachers and students
c. It takes place during instructions
d. It provides feedback to students, and
e. It provides instructional adjustments and correctives.

On the basis of the above-mentioned points, it is clear that assessment for learning (AfL) is a pedagogical tool. It aims to inform and improve students' learning by providing regular feedback. In this process, students become active meaning makers and thoughtful judges of their own learning (Willis, 2007, p.1). So, educators regard AfL and its practice in the classroom contexts as an important and often overlooked factor that can impact the achievement of students' learning. There are different influencing factors that may influence the learning of the students. They are beliefs about learning, concepts of learner identity, and issues of power and control. As these factors are interrelated and are part of the social and cultural contexts of teaching, they are represented in this paper as an assessment relationship. This paper argues that AfL therefore needs to be seen as more than an assessment technique. AfL is a significant challenge to foundational issues of classroom pedagogy. Assessment for learning is the process of collecting information from different sources to improve the quality of students' learning.

Here it is better to quote the notion of James and Pedder (2005). They express that AfL does not believe in the notion that students are merely the objects of their teachers' behavior; they are the animators of their own effective teaching and learning process. 'Assessment for learning' (AfL) is now recognized as one of the most powerful strategies for supporting student learning (Hattie, 2012). Over the last 20 years, AfL has been perceived as a pedagogical tool for the improvement of learners' learning. AfL is based on a theoretical foundation, drawing on cognitive science, social constructivist theories of learning, and models of motivation. In certain instances, this has resulted in distorted or superficial incarnations of AfL (Looney, 2011; Marshall & Drummond, 2006).

AfL employs several assessment tools during instruction instead of a single final exam at the end of the academic year or semester.

AfL activities allow us to identify what our students are learning and enable them to improve the learning environment through our courses and academic programs. To ensure improvement in learning and to enhance quality in education, AfL plays the key role in assisting students individually with their learning. Apart from this, AfL is also helpful to reduce dropouts on one hand and increase retention on the other. National Curriculum Framework (NCF) (2078 BS) recommended implementing AfL at the Basic level, grades 1-5 of Nepalese schools, which has now been extended to grade seven. One of the weaknesses found in the implementation of AfL in Nepalese schools is the detachment of assessment from classroom teaching-learning; as a result, the use of assessment for improvement purposes is minimal. In this regard, Adhikari and Parajuli (2018 BS) have stated that "assessment results have hardly been used in the improvement of teaching-learning process; rather it has been used as a ritual process of filling the forms in many schools". The government of Nepal, Ministry of Education, Science and Technology, Curriculum Development Center (CDC) has now made AfL System mandatory at the Basic Level. However, many teachers, Education Officers, and parents are not clear about the proper implementation of AfL and factors that are affecting its proper implementation.

There are different views regarding AfL, and some of the teachers are still confused about the notion of AfL. The actual picture is not clear since there is very little information available on teachers' perceptions about AfL in Nepal. Despite having lots of advantages, students and teachers are not willing to take part in AfL-related activities. It is a crucial problem in the field of teaching and learning. Hence, I want to explore the views of Basic level teachers about the concept of AfL and their classroom practice of it. This study tried to explore teachers' perceptions regarding AfL. It is also related to the application of AfL in teaching and learning in Basic level classrooms. This paper may help teachers in understanding the essence of AfL and may help teachers in changing their attitude from assessment of learning to assessment for learning.

Materials and Methods

To carry out this study, I employed the qualitative research approach through which I tried to explore the experience of B-level teachers. To accomplish my task, I used an open-ended interview guideline to unveil the perception of teachers about AfL. Cohen, Manion and Morrison (2018, p.335) have stated that an open-ended interview is an appropriate tool for collecting human perception and values. It is particularly recommended for exploring experiences and perceptions from individuals' perspectives. The study was carried out during March 2023 in Chandragiri Municipality of Kathmandu district. To explore teachers' perceptions about AfL, I

purposely selected six teachers who were teaching at the basic level in different community schools and coded as participant nos. 1, 2,3,4,5, and 6. All the selected participants had at least a Bachelor's degree qualification. Two teachers (one male and one female) were selected from each school as participants.

Data were collected from participants among the target population to explore teachers' perceptions and practice of AfL. An open-ended interview guideline was developed for the collection of field data as the primary source of information. The interview guideline incorporated socio-cultural aspects of AfL, perceptions and understanding of teachers about AfL embedded into daily classroom instruction. Similarly, personal experience of teachers in aligning AfL with classroom instruction. Participants were asked how they felt about AfL and its influence in their teaching. They were also asked for their views on any other challenges in implementing AfL at the basic level.

Interviews were tape-recorded and later transcribed. An open-ended interview with each participant was conducted. The time of the interview was not exceeded by more than an hour. Information obtained from individual interviews was transcribed, coded, and analyzed. I employed an inductive analysis, which allows the patterns, themes, and categories of analysis to emerge (Saldana, 2018). Two levels of qualitative analysis were conducted. The descriptive analysis described the respondents' life situations and characteristics. The thematic analysis elaborated the structures of basic constructs and new constructs that arose in the early analysis. I reviewed transcripts of the first interviews to identify all relevant ideas. Their perception and understanding were compared and discussed. The process was repeated for the second set of transcripts until there was agreement on the ideas and concepts. At the same time, some of the concepts were broken down into various sub-components of the theme. The next stage of analysis was to go back to the individual interviewee level to look at within-person consistency with each concept. The readers assembled and compared all the text references to a concept.

In this way, the readers ensured scientific rigor of the qualitative analysis by making sure the themes and contexts derived were correct in that credibility, reliability, and dependability can be demonstrated.

Results and Discussion

The study was completed after conducting interviews with teachers to understand their perceptions and practice of AfL. All participants who were interviewed were teaching at the Basic level. I analyzed the AfL practice of the teachers in teaching and learning activities at the

Basic Level. To find out the teachers' practices of AfL in class, I developed a teacher interview guideline. Based on this guideline, selected teachers were interviewed using the process mentioned above. After the collection of the field data**,** I generated different themes regarding the teachers' perceptions and their interviews, which are analyzed below.

Generated different themes regarding the teachers' perceptions and practice of AfL based on the information obtained from interviews, which are analyzed below.

Teachers' Perception About Assessment for Learning

Teachers have a positive attitude about AfL and its use in the teaching and learning process. They regard AfL as a pedagogical tool that enhances students' learning. They expressed that they were using AfL for the enhancement of students' learning. Besides the paper and pencil test at the end of the academic year, they were employing other tools like homework, classwork, self-correction, and project work as assessment tools which may help in enhancing the students' learning. In this sense, participant-1 expressed it like this:

I always used to find out the students' level of learning and try to find out where am I going (what are the goals) How can I going? (what progress is being made toward the goal?) Where to next? what activities need to be undertaken to make better progress?

Here, participant-1 has their own opinion of using AfL to enhance the quality of students' learning. According to participant 1, different activities and classwork could be used to enhance the quality of learning. In AfL, teachers need to provide descriptive feedback to the students about the status of their learning in relation to the success criteria and give cues to the students about what they can do to progress and close the gap.

Likewise, participant-3 had different insight about AfL. He expressed his opinion like this:

> AfL replaced the excessive dependent in the use of a paper-pencil test for evaluation of student's achievement in Nepal especially, in the school of Nepal. AfL suggests the use of different tools like portfolio, observation, self-correction, and project work as assessment tools which help to present learners' actual performance in learning activities every time.

The above stated perception about AfL is very prominent in the context of Nepal because there is excessive reliance on the paper and pencil test. Paper and pencil tests are more foe than friend in students' achievement. On the other hand, AfL can substitute the old paper-pencil test by using different types of assessment tools. Furthermore, in AfL, students can get clear information about their tasks.

Similarly, participant 4 opined that the habit of the teacher developing the portfolio as a modern tool of AfL can help to improve the quality of learning AfL is more useful for providing scaffolding to identify the degree to which the learner is advancing and may result in further instructional /learning adaptation if the gap is not closing.

The above stated opinion of the participant indicates that AfL tries to identify the learning status of the learners. Then the teachers and peers give the students or learners support to move them from where they are, what they have already known, to what they can do next. Such a process of providing scaffolding is very essential to close the gap between their current learning status and the learning goal. In AfL system, the teacher provides the necessary instructional support and tries to bring reform in students' learning. Here it is clear that AfL aims to close the gap between where the learner currently is and it makes clear that where the learners and teacher want to be at the end of the lesson. AfL regards learning as a continuum, a cyclic process. This means that AfL can be used to bring changes in the students' learning status and help them close the gap between their current status and the intended learning goals.

Similarly, one female participant of this study expressed her opinion about AfL in this way:

> Classwork, homework, and observation can play important roles to improve the learners' performance. With the help of these tools, students' learning habit can be foster. AfL plays significant role for the betterment of the learners learning habit and their better performance. Self-study and self-reflectivity habits are directly linked to the development of learning habit of the students. A portfolio is also seen as an effective tool to develop learning ability by collecting good pieces of writing and creative work to keep a record of progress every time.

Here, she added a different perception regarding AfL than previous participants. The use of tools of AfL like observation, portfolio, and project work in the class made the students more innovative, creative, and self-dependent for learning. Moreover, as a new tool of AfL, a portfolio helped the teachers collect information about the students' learning.

All the perceptions, under this theme, concluded that AfL, and its tools like homework, classwork, project work, self-correction, classroom participation, and preparing a portfolio, helped the teacher assess the students' progress in learning and their competency in learning skills. In AfL system, the students get immediate and specific feedback for the improvement of their learning. With the immediate feedback, students get an opportunity to be familiar with a

clear picture of their learning status and progress. It helps teachers modify their planning and instruction strategy with proper improvements. So, AfL helps teachers understand the real condition of teaching and learning activities for both teachers and learners respectively.

Besides the above mentioned participants, other participants (teachers) expressed negative perceptions about AfL. They further added that they did not like to follow and implement AfL. They added that AfL increased their workload and it was very time-consuming. Furthermore, they opined that students had a poor attitude towards learning because AfL demanded acontinuous learning and assessment system. In this regard, participant-2 presented her view like this:

Assessment for learning (AfL) does not help students in their learning. The AfL gives chance of duplication, If the student is absent in school due to some causes there is the chance of copying from his or her friends. sometimes the parents or elders may do the task for the students.

Two participants among the six shared that the task of adjusting instruction was very difficult. It was a burden and ineffective due to the teachers' limited time and resources. The 5th participant's version was similar with this notion, So, it would be better to state the opinion of the 5th participant:

> In Afl, practice teachers need to aligning instruction with the targeted outcomes and creating differentiated teaching strategies and learning opportunities for helping individual students move forward in their learning. Managing instruction in the pace of students learning is very difficult for me. Furthermore, collecting students' information regarding learning skills, the teachers have to manage each portfolio for an individual within a limited time.

The above stated notion of the teacher indicates that implementing AfL is difficult task. Teachers have a negative attitude about AfL. AfL demands democratic classroom culture, where students feel safe to say what they do not understand and give and receive constructive feedback from peers. The teacher must establish a supportive and collaborative classroom environment, but a teacher who does not want to share power cannot apply AfL. In an AfL classroom, there must be distributive power; this means that the relationship in the classroom must be supportive and collaborative. There must be mutual trust among students and teachers. Teachers who have the old mindset do not want to share the power. In such an environment, students feel unsafe and for learning. In the opinion of the participant teacher, it is very difficult because of the time limitation. He has realized that the time of 45 minutes was not suitable to record all information of the students in the classroom. In the AfL system, teachers need to be more willing to provide

helpful feedback and suggest additional activities for further learning. But the participant teacher expressed that students understood the feedback as criticism and they did not perceive it as needed information for further improvement in their learning.

Infrastructure and Resources for the implementation of AfL

This theme was generated based on interviews with the majority of the interviewees. Regarding the proper implementation of AfL, the educational institution should be well equipped. During the interview, the teachers viewed that there was a lack of appropriate materials, resources, and infrastructurefor the effective implementation of AfL. AfL is not a single entity; it is the combination of different aspects such as aligning instruction, identifying the particular learning needs of the students, and selecting and adopting the learning needs of the students. It requires many resources or materials such as papers, files, and separate racks for portfolios to keep the individual records of the students. Individual recording systems, and progress charts are very important components for the proper implementation of AfL. As the interviewee shared, the implementation of AfL in Nepalese schools found a very poor situation; most of the schools lack even the fundamental AfL materials like forms and files. This is justified by the opinion of participant 1:

> There are many challenges for the proper implementation of AfL because we do not have extra resources for the project work and our classroom environment is not appropriate for proper implementation of AfL. She further added that in most of the cases our head teacher could not provide us extra materials such as file, cardboard and color. In the absence of the materials we (teachers) could manage these materials by ourselves.

This evidence proves that schools lack the needed basic materials for the proper implementation of AfL in the school. Most of the teachers, who are teaching in the government schools, are facing the same problems or challenges of materials while implementing AfL in the teaching field. Not only materials and resources, but the practices of AfL also require other infrastructures like racks, extra rooms, and well-equipped and well-managed classroom. This theme is generated from the interviews of participant 3, who reported, "Poor infrastructure is a problem for the teacher. In our school, there are no proper racks to manage the students' portfolios, which are the main challenge to implement AfL."

As the participants reported, most of the government schools of Nepal did not have proper physical infrastructure to manage AfL and its tools like a record file. Based on the above

mentioned information expressed by the teacher, AfL is not the "one size fit s all" practice. AfL requires a feeling of comfort while debating and defending their viewpoints; at the same time, there should be a culture of sharing ideas between and among the teachers and students. In AfL, teachers and students both determine the task. But our curriculum is content-loaded and out testing culture is content-based rather than performance -. Such a curriculum demands teacher-led activities and accomplishment of the content within a fixed time.

Participant 4 reported a similar experience while implementing AfL:

> Poor and unconducive classroom environment works as a barrier for proper implementation of AfL. For classroom discussion and class work many schools lack sufficient rooms, desks and benches, and well-prepared teachers.

From the above view mentioned by the participant teacher, it is clear that most of the Basic level teachers are facing the challenge of poor infrastructure for the proper use and implementation of AfL. With limited rooms and buildings, the implementation of AfL is limited in imagination. In this way, based on the interview information, a conclusion can be drawn that insufficient resources, materials, and poor infrastructure are the hindrances for the proper implementation of AfL at the Basic level. Due to these causes, teachers were found reluctant to implement AfL.

Workload and Time Limitation for AfL

Classroom crowdedness and over workload are other barriers to the proper implementation of AfL in the school. Based on interview information obtained from the participant, it can be drawn that most of the teachers have to engage in different tasks such as teaching, homework checking, discussing, and involving the students in project work within the limited time bound. On the other hand, they have an overload of work for the proper implementation of AfL. A female participant expressed her opinion in this manner:

> I felt that the heavy workload of the teacher is also a problem for the teacher. she has to teach, take attendance, use materials, discuss with students, check homework and classwork, and assess their performance within the limited time of 45 minutes.

The participant expressed her view about the heavy workload and limited time bound for the teachers as a challenge of AfL in teaching and learning activities at the basic level. As she reported, most of the teachers in Nepal were very busy with teaching tasks only. They had to

teach 6/7 periods per day, so teachers did not have extra time to carry out the different activities for the improvement of students' learning. Overwork, a busy schedule, and class crowdedness are the other hindrances for the proper implementation of AfL.

AfL Related Training Program for Teachers

This theme is based on the opinion of the two teachers who were involved in the interview. They were participant 1 and participant 4. Regarding the teacher training and inclusion of AfL-related content, they opined that the existing teacher training program did not incorporate the AfL-related content and training manual.

Assessment is an integral part of the teaching and learning process, not something just done after instruction to document student academic achievement. Thus, incorporation of an assessment literacy course in a teacher training course is very important and decisive. Assessment literacy signifies what assessment knowledge and skills are needed by teachers. Regarding the inclusion of an AfL-related training package, participant-1 shared his opinion in this way:

> AfL is a new concept and approach for teachers. Neither training package nor resource persons of the training program talk about it. As I have experienced, training agencies have not provided any training programs for the teachers about the proper implementation of AfL in the classroom situation. So, in my realization, the lack of proper training for the Basic Level teachers about AfL is a challenge.

Conclusion

Teachers have a prominent role in the proper implementation of AfL. So, we can say the teacher is the key agent for the proper implementation of AfL. Through this study, I tried to explore teachers' perceptions and practice of AfL. The information obtained from teachers' interviews depicts that many teachers have agreed that AfL is necessary to be implemented in the classes for effective teaching and improvement in students' learning process. Teachers' feelings are that they can not implement AfL in the existing situation. It can be concluded that in the absence of the required materials and trained teachers, AfL could not be implemented properly. Most of the teachers have expressed that AfL helps students in the improvement of their learning and it also helps bring reform in the pedagogy.

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Analysis of NASA Test Items in Mathematics

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Abstract

The reflective review aims to analyze the mathematics test items used by the Educational Review Office (ERO), Nepal, for grades 5, 8, and 10 within the framework of the National Assessment of Student Achievement (NASA). Using qualitative document analysis, a few items are also compared against the international standards of PISA and TIMSS to assess curricular alignment and cognitive demand. The results indicate that some institutional strengths, such as bilingual accessibility (Nepali and English), the coverage of learning outcomes as mentioned in the national curriculum, and the use of student background questionnaires to link achievement to socio-economic factors, are well connected. However, a comparative review signals that NASA items are heavily weighted toward knowledge recall and the routine procedural nature of problem solving, often featuring decontextualized mathematical items. The international benchmarks emphasize mathematical literacy, requiring students to develop, apply, and interpret mathematics

in complex real-world contexts. The recommendations include incorporating context-rich items and a greater proportion of higher-order reasoning tasks to better align with global competency standards.

Keywords: assessment, mathematics, mathematical literacy, real-world problem

Context and Background

The Educational Review Office (ERO), established under the Ministry of Education and Sports, is the body responsible for evaluating the quality of school education in Nepal. A foundation of its evaluation strategy is the National Assessment of Student Achievement (NASA), which serves as a large-scale, system-level assessment of student achievement. Unlike traditional examinations designed for student certification, NASA's primary goal is to provide evidence-based feedback on the effectiveness of the national-level curriculum, pedagogical practices, and assessment strategies.

NASA focuses on core transition points in the school system: Grades 3, 5, and 8 (completion of basic education) and Grade 10. The assessments include student background questionnaires that collect information on socioeconomic status, home language, ICT access, and teacher-student interactions, enabling a nuanced understanding of the relationship between student achievement and learning environments.

In recent years, NASA has not only focused on assessment and monitoring; it has also prioritized educational reform by generating nationally representative evidence on students' learning achievement and providing evidence-based feedback to evaluate the effectiveness of curriculum implementation, teaching practices, resource allocation, and educational equity. The findings from NASA have been used by policymakers, curriculum developers, teacher educators and development partners to identify learning gaps and inform targeted interventions to improve educational quality. As Nepal's school education curriculum moved into a competency-based approach and learning-centered reforms (CDC, 2019), the role of NASA has become increasingly important in assessing whether students are acquiring the competencies envisioned in the national curriculum.

The growing emphasis on students' performance assessments conducted by international agencies such as the Program for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) has also increased expectations regarding the quality and scope of national assessments. The large-scale assessment programs such as PISA

and TIMSS have expanded the understanding of mathematical proficiency beyond procedural knowledge to include reasoning, problem-solving, communication and the application of mathematics in authentic contexts. Consequently, national assessments are increasingly expected not only to measure curriculum alignment but also to provide evidence of students' deeper understanding and ability to apply mathematical knowledge in everyday life and future learning. Within this context, a reflective analysis of NASA mathematics test items is both timely and necessary to determine the extent to which these items reflect mathematical competence and align with emerging international standards for educational assessment.

Purpose: A Reflective Analysis of Test Items

The purpose of this review is to examine the test items of mathematics used in the National Assessment of Student Achievement (NASA) at grades 5, 8, and 10 and evaluate whether they provide meaningful evidence of students' mathematical competencies. Specifically, the review explores whether the assessment items adequately capture the scope of mathematical learning envisioned in Nepal's national curriculum, including conceptual and procedural understanding, problem-solving abilities, reasoning, and the application of mathematical knowledge and skills across different contexts. Given the emphasis on a competency-based curriculum, it is important to assess whether NASA test items measure not only what students know in the knowledge domain but also what they demonstrate with their mathematical knowledge. More specifically, this paper examines the curricular alignment by investigating how well the assessment items reflect the intended learning outcomes. Second, it analyzes the cognitive demand of the items by considering the balance among knowledge recall, procedural application, conceptual understanding, and higher-order reasoning. Third, it also argues whether the NASA mathematics items align with the internationally recognized assessment frameworks, particularly the mathematical literacy framework of the Program for International Student Assessment (PISA) and the content and cognitive domains of the Trends in International Mathematics and Science Study (TIMSS).

Ultimately, the purpose is not only to evaluate the quality of existing test items but also to generate recommendations to strengthen the validity, significance, and policy usefulness of future test item construction.

Method: Document Review

This study employs qualitative document analysis, a systematic procedure for reviewing and evaluating resources to extract meaning, gain understanding, and develop empirical knowledge (Bowen, 2009). The following resources were reviewed during this process.

Grade 5: Based on test sets G5M1, G5M2, and G5M3 (2022 and 2026)

Grade 8: Based on test sets G8M1, G8M2, and G8M3 (2025)

Grade 10: Based on test sets G10M1, G10M2, and G10M3 (2023)

Strengths of the NASA Items

This section demonstrates the strengths of the NASA items for grades 5, 8, and 10.

Strengths of NASA Items: Grade 5

The NASA test items used in grade 5 are designed to assess students' foundational numeracy skills and basic mathematical reasoning. One of the strengths of these sets was their inclusive bilingual presentation, in which the items were developed in both Nepali and English. The instructions and questions are provided in both Nepali and English, ensuring that students are assessed on their mathematical competence rather than being limited by language proficiency.

The assessment items show a strong alignment with basic life skills and foundational mathematical concepts. For example, rather than simply asking for definitions and procedures, the items require students to interact with visual representations of real-world objects, such as calculating the perimeter of a classroom "whiteboard" or finding the volume of a 3D box. This approach bridges the gap between abstract mathematical concepts and physical reality. The items that require students to complete shopping bills (listing goods, rates, and amounts) and to read simple bar graphs of student preferences provide enough space for students to use their creativity. These tasks measure functional numeracy, which is essential for lower-grade students.

Furthermore, the grade 5 items employ effective cognitive scaffolding that helps students develop a deeper understanding, beginning with lower-level tasks. The assessment begins with multiple-choice items that cover basic recall and identification skills, such as identifying the number of sides in a triangle or rounding numbers to the nearest thousand. It then proceeds to more complex operations, such as simplifying algebraic expressions. By asking students about their home language, parental education, and access to ICT (such as smartphones and the

internet), the correlation between foundational achievement and socio-economic factors can be established, providing a rich dataset for policy improvement.

The curricular alignment seems strong in areas such as number sense and simple geometric identification, reflecting the basic education focus on foundational literacy and numeracy. Regarding cognitive demand, items are heavily weighted toward recall (e.g., counting the sides of a triangle) and procedural application (e.g., rounding numbers), with limited emphasis on higher-order reasoning. This balance between conceptual and procedural knowledge in mathematics (Manandhar et al., 2022), ensures that students have basic skills before encountering complex mathematical modeling in higher grades.

Strengths of NASA Items: Grade 8

In grade 8, we can observe that the NASA items attempt to bridge the gap between basic arithmetic and secondary-level mathematics. In these items, the gradual focus on formal logical structures and scientific representation of mathematics is the major strength. Items such as students needing to use scientific notation to write numbers or to solve disjoint sets problems show evident progression moving towards building rigor in secondary education.

The geometry in Grade 8 is particularly well-constructed, with a focus that goes beyond simply identifying shapes, applications, properties, and formulas. For instance, learners are asked to calculate the area of a rhombus when they are provided with the lengths of the diagonals, or to determine the area of a circle given a specific radius. This requires students not only to remember the formula but also to apply it to a given model. The use of visual-spatial reasoning, which is also considered a core mathematical skill at the school level, is a strength evident in items involving comparing heights using ratios or identifying coordinates on a grid.

The Grade 8 items also focus on assessing their fluency in algebra. Having the components of the Highest Common Factor (HCF) and Lowest Common Multiple (LCM) for algebraic expressions, along with factorization-related tasks, ensures that the assessment covers the core curricular goals in the completion of basic education. Dividing into two groups, group A and group B, with objective and subjective questions, allows for balanced assessment of both quick procedural knowledge and step-by-step problem-solving skills for contextual problems. Such a structure and set of questions strengthen the data-driven assessment. It also adds value by probing learners about their learning environment, ICT use in the classroom, teacher support, and even exploring perceptions of bullying, which guides ERO in understanding the contextual

barriers to learning at this critical age. The items are well aligned with the competency standards, especially in the areas of introducing the notation of formal algebra and demonstrating geometric knowledge and competency by the end of basic level education.

The focus here shifts significantly from cognitive demand to assessing procedural applications for executing multi-step operations, such as finding LCM or calculating areas. While the reasoning domain is not completely ignored and is well incorporated, significant emphasis is given to the assessment of conceptual understanding and procedural fluency.

Strengths of NASA Items: Grade 10

The Grade 10 NASA items are highly aligned with the secondary-level standards and are technically advanced. Integrating complex geometric and trigonometric applications together is the key strength of these items and the assessment. It covers topics such as Circle Theorems, which include properties of tangents and cyclic quadrilaterals; identifying the volume of combined solids, such as a cone surmounted by a hemisphere; and solving trigonometric problems, including angles of elevation. These items require students to apply and learn multiple mathematical concepts in a single solution.

Additionally, in Grade 10, another key strength is aligning the assessment items with international benchmarks like PISA. One Grade 10 set explicitly includes a PISA-labeled problem (i. e., The Farmhouse Roof), which requires students to translate a complex 3D physical structure into a mathematical model to find area or volume. This shift toward mathematical literacy, the ability to use math in unfamiliar contexts, is a major step forward for the NASA framework. Through the algebraic items, students can demonstrate a high level of rigor, involving the rationalization of surds and the solution of simultaneous equations with multiple variables.

Grade 10 sets expand beyond just statistical applications. Students are not only given the chance to read graphs but are also asked to identify median classes and find quartiles from grouped data, which are essential skills for data interpretation.

Finally, another key strength is the comprehensive background questionnaire. Through the questionnaire, they collected detailed data on their students' future career aspirations, their specific use of and competency with digital materials such as YouTube videos for learning, and their relationships with their teachers. This allows ERO to produce reports that not only inform what students know but also provide explainable, data-backed evidence on why they might be succeeding or failing, based on their access to technology and the quality of classroom

instruction. This holistic approach adopted by NASA Grade 10 items makes it a powerful tool for system-wide educational reform.

Grade 10 items show strong curricular alignment with the appropriate-level standards and integrate topics such as trigonometry and statistics that are essential for higher-level education pathways. The cognitive demand of the assessment is higher in this grade, striking the right balance between routine procedural application and items requiring a deep conceptual understanding of geometric theorems. Notably, the inclusion of the farmhouse roof task assesses the demand for higher-order reasoning, which, as a result, challenges students to formulate and interpret mathematical models in complex real-world contexts.

Strengths of PISA and TIMMS Items

The development of PISA and TIMSS items followed a specific international process to ensure cross-national validity and scientific reliability. The International Association for the Evaluation of Educational Achievement (IEA) developed the TIMSS items and organized them into specific content domains (Number, Algebra, and Geometry) and cognitive domains (Knowing, Applying, and Reasoning). These items are intended to provide feedback on students' understanding and allow education systems to benchmark their performance against international averages. Similarly, PISA items are organized in 'unit form,' consisting of a stimulus, such as a photograph, diagram, or real-world scenario, followed by several questions. The key focus of PISA is mathematical literacy, assessing how well 15-year-old students can apply their knowledge to real-life challenges, such as interpreting the area of a continent from a map scale or modeling the structure of a farmhouse roof. The latest question patterns (i. e., context-driven mathematical tasks) developed by the CDC also align with this principle.

A notable similarity between these international assessments and ERO's NASA items is the shared goal of system-level monitoring rather than individual certification. NASA items for Grades 5, 8, and 10 mirror the cognitive scaffolding found in TIMSS, moving from basic knowledge recall (Group A) to more complex application and reasoning (Group B). Furthermore, NASA has begun to explicitly integrate international standards; for example, the Grade 10 NASA assessment directly includes released PISA items, such as the "Farmhouse" pyramid roof problem, to measure higher-order modeling skills. Both NASA and TIMSS also utilize released items to identify student misconceptions and provide a basis for remedial pedagogical strategies.

The differences lie largely in the contextual complexity and cognitive depth of the items. While PISA and TIMSS items almost always require students to interact with a complex as rich stimulus such as a "Walking" formula for pace length or a "Braking" distance chart, many NASA

items remain "decontextualized" mathematical expressions or routine procedural tasks. For instance, NASA Grade 5 and 8 items often focus on direct simplification or standard geometric identification. In contrast, PISA items frequently require students to "formulate" a problem from a real-world context before solving it. Additionally, PISA and TIMSS provide highly detailed coding guides with multiple "partial credit" levels and examples of common incorrect student responses to ensure objective scoring across dozens of countries, a level of technical documentation that is more extensive than the basic scoring keys typically seen in NASA sets.

The scholarly work of Joshi (2023) provides critical evidence for this review, specifically identifying the need to "mathematize" real-world problems in the Nepali context. Joshi's research highlights that, although the national assessment aligns well with content strands such as arithmetic and algebra, there is a noticeable gap in assessing contextual complexity and higher-order reasoning, as recognized by international benchmarks. He identifies linguistic and cultural barriers as significant factors. According to him, assessments must move beyond measuring routine application to assessing how effectively students can formulate and interpret mathematical concepts across diverse situational domains, thereby driving pedagogical reform (Joshi & Shrestha, 2022).

Finally, a structural difference is NASA's unique integration of Student Background Questionnaires directly within the test booklets. While PISA and TIMSS collect background data, NASA's inclusion of questions regarding home language, ICT access (smartphones and internet), and even perceptions of teacher bullying alongside the math items allows for an immediate, localized correlation between achievement and Nepal's specific socio-economic challenges. Furthermore, NASA items are fundamentally bilingual (Nepali and English) to ensure linguistic inclusivity. While PISA and TIMSS are translated into many languages, they do not typically present multiple languages simultaneously on a single test form. These differences draw our attention to NASA's role as a tool for national policy reform that is gradually evolving toward international literacy-based frameworks.

Comparing NASA items and PISA/TIMMS Items

This section compares item modalities between NASA items and PISA/TIMSS items.

Contextual Questions

NASA items developed by the Educational Review Office (ERO) typically feature simplified real-world contexts or "decontextualized" mathematical expressions, such as calculating the perimeter of a classroom whiteboard, the volume of a standard box, or finding the

HCF of algebraic terms. While ERO has begun to integrate international standards by including PISA-style units like the Farmhouse Roof in Grade 10, many items remain limited to routine school scenarios. In contrast, PISA items are built around complex "units" that provide extensive stimuli such as photographs, map scales of Antarctica, or diagrams of braking distances requiring students to extract and interpret data from authentic real-world environments. Similarly, TIMSS items use rich scenarios, such as multi-step problems involving letter writing or garden patterns, whereas NASA's contexts view procedural tasks as secondary.

Level of Cognitive Difficulties

In the NASA items, the cognitive domain has primary weightage for knowledge recall and routine procedural application. In Grades 5 and 8, students are often asked to identify the number of sides in a triangle, state the rounding numbers and write values in scientific notation. Even in Grade 10, despite placing higher weightage on cognitive demand, students often perform memorized proofs of standard theorems, such as proving the area of a parallelogram is double that of a triangle on the same base. An analysis of Nepali middle-school mathematics textbooks showed that more than 92% of the exercise tasks were of low cognitive demand, focusing more on procedural execution without paying much attention to meaningful conceptual connections, while over three-quarters of the tasks were supported by similar worked examples (Basyal et al., 2022). Conversely, TIMSS and PISA are explicitly scaffolded across Knowing, Applying, and Reasoning domains. For example, TIMSS includes items that challenge students to identify the 100th term in a sequence, requiring a level of abstract reasoning that extends significantly beyond the routine mechanics typically assessed in NASA.

Mathematical Reasoning

In NASA's test items, mathematical reasoning is generally measured by demonstrating linear, logical steps in multi-step word problems or formal geometric proofs. These items, such as finding the value of in a Venn diagram or calculating currency exchange, usually lead to a single objective result. In contrast, PISA items demand higher-order reasoning that is often qualitative, such as explaining why one irregular shape has a larger area than another or describing a method to estimate the perimeter of an irregular figure. Similarly, TIMSS reasoning items require students to generalize patterns or justify why a specific arrangement of digits produces the greatest possible product, emphasizing the thinking process over the final calculation.

Procedural and Conceptual Understanding

NASA items place a high standard on procedural fluency, with a significant portion of the test booklets dedicated to the direct simplification of expressions or the solving of equations. Conceptual understanding in NASA is often assessed by applying specific definitions, such as those involving proper and improper subsets. PISA and TIMSS, however, focus more on conceptual modeling; for instance, PISA requires students to match height-time graphs to the physical shape of a water tank, testing the concept of rate of change rather than just volume formulas. While NASA Grade 10 items involving combined solids (e.g., a cone surmounted by a hemisphere) test application, they remain largely formulaic compared to the literacy-based conceptual challenges found in international assessments

Suggestions/Implications to ERO

To strengthen the National Assessment of Student Achievement (NASA) and align it with international benchmarks like PISA and TIMSS, the Educational Review Office (ERO) should implement the following five strategic enhancements:

First, ERO should move from a cognitive balance of tests of knowledge recall and routine procedural application (such as basic rounding or simplifying "decontextualized" algebraic expressions) towards the more "Reasoning" domain, which demands that students generalize patterns, justify their mathematical choices, and attempt to solve non-routine problems. Second, the assessment should change from isolated questions to context-rich "units" modeled after PISA, featuring a central stimulus, such as a real-world scenario involving construction, market, trade, or geography, that requires students to formulate, apply, and interpret mathematics in an authentic environment. Third, systematic effort should be made to move beyond "functional numeracy" toward higher-level mathematical modeling, challenging students to critique data sets or identify bias in statistical representations. Finally, with growing access to smartphones and the internet, ERO should begin developing Computer-Based Assessments (CBAs) to measure dynamic reasoning and digital literacy skills and competencies that are increasingly prioritized in the global assessment system.

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English Language Students' Experiences with Internal Examination in Higher Education

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Abstract

Internal Examination is an integral part of the assessment system in education in Nepal and across the globe. Existing research gives limited attention to how bachelor-level English language learners in Nepalese universities experience internal examinations despite their important role in student monitoring and academic influence. The present study is qualitative in nature, based on the experiences, problems, and opinions of the fourth-year students of the Bachelor of Education (B.Ed.) in English at Mahendra Multiple Campus (MMC), Dharan,

regarding the internal examination. Open-ended questionnaires and Focus Group Discussions (FGDs) were used to gather data from purposively selected fourth-year students who had experienced internal exams in their previous years. The four main themes drawn for the thematic analysis were Assessment Practices, Student Effort and Preparation, Institutional Support, and Teacher Support. Results reveal that students identified internal assessment as an effective instrument for following their learning progress and preparing for external assessment, but at the same time, there were challenges to be overcome, such as limited assessment activities, inconsistent assessment implementation, non-transparent and delayed assessment feedback, poor assessment planning, limited access to learning resources, and inadequate teacher support in assessment. The study makes a valuable contribution to the conversation about assessment reform in the context of the higher education system in Nepal.

Keywords: internal examination, assessment practices, students' experiences, English education, higher education

Introduction

The assessment process is one of the most important aspects of the learning process, and it sets parameters for measuring learning and its progress, and identifying the areas of learning that require development. Internal examinations have a special role in the assessment process in higher education among different types of assessments. An internal examination is conducted by the course teachers and the administration of the institution, as opposed to the external exam conducted by national or regional exam offices. They can take a variety of forms, such as written tests, oral presentations, group work and project work, and are designed for a continuous, cumulative and holistic representation of student achievement over the course of the year (Badyal & Singh, 2018).

Internal examinations in Nepal have slowly been formalized as a part of the assessment system in higher education. There are different provisions of internal assessment under Tribhuvan University (TU), the largest and oldest university of Nepal, according to educational level and faculty. Internal assessments contribute up to 40% of the total weightage in master-level (M.Ed.) programs. This system is not only designed to evaluate students but also to help motivate them to keep studying content throughout the semester, as opposed to depending on a single high-stakes final exam. Internal assessment will generally include mid-term tests, presentations, attendance, and assignments handed in. But in a bachelor's degree in the regular annual programs under the faculty of education, there is no formal provision of internal assessment. But despite the

absence of formal policy, many campuses manage internal examinations for formative evaluation purposes by their own internal decision.

The process and implementation of the internal examination system in many institutions in Nepal are not clear and supportive for the learners. Students often get unclear standards of assessment, inconsistent arrangements for exams, and low or poor levels of feedback (Acharya, 2022; Pageni, 2025). However, previous studies examining this have a tendency to concentrate on structural or policy issues of assessment rather than the lived experience of the student. This gap is significant when considering English language learners at the undergraduate level who also have the additional challenge of navigating the assessment system in addition to linguistic and pedagogical challenges. This study aims to fill this gap by focusing on the voices of B.Ed. fourth-year English students of MMC Dharan. The final year of bachelor-level students has faced the internal examination system for several academic years, which means that they have the benefit of being able to share their experience and perspectives from different years of classes. Regarding the gap, this study aims to explore what students generally state about experiencing the internal examination and its process, to look into what difficulties students face in the internal examination, and to explore how the internal examination system can be improved to facilitate students' learning.

This study is mainly based on two theories. Constructivist Learning Theory (CLT) by Piaget (1952) offers the model that learning is meaningful and acquired through interaction with the content, and is not passively received; knowledge should be constructed through the design of assessment, not the passive reproduction of information. The Assessment for Learning (AfL) framework, developed by Black and Wiliam (1998), emphasizes the place of assessment in facilitating better learning, with feedback, student engagement, and clear indications of learning goals at the center. These can be used together to give a prescriptive standard to examine and rethink the existing internal examination processes at MMC Dharan.

Literature Review

Piaget (1952) states that the learning process should not be passive, but it should involve students in the creation of meaning by participating in a variety of experiences and reflecting on them. In higher education assessment, constructivism proposes the use of assessment formats that stimulate analysis, application, and creation instead of memorization (Fuentealba, 2011). Assessment tests what we have memorized, which contradicts the actual principles of learning. Structured project work, presentations, and group activities can be better designed in accordance with constructivist principles because they demand genuine cognitive activity.

Black and Wiliam (1998), who proposed the assessment for learning (AfL) approach, argued that assessment serves a purpose that goes beyond simply recording to enhance learning. It emphasizes how assessment should be employed not just to measure learning, but also to enhance and build positive knowledge. Some of the key AfL phrases are: "specific and actionable feedback," "self- and peer-assessment," and "assessment data" used to adjust and improve instruction. If internal exams grant marks without any comments, the formative value of the marks is lost (Sadler, 1989). Harlen (2007) also states that feedback must not be supplementary, but the central mechanism through which assessment promotes learning growth. Although these conceptual frameworks are not integrated, they suggest a basis for the analysis of internal examination practices in this study.

Assessment is an agreed, shared component of students' learning experiences, which has the capacity to impact on students' learning by influencing their preparation, participation and reflection. Through appropriate, timely and constructive assessment, and well-planned assessments, there is increased student engagement, motivation and confidence. More involvement brings in more active learners, self-regulated learners and better academic outcomes, which has a positive impact on learning outcomes. On the other hand, ambiguity in assessment processes, inadequate feedback, and inconsistent practices have a negative impact on engagement, anxiety, and learning. In this sense, assessment practices, feedback, students' engagement, and learning experiences are all tightly bound to each other, where each of them influences and reinforces the others in the teaching-learning process.

There has been an increasing interest in assessment practices in the higher education context in Nepal; however, student experience is under-researched. Based on the realities of the present examination system, Acharya (2022) pointed out some existing weaknesses, such as limited accountability of examiners, low use of technology and excessive dependence on paper-and-pencil formats. The study pointed out that these issues reduce the quality of higher education in comparison to international standards.

In the same way, a case study at Tribhuvan University by Adhikary (2023) showed that internal assessments could positively affect students' motivation, study habits and confidence. But the research also reported that there was a lack of consistency in the assessment criteria used and the absence of adequate infrastructure, which greatly affected their effective implementation. Significantly, students appreciated the formative assessments for the feedback they received in real time, and good teacher/learner interaction to enhance the learning process.

Ranjit (2022) explored the English language assessment policies and practices in Nepal and found that there is a gap between the policy in the form and the classroom practices. Traditionally, examination-based assessment is still predominant in most classrooms, whereas national policies suggest a different way of assessment, i.e., communicative and continuous assessment. The research identified inadequate teacher training, inadequate resources, and misalignment between curriculum goals and assessment methods as major factors.

In recent years, educational policies in Nepal have been enhancing communicatively oriented English teaching and continuous evaluation, as mentioned by Shrestha and Gautam (2022), with the assistance of the British Council. But, in reality, the classroom is still dominated by memorizing and by examination-oriented teaching. They suggested stronger teacher training, the shift towards flexible assessment methods, and enhanced policy-practice alignment.

Khatri (2025)attempted to explore the perception of system fairness in internal assessments for college students in Nepal and concluded that, in the case of college students, subjective biases of teachers often balance objective standards of evaluation. Another issue that emerged from the study was the absence of timely and relevant feedback, which does not allow students to make meaningful changes in their next exams.

For internal assessments, Gaulee and Bista (2019) pointed out that internal assessment could be used to improve student motivation and engagement, such as through the use of formative feedback mechanisms. But there were inconsistencies in assessment criteria, and the lack of institutional support for the effective application of the internal assessment process was reported. The results are corroborative of those of Adhikary (2023) and repeat the need for consistency in the assessment process.

Recently, an exploratory examination by Parmigiani et al. (2024) examined how formative assessment is implemented within higher education programs for future education professionals. As students participate in continual embedded formative assessments, they gain a greater understanding of the complicated assessment concepts and are extremely enthusiastic about applying various forms of assessment. The key findings of the study include that formative assessment needs to be an ongoing activity rather than episodic and must be woven into the learning process to facilitate self-reflection as part of learning (Parmigiani et al., 2024). This international example illustrates just what is lacking in the Nepali scenario to break out of the summative, teacher-focused culture and move to a developmental system of feedback which is provided in a timely and actionable manner.

Although previous studies in Nepal have examined assessment policies, implementation, and institutional challenges, little is known about how undergraduate English students actually experience internal examinations in their day-to-day learning. Their perceptions of assessment practices, feedback, fairness, and institutional support remain underexplored. Addressing this gap is important because students' lived experiences provide valuable evidence to improve assessment practices and make internal examinations more transparent, supportive, and effective for learning. Several related studies provide insights into the structural and policy frameworks of assessment, but few are from a student's perspective, especially at the bachelor's level among English Language Learners. Existing works mostly approach students as the objects of the assessment process rather than as informed voices with meaningful comments on assessment quality. This research aims to fill that gap by documenting the first-hand experiences of B.Ed. English students in MMC Dharan and how their experiences have translated into evidence-based insights into assessment reform.

Methods and Procedures

The research design employed in this study is a qualitative research design, integrating descriptive and thematic analysis to explore students' experiences with internal examination. The qualitative descriptive research design can be used in this study because the research is used to describe and understand the natural conditions of students related to the internal examination research. It is based on the perspectives, perceptions, and meanings attributed by the participants and is operated by qualitative data; thus, a rich description and thematic analysis are possible instead of numerical measurement (Jackson et al., 2007). The study is not designed to measure student attitudes numerically, but rather it aims to describe the texture, complexity, and situatedness of the lived experience of a group of English language learners in a specific institutional context.

Participants and Sampling

This research was conducted with B.Ed. fourth-year major English students at Mahendra Multiple Campus (MMC), Dharan, one of the constituent campuses of Tribhuvan University. As the participants, all 46 students of B. Ed. fourth-year major English students were selected using the purposive sampling method who follow these criteria: (a) currently pursuing a B.Ed. degree in their Final Year, (b) majoring in English as the major subject, and (c) first-hand experience with conducting internal examinations within the previous academic years. Similarly, four students (two boys and two girls) were purposively selected for a focus group discussion (FGD). The

reason for selecting fourth/final year students was that they have good experience with internal examinations and they can provide accurate, comprehensive, and trustworthy data for the study.

Data Collection Procedure

To complete the study, two basic data collection tools were used for comprehensive data collection. Firstly, an open-ended guideline questionnaire, having 10 questions, was used to gather individual written responses about the experience, perceptions, and suggestions of students with internal examinations. Open-ended questions gave participants a chance not to be restricted to what to say, but rather to speak in their own terms. Secondly, an FGD was conducted for about two hours with the selected students, for gender representation. Secondary sources such as peer-reviewed journals, research reports, policy documents and books were also used to contextualize primary findings within the wider research literature.

Data Analysis Procedure

A systematic qualitative thematic analysis approach, which was described by Clarke and Braun (2014), was used for data analysis. The researchers reviewed responses to the questionnaires and the FGD transcripts several times to reach data familiarity. Second, to generate data-driven themes, the initial codes were identified by attending to the common words, phrases, and ideas of students' experiences. Third, these codes were clustered into larger patterns or categories, which came to represent four general themes: Assessment Practices; Student Effort and Preparation; Institutional Support; and Teacher Support.

Direct evidence from the responses of the students was provided for each theme, with verbatim quotations where appropriate to allow for the authenticity of the voices of the students. Descriptive analysis was applied to summarize general trends and deeper interpretive insights gained through a thematic analysis. Primary data were also checked for cross-confirmation against secondary data to make it more valid with the empirical evidence.

Ethical Considerations

As an ethical consideration, all participants gave informed consent before data were collected. Participation was entirely voluntary, and all participants were informed of their right to withdraw at any time without consequence. This study mentions no specific identifying information provided by the respondents, and confidentiality and anonymity were maintained throughout the research. Data were only utilized for academic purposes and stored securely.

The questions were put in a respectful and non-threatening way, and throughout the study, the principle of non-maleficence was followed. All secondary sources were properly cited according to APA 7th edition, and EndNote software was used to manage the citations and references.

Results and Discussion

Questionnaire responses and FGD transcripts gathered from data collection were thematically analyzed to derive four thematic areas: Assessment Practices, Student Effort and Preparation, Institutional Support, and Teacher Support. These four themes were followed by three sub-themes each. The following is a discussion of each theme using participant quotations and literature. Verbatim quotes are attributed by the type of source and gender, e.g., FGD Participant 1 (Female) or Questionnaire Respondent (Male).

Assessment Practices

As Sapkota (2022) notes, assessment encompasses any method or tool that helps educators collect evidence about student learning in relation to pre-established goals. For this study, assessment practices are defined as the formats, fairness, how the assessment is marked, frequency and feedback mechanisms in relation to internal assessments conducted at MMC. The data show that despite the formative purpose of the system, it is very unsatisfactory in terms of devices used, i.e., predominantly written formats, and does not offer sufficient grading and feedback mechanisms to be of value in the formative process.

Limited Assessment Formats

Students reported that internal examinations of the B.Ed. at MMC were almost entirely conducted as written assessments (examinations), and there was no systematic provision for using oral presentations, group-based projects, or portfolio-based assessments. This uniformity is a disadvantage to students with skills beyond written work. One participant shared the issue as:

> When we have to write exams, that's nothing; it is only written exams, sometimes if we had oral exams or group projects, at least we would be learning the real thing. I think I am good at presenting ideas orally, but that has never been evaluated. (FGD Participant 1, Female)

Another participant pointed to a unique opportunity that demonstrated the educational benefit of differentiated assessments:

> So, one teacher in the third year assigned us a group project for an internal exam, that was where I learned the most throughout that whole year. We engaged in collecting materials,

> discussing, and dividing the work among the groups. But other teachers didn't provide such a chance to us. (Questionnaire Respondent, Female)

A constructivist perspective suggests that restricting assessment to written tests might deprive students of the chance to demonstrate understandings in their practical applications, their reasoning in collaboration with others, and their creative thinking. All of these are integral to the process of meaningful knowledge construction as described by Piaget (1952). However, assessment as a tool to support learning is very effective when it is designed to measure a variety of student abilities (Fuentealba, 2011), and the AfL framework itself also recommends a variety of different types of assessments that actively involve students in the learning process (Black & Wiliam, 1998).

Grading Fairness and Transparency

Participants who engaged in both the open-ended questionnaire and the FGDs were concerned about the inequity and lack of transparency in the system of scoring and evaluation. Students claimed they were awarded marks without any explanation of which ones were correct, incorrect, or insufficient. One of the participants explained his experience:

> I studied very hard, but the teacher just wrote down the mark; he didn't explain why I got a wrong answer on a particular question, or tell me what I did right. I felt like I was given a mark without any meaning. (FGD Participant 2, Male)

Another key issue of concern was inter-teacher marking standard variation, as they stated. A female participant expressed:

> According to the result given, how can the same students get vast different marks from one teacher (subject) to the other in the same department, since one teacher scores nearly everyone 75%, while the other teacher scores most of them below 60%. Therefore, I think there is no clear standard at all. (FGD Participant 4, Female)

Students consistently requested explicit rubrics and pre-shared scoring guides that define grading criteria as a means to increase transparency and consistency in the grading process. Some of the benefits of rubrics identified by Wolf and Stevens (2007) include their use as a multi-purpose scoring tool and their capacity to make assessments more accurate and fair. This "halo effect," that is, the predetermined impression of a student affecting the objectivity of grading, has been specifically noted by Acharya (2022) in the context of internal evaluation in higher education in Nepal.

Frequency and Feedback

Students preferred the shorter and more frequent tests throughout the year rather than a single high-stakes written exam. Such a model was seen to be less stressful and a better environment for regular study. More importantly, the lack of feedback following examinations proved to be the most highly and consistently voiced concern in all of the data sources. One participant described the situation directly, "Most of the teachers just read the marks after the examination; no comment, no improvement; they did not even give us a copy of the answer sheet so we could see what to work on" (FGD Participant 1, Female.

Another participant explained that they had seen certain feedback, although rare, that was very powerful:

> One teacher once sat near me and pointed out what was a strong aspect I did and what needed improving, and how I could get the best result ever in that subject. I improved on those things and got the best result I've ever had in that subject. I'm not sure if that type of teacher is in this place. (Questionnaire Respondent, Female)

A meta-analytic review by Yang et al. (2021) supports the finding that testing students regularly is highly effective in improving student achievement. Sadler (1989) claims that formative assessment is only effective when students are provided with clear feedback on what they have to do to improve. In the absence of such feedback, the internal exams become summative record-keeping exercises, similar to those documented by Khatri (2025) and to college contexts in Nepal.

Student Effort and Preparation

The data indicate that the students have a genuine commitment to internal examination and have made better efforts to prepare for it. This theme reflects the ways that students learn, the impact of examinations on attendance, how they manage the workload of assignments, and their response to the demands of the internal assessment in terms of their emotions.

Study Habits and Strategies

Participants mentioned that active preparation methods for exams included both individual revision and group learning. One student talked about how they would usually prepare for class:

> I just review my notes, review topics with friends, and prepare with old questions and make quick notes of each chapter before that night's exam to get done quickly, even though I know the internal marks are not important to my final exam. (Questionnaire Respondent, Male)

Others modified their approaches to meet the unique requirements of their particular subjects and teachers. Regarding the issue, one participant states, "Notes alone are not sufficient for some subjects, so I have to use reference books. I try to understand the issue instead of memorizing it because some teachers ask practical questions in internal exams" (FGD Participant 2, Male).

Such habits align well with Tus et al.'s definition of effective academic study as comprehensive reading, clear note-taking, and collaborative group study (Tus et al., 2020). Students' deliberate and varied effort is evidence that internal examinations positively shape learning behavior, even though the internal examination system is not optimal in its formative nature. From a Self-determination Theory perspective, motivation is sustained because students are intrinsically motivated by an internal drive to meet the challenge of mastery. This is a deep learning technique to help defuse emotional reactions to assessment. In the long run, preparation for lessons and attendance create a positive cycle in conjunction with assessment and encourage students to develop different learning methods that go beyond memorization.

Attendance and Class Participation

There was no formal requirement for students' attendance for the B.Ed. students, but participants showed a clearly positive link and consistency between the idea of internal exams, motivation and regular attendance. One student explained:

> When we get the schedule of an internal exam, I do not miss class, but rather, teachers will share information about what questions might be asked, or discuss important points that I wouldn't be able to pick up exclusively from the book, and this keeps me more active in learning. (FGD Participant 3, Male)

The result indicates that the role of internal examination is not simply an assessment but also has a positive motivational effect, namely, motivating students, engaging them in the learning process, and encouraging regular course content review. Several students commented that there was no formal system for maintaining regular attendance and noted that this was a missed opportunity to reinforce its motivational benefits.

Anxiety and Emotional Stress

Respondents reported unpredictability of exam timing and format as a significant concern from both data sources, which related to exam anxiety. One student explained the effects on their body and their mind: "Once a teacher announced the exam on Tuesday for Thursday, but I had another task due Friday, and I couldn't sleep well on Tuesday, when I was supposed to take the exam, my mind went blank at the start" (Questionnaire Respondent, Female).

The after-test anxiety for the students was worrying as well. As a respondent stated, "After the exam, I feel even more anxious because I don't know how my paper will be marked and when I will get the results. Just knowing those things would ease a lot of the stress." (FGD Participant 4, Female). According to Bayat and Salehiniya (2019), poor institutional planning and irregular scheduling have been directly correlated with increased academic anxiety, which in turn reduces the students' motivation and performance. This can be significantly improved by using clear marking guidelines and sharing marking times with learners ahead of time.

Institutional Support

An important, often critical theme that came up was the role of the campus administration and institutional systems in shaping student experiences. Individual reports and occasional revision sessions with individual teachers and students were known to each other, but there was a general feeling of inadequate planning, inconsistent procedures, and insufficient resources.

Inconsistency in Rules and Procedures

Students indicated a system in which the internal exams are written and graded to each teacher's individual taste, with no departmental consistency or uniformity. The way of confusion is stated as "Each teacher sets their own questions which they are marking differently, and a teacher gives short answer questions, and another gives essay-type questions, etc." (FGD Participant 3, Male).

One participant pointed out that there's another version of inconsistency.

> Some teachers take internal exams very seriously; others don't even have a formal exam. Students in different sections are evaluated in completely different ways, which is unfair for me" (Questionnaire Respondent, Male).

Sonnleitner and Kovacs (2020) suggest that in order to be considered fair, an examination must have transparent and reliable procedures that enable students to understand the assessment procedure and trust it. If internal exams are not standardized, even at the departmental level, inequities affect student trust and motivation (Adhikary, 2023).

Absence of an Academic Calendar and Advance Planning

Another related issue was the lack of an academic calendar for the campus, which clearly mentioned when and how internal exams would be conducted. Students were expected to be examined internally, as informed in the calendar published by the Campus. Students were often informed about exam dates just days before the test, and it was very difficult to prepare for the exam. One participant states, "Sometimes the campus and occasionally subject teachers announced the exam date very shortly, which wasn't enough time to get ready and be prepared for the exam" (FGD 1 Female).

Related to the same issue, another one commented:

> We still have not set an academic calendar for this year on our campus; we do not know the date of examinations or the date of vacations, and even though we don't know the end of the semester, how could we plan our studies?" (Questionnaire Respondent, Female)

Without planning directly challenges the ability for students to take responsibility for their learning as a constructivist theory (Piaget, 1952) and in the primary context of AfL (Black & Wiliam, 1998). This is somehow consistent with the practical examination conducted at TU (Karki, 2020).

Access to Learning Resources

A lack of variety of learning resources relating to the students' interests and cultures in ELT classes further compounded students' difficulties in preparing for internal examinations (Karki, 2018; Rai et al., 2023). Library holdings were frequently described as insufficient, and internet connectivity as unreliable. A participant expressed, "Our library does not have many of the books listed as references in our courses. I have to buy them myself or find PDFs online. Not all students can afford to do that" (Questionnaire Respondent, Male).

Students' problems with preparation for the internal examination were weakened by the unavailability of proper learning resources. The libraries were often found to be under-resourced and lacking internet connection, and the e-library was not available in the campus library. A

student stated, "We don't have many of the coursebooks in our library; they are quite expensive to buy, and I have to either buy them or find PDFs online; not all the students can afford to do that (Questionnaire Respondent, Male). Another participant added, "The internet speed on campus is very slow, and sometimes it is not working inside the library. We were convinced by the Campus Chief sir to install an e-library, but it is not fixed yet!" (FGD Participant 3, Male).

According to Gaulee and Bista (2019), insufficient institutional infrastructure is one of the structural barriers to effective internal assessment in Nepalese universities. The use of internal examination creates educational inequality because students from less-resourced backgrounds cannot access the necessary study materials.

Teacher Support

The teacher's behavior and attitude turned out to be the most significant factor that affected students' internal examination experiences. Students made strong comparisons between those teachers who guided clearly, marked the work fairly, and gave meaningful feedback, and those who failed to do so. Within the theme 'Teacher support', three sub-themes were discovered: guidance and clarity, fairness for assessment, and the quality and timeliness of feedback.

Guidance and Clarity

Students consistently valued those teachers who communicated clearly before the examination on the scope, question formats, and marking scheme of examinations. The practical guidance was perceived as being both practically effective and emotionally supportive. One respondent said that he met a positive example:

> Before the exam, the teachers always explain which chapters will be tested, what sort of questions, how marks will be allocated, etc., and so I feel well prepared and confident for that exam. I think all teachers should do that. (FGD Participants 2, Male)

Unclear or no guidance, on the other hand, made it feel like there was an unfair disadvantage; however:

> In some classes, they would just tell us to 'study everything' and then ask very specific questions. I've studied the entire unit, but the question was about a detail which I hadn't focused on, and I felt it was almost unfair because we were never told what was important. (FGD Participant 4, Female)

Research by Sitinjak and Canu (2023) reports similar findings, noting that effective guidance is a process of providing direction through structured steps that assist students in developing their knowledge of their abilities and guide them in choosing educational programs. With clear explanations and guidance, ambiguity is eliminated, students' effort is directed, and the confidence needed for internal examination settings.

Fairness in Assessment

One of the biggest and most exciting concerns identified in the study was grading bias, where some students reported situations where grades seemed beyond their imagination. They reported:

> I saw a student who hardly attended and wrote less than one page in the exam, but he got 15 out of 20. I wrote three full pages and got 14. There must have been some other reason for that. (Questionnaire Respondent, Male)

> I think some of these are for favoritism; marks depend on whom the teacher likes, not what you write. If the marks are already decided, why should I, and if I'm not the type of student the teacher likes, why bother to work hard? (FGD Participant 1, Female)

The teacher's role in supporting others to be effective, Dessel et al. (2017) emphasize, has to be equitable both intellectually and emotionally. From the respondents' perspective, the teacher failed to maintain impartiality. Adhikary (2023) also went with a similar idea and explicitly suggests that internal evaluation in Nepal is influenced by the 'halo effect' that refers to the effect of predetermined concepts about a student on the grading of that student. This perceived bias undermines the trust required for an effective assessment system as a whole and negatively impacts individual students.

Feedback Quality and Timeliness

The most universal and significant demand for teachers is to provide meaningful, timely, specific feedback. Students who were making good progress reported that feedback had a transformative impact on their future work. The response from one FGD participant-2 (Male) was, "My teacher called me and explained what I had done well and where I lost marks; she pointed out specific lines from my writing, in that subject, I did the best of my life." Those who were given marks only talked about being demoralized and helpless. Another participant stated:

> The teacher didn't tell me what was wrong with my work, and I spent many hours preparing for exams, so I didn't know if I had the wrong concept, poor and insufficient writing,

or anything else. How can I improve my writing if I don't know?" (Questionnaire Respondent, Female)

One participant stated how even a direct question regarding marks was neglected by the teacher: "I once asked my teacher about why I failed in a mark, and he was annoyed. He only said the mark was final; that's why children were afraid to ask; they were afraid to correct themselves" (FGD Participant 3, Male). Subsequently, Black and Wiliam (1998) also clarify that feedback is not something that can be added as an 'extra' to assessment, but rather the essential key to learning. Similarly, Harlen (2007) identifies feedback as the primary means by which formative assessment serves its purpose. Specific, respectful, improvement-driven feedback on students' work changes internal examination from a bureaucratic checkpoint to a real learning opportunity.

The analysis provides a holistic understanding of the key tensions between institutional assessment systems and student learning activity, directly answering some of the central research questions. Evaluated from the perspectives of Constructivism and Assessment for Learning (AfL), the campus is over-reliant on traditional written tests, and its feedback is not consistent with national assessment policies. Despite those systemic weaknesses, however, Self-Determination Theory (SDT) accounts for why students can keep their intrinsic motivation and collaborative study strategies. There are scattered examples of transformative and individualized teacher support, but many institutional limitations, such as resource scarcity, the lack of an academic calendar, and higher workloads, restrict equitable evaluation in many cases. Based on these findings, it is concluded that there is a need to standardize assessment policy institutionally, work on the profession in relation to it, and address classrooms in Nepal's higher education institutions.

Conclusion

This study focused on the experiences of B.Ed. fourth-year English students at MMC, Dharan, on a topic related to the internal examination. Four themes emerged through the data: Assessment Practices, Student Effort and Preparation, Institutional Support, and Teacher Support. The results of the study reveal a mismatch and inconsistency between the aim of internal examinations and students' experiences of them. Despite the high value placed on internal assessments and genuine efforts to prepare, students' learning is hampered by a lack of a range of assessment options, incomprehensible grading systems, inadequate feedback, and gaps in planning and academic resources. The research emphasizes the need to implement an assessment that is fair, transparent, and learner-centered to enhance students' learning experience. Based on

constructivist teaching and the AfL approach, the results point to the need to focus on a variety of assessments and feedback that support learning, not just on measuring it, when planning internal assessment. These findings have implications for teachers, departments, campus administration, and Tribhuvan University to enhance the quality of assessment by 'standardization of procedure', 'assessment literacy', 'regular feedback ', and 'efficient academic planning'. The paper also provides a basis for further study in other higher education systems using internal assessment and teachers' perspectives.

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Public School Auditing: A Case Study of Kathmandu District

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Abstract

This article is an outcome of performance auditing of seven selected public schools in three municipalities in Kathmandu. Along with this author, two researchers were appointed for the task. After conducting the final audit in all seven schools, this article has been prepared based on author's observation. Given the introduction of the Public Schools, Performance Audit Road Map and Tools, and the objectives of the performance audit it started with the aim of finding gaps between expectations and reality in the field. In our observation, we found that very often, people perceive public schools as unmanaged, low- resource, and schools for the poor, but the observations showed that they are full of resources and infrastructure; except for some cases , many schools are well-off. A painful reality is that they could not draw the attention of locals and well-off individuals from their community. Due to political influence, favoritism, and casteism, some

problems exist in the leadership practices of certain schools. Low-qualified, junior teachers and money-oriented individuals are appointed from the School Management Committees, which have ultimately affected the school governance, leadership, and financial management. Finally, the rubrics were filled, and the schools' gradings were conducted. This made the school leaders and SMC/PTA members positive toward the overall performance audit action of the Education Review Office.

Keywords: school audit, rubrics, leadership, performance, validation

Background of the Study

As a researcher, I had the opportunity to participate in a research program, the 'Public Schools' Performance Audit,' conducted by the Education Review Office (ERO) under the Ministry of Education, Government of Nepal. As a field researcher, I visited seven schools across three municipalities in Kathmandu district. There were approximately 1,000 questions for the head teachers to complete as part of self-evaluation. Following this stage, the external evaluators' validation stage was conducted. Finally, 50 rubrics were designed to evaluate the schools' overall performance and grading.

Self-evaluation covered three sections. The first provided overall information about the school. The second covered student information, and the third addressed school performance. School performance was further divided into sixteen areas, including the school's physical infrastructure, drinking water, toilet and sanitation, teaching infrastructure, school management and planning, school health, nutrition and beauty, human resource management, teachers' professional development and capacity development, early childhood education, governance, financial management and transparency, curriculum and the teaching-learning system, teaching coordination, group work and extracurricular activities, learning achievement, student assessment, innovation and management, item design, and evaluation system, and so on. Once the head teachers completed the physical and online forms, the external evaluators had to re-evaluate them for validation using class observations and opinions from students, parents, and local authorities. They then worked collectively with rubrics to grade the schools in four categories: replicable (90%+), very good (70-89%), improvable (51-69%), and weak (49% or below).

Two researchers were appointed to each of 20 districts. Each group worked in six or seven schools. The Education Development and Coordination Unit (EDCU) and the Local Level Education Coordination Unit provided support at the local level, and school head teachers were

clearly instructed to assist. According to ERO, the schools were selected with the help of EDCU and the Local Level.

Along with the physical infrastructure, we observed the sanitation, resource mobilization, and school results, too. From an infrastructure point of view, small schools have better results than the big and well-occupied schools. Though their lands were small and resources were very limited, their results were better. Out of seven schools, three, which had very limited grounds and infrastructure, had the best results, i.e., 90% and above. One school had 100% results in grades five, eight, and SEE. Even on limited grounds, the school had planted flowers on the way to the toilet and classrooms. The greenery part was maintained well in the flowerpots. It was exemplary for all the schools.

Some Replicable Activities Found in the Schools

Despite some shortcomings, many exemplary activities were found in the schools. Out of seven schools, five schools had a vending machine to distribute sanitary pads to the girls. In each school, there were nurses and necessary toolkits, along with some medicines. Except for a few exceptional schools, many schools maintained nurse rooms with beds, informative posters, and pamphlets. Students' height, weight, and some other necessary physical, mental, and emotional activities were recorded well. It was used as a counseling section.

In two municipalities of Kathmandu District, Tokha and Budhanilkantha, nutrition and tiffin management for students is exemplary. In collaboration with an organization, Food for Life, the schools offered scheduled nutritious meals for children. They had a fixed menu posted on the wall, which the students could see before the week. On the day of khir (rice pudding) and haluwa puri, the children were found excited to come to the school. A female head teacher of Tokha excitedly reported, "Everyone likes khir! On the day of khir and haluwa puri, the children consume almost double. In these two days, the students rarely become absent."

Even though some schools were in a critical situation from an area and infrastructural point of view, their students' leadership practices were found satisfactory. From morning assembly to Extra Curricular Activities (ECA), they were engaged with the teachers. Different units were there, like the SCOUT club, the RED CROSS, the Eco club, and different houses. Generally, the students of all schools were divided into four houses. But at Budhanilkantha, where more than seven hundred students were present, the school divided them into five houses to ensure equal participation in each activity. This is also a replicable activity for other schools.

At the same time, alongside students' leadership practices, the schools were found to teach disaster management to the children.

Almost all the schools followed the traditional system of evaluation: three terminal examinations, a numbering system, failed and passed results, etc. In our inquiry about why they were doing so, they reported that the parents and SMC wanted the same traditional style. They needed marks, not grades. Even in early childhood education, they wanted an examination and marking system based on numbers. However, in a school in Sankharapur Municipality, a special type of portfolio management was implemented. Each student's portfolio was maintained in a big file. All the classroom activities, unit tests, monthly tests, and terminal test papers were filed systematically, and they were submitted to the parents at each terminal examination along with grades.

School Governance, Financial Management, and Leadership

School governance, financial management, and leadership are the key components for overall school development. The government and SMC offer the day-to-day operational management responsibility to the head teachers. Quoting schools' success beyond the numerical results, Gann (2015) writes that leadership and school governance are rounded things. They answer the questions why, how, and who. In school governance, the schools' professional leaders, like head teachers, make partnerships with ordinary people to make the school better through the networks. Focusing on enabling conditions and incentives for good governance and accountability, Lewis and Pettersson Gelander (2009) state, "For effective service delivery, central public policymakers must have a set of objectives that are clear to lower levels of government, which then translate policy into viable programs that can be implemented by local government and service providers" (p. 5). They argue that the actual accountability remains on well-defined standards and valid information for the teachers in the schools.

During the observation, we found that all the schools except the one in Budhanilkantha had clear financial statements. They had maintained their audit reports and conducted a social audit on time. But in one school, neither a financial audit was conducted for two years nor a social audit was conducted on time. Not only financial management and transparency, but also the infrastructure, were measurable; labs and libraries were neglected, toilets and classrooms were scanty, and the teacher staff was not satisfied. We discussed these weaknesses with the account staff. One of the staff said:

We have been facing financial exploitation in the schools. In the name of the local people, a junior teacher is appointed as a head teacher. Casteism and favoritism are working here for leadership. In the meetings and trainings, if money is there, the head teacher goes himself/herself, but if it is not paid, he/she sends us to attend. None of the secondary teachers are satisfied.

It reminded us of Barker (2001), who states, "Schools with weak leadership are frequently described as unhealthy, unhappy organizations that lack direction and purpose, often because their leaders are unable to analyze their own negative impact or adapt to necessary changes" (p. 5). Such leaders are unable to analyze the impact of weak performance.

While observing the leadership practices and schools' overall performance, we found that young head teachers were comparatively better than old leaders. The head teachers who practiced leadership activities (principals) in the private schools before they came to the public schools were found more skillful and energetic in leadership activities than the locals and others. This reality of leadership skills matches the findings of Li et. al. (2019). In their article, "Old is not always better: evidence from five randomized experiments in rural primary schools in China", they have mentioned that, in comparison to the older head teachers, young ones of around 40 years are better for leadership in the schools for children's health, nutrition, and school performance. They can create a 'can-do' environment in the teaching staff and transform the school culture, climate, and performance.

Similarly, Kauts et. al. (2021) conducted research in instructional management and leadership and found that the schools with young leaders demonstrated a higher performance in academic standards. "Teachers in schools led by younger principals exhibit significantly better behaviors in three specific dimensions of instructional management: coordinating the curriculum, protecting instruction time, and developing academic standards" (Kauts et. al., 2021, p. 240).

Voices From the Students, Parents, SMC, and PTA

Because of labor migration, seasonal migration, and rural-to-urban migration, heterogeneity is a common phenomenon in all the schools of the Kathmandu district, especially Tokha, Budhanilkantha, and Sankharapur municipalities. The public schools were not the choice of the local people. None of the local business persons, public officers, or well-off people's children were found in those schools. They chose private and expensive schools where all the facilities were available to the children. Addressing the crisis in education in Nepal, Mathema (2007) wrote, "Public schools are now being abandoned by those who can afford to send their

children to private schools" (p. 64). In his study, furthermore, he found that the public schools in Nepal are now attended by children from poor backgrounds.

One of the Local Authority Members (Ward Member) joined the preliminary discussion in the school audit program and said, "My children are learning in a private school. They have been charging us very expensively. At the same time, they compelled us to buy books, bags, and shoes/shocks from the same school. Doesn't the government/education ministry take action against it?" Listening to the local authority's statement, I remembered Phyak and Khanal (2025). In their article, Modeling of Public Schools, a neoliberal ideology, they state that the model school plan has promoted endogenous privatization and reinforced elite culture, segregated many children from schooling, and displacement of students from low-income generating families.

The stakeholders, those who have been taking the responsibilities of those particular schools, have not been sending their children to those schools and raising their voices for change. They have made the schools-the schools of the poor and landless seasonal workers.

Furthermore, public schools are very easy places for different organizations and local clubs. Bringing lots of programs like counseling, reproductive health, sanitation, and so on, they come to school time and again and disturb the classes. Sometimes, they threaten the head teachers for financial aid and other programs. According to the head teachers, two months ago, political interference was high from the teachers, local authorities, and clubs, but now, once the government has changed, it is completely controlled. One of the headteachers said in the discussion, "Hamlai ta kan ma tel hale jastai bhako chha!" (We have been feeling peaceful and comfortable!), . In this regard, Dhakal and Panta (2026) argue that the head teachers have political interference, limited autonomy, and unsustainable workload.

Account staff are appointed in the schools, but they are paid very little. At the same time, along with the account management, they need to attend the meetings of the Resource Center (RC), and they should go to the EDCU and LLECU for documentation, and they need to take three or four classes in the schools. Very often, their classes are disturbed. "Account teacher's courses are never finished in time", one of the PTA members and parents said in the discussion. The account staff member com. teacher, became perplexed! He did not speak a word and looked at the SMC members. It was called an occupational burden (Paudel et al., 2024). According to this burden, or excessive workload, stress grows in the workers, which ultimately affects organizational performance.

After evaluating and validating the head teachers' self-evaluation form and overall observation, we worked on rubrics. Once the rubric work was over, we presented the rank and overall performance of the school to the stakeholders, like students, parents, SMC members, and PTA members, in a group. Students were found to be positive about leadership activities, smart boards, and social participation. *"We have learned to use the smartboard, which the private schools' friends rarely get"*, one of the student leaders (Budhanilkantha Municipality) said. The next student from another school (Sankharapur Municipality) said, "We go to different places for RED CROSS, SCOUT, Eco club works, and projects. If we could read seriously, public schools are fine. We are satisfied with our studies, teachers, and headteacher." These positive voices of the students reminded me of Pokhrel and Upadhyaya (2026). They put forth the logic that if students' voices are not incorporated in schools, no education policy would become complete and successful. And students are the final determiners to indicate the quality of education of a particular institution.

We discussed with the parents, SMC members, and PTA members. They became thankful to ERO for this activity. They wanted such activities each year. "If possible, it should be conducted every year. Otherwise, at least once in every two years, this program must be launched. We have got a chance to learn a lot from this", almost all the SMC members and PTA members stated this statement.

Out of 35 parents, five from each school, only four or five male parents had come. Otherwise, all the mothers attended the program. All of them were migrant parents, either from rural areas or seasonal workers. They felt shy to speak in front of teachers and SMC members. Their level of education and consciousness about school performance was very low. According to them, they did not know what their children were learning. And, there was nobody to support their children with home assignments. Here, Pokhrel and Upadhyaya (2026) opine that economic constraints, frequent mobility like migration, poor literacy, and limited access to educational institutions limit parental involvement in children's learning. Similarly, in his PhD thesis, Nepali (2024) adds that illiterate parents cannot support their children in education because they cannot read and write. So, their children lag in academic performance.

Rubrics, Ranking, and Reality

Fifty rubric items were used to analyze the schools' performance and management. Sitting and discussing with the head teachers and SMC members, one of the four options- replicable, very good, improvable, and weak- was ticked. Each option would get four, three, two,

and one scores, respectively. They would carry 200 marks altogether. Headteachers wanted to secure maximum marks.

While filling out the self-evaluation form, they ticked 'Yes' in every section. But while observing, they said, "Sir, we have been doing it, but we have not recorded it. We have not minuted it."

In each point, they wanted to tick 'replicable' and 'very good' options. While reading the criteria of replicable and verythe good, they tried to be quiet, yet they wanted us to tick 'very good'. They were afraid that their schools would fall into the 'improvable category' or be 'weak'. After seeing their result, they promised that they would keep the records of all the activities conducted in the schools. Atkinson (1957) writes, " Success is counterbalanced by the fear of failure, and this fear-particularly when associated with negative evaluation or poor performance-can energize effort toward achieving a satisfactory standard" (p. 336). Similarly, Covington (2000) writes, "Risk of receiving low grades or being placed in lower-ability groups often increases their investment of time and effort as a defensive strategy to protect their self-esteem and avoid social stigma" (p. 189). And, McGregor (2005) talks about the shame of failure and humiliation for positive performance.

From the leadership perspective, young, qualified, and career-oriented head teachers were found positive and excited about the rubrics and their results. They promised they would do far better than this in the coming days. They were thankful to ERO for this opportunity from which, they reported, they learned a lot for school improvement. At first, they were tired of one thousand questions, but later, they became grateful. Galanter (1978) calls it a 'relief-effect'. "The relief effect is the experience of positive affect (a rewarding feeling) that occurs when a person anticipates a demanding task that is subsequently avoided" (Gheza et al., 2023, p. 2). And, Geeney et al. (2025) add, "Relief may be experienced when an unpleasant experience comes to an end" (p. 1).

Conclusion

Every head teacher wants a positive ranking in the overall evaluation. They have a dream to make their schools better than others. But, because of the limited number of teachers, weak infrastructure, limited land and resources, and political pressures, they are lagging. They need to take classes, attend meetings, evaluate students' performance, and manage school cultures and conflicts simultaneously. Economically, they have very limited resources. Locals and well-

off people are not attracted to the public schools. So, the public schools have become a forceful shelter for seasonal migrant children and the poor. These children have low respect and love for the schools. Their parents could not give sufficient time for their children's education and schools. Yet, the struggle is going on. Some teachers and account staff are becoming victims of favoritism, localism, and casteism. Account staff are not well paid, yet they are working rigorously. In the coming days, the ERO, head teachers, SMC members, and PTA members will give the utmost dedication and make a commitment to excellent results.

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Non-Cognitive Assessment Approaches in the Buddha's Teachings: Relevance to the Modern Education System

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Abstract

In the school education system of Nepal, increasing emphasis has been placed on holistic education through the National Curriculum Framework (NCF, 2019), which promotes the use of both cognitive and non-cognitive assessment approaches. The framework aims to develop learners' knowledge, skills, values, attitudes, and the ability to apply learning in real-life contexts rather than focusing solely on academic achievement. Non-cognitive assessment is also reflected in the National Education Policy (2019) and the School Education Sector Plan (SESP, 2022–2032). However, its implementation remains largely teacher-based and observation-oriented rather than relying on standardized psychometric instruments, resulting in considerable variations across schools. At the same time, non-cognitive skills such as moral character, emotional regulation, mindfulness, compassion, and ethical behavior have gained increasing attention due

to their importance for holistic student development (OECD, 2015; UNESCO, 2021). This paper examines non-cognitive assessment approaches found in the Buddha's educational philosophy through qualitative textual analysis of early Buddhist literature, particularly the *Pali* Canon. The study identifies some major approaches: self-assessment, assessment through moral conduct (sīla), assessment of character transformation through mindfulness practice, and observation.

***Keywords*:** Buddhist education, non-cognitive assessment, mindfulness, character education, formative assessment, moral development.

Introduction

Modern educational systems have conventionally prioritized cognitive attainment assessed via examinations, standardized testing, and academic success. Although these assessment approaches are significant, they frequently offer a constrained perspective on learners' comprehensive growth. There is growing recognition in global educational discourse that effective education should include the development of non-cognitive abilities, such as moral character, self-awareness, emotional regulation, mindfulness, ethical conduct, and social responsibility (OECD, 2015; UNESCO, 2021).

Non-cognitive assessment has emerged as a crucial emphasis in the present school education system and educational research. This pertains to the assessment of learners' attitudes, beliefs, behaviors, dispositions, and socio-emotional competencies, which are essential for lifelong learning and responsible citizenship (Duckworth & Yeager, 2015). Nonetheless, despite the growing recognition of its importance, many education systems continue to prioritize cognitive outcomes, often overlooking systematic approaches to assessing learners' ethical and personal development.

Policy and Practice of Non-cognitive Assessment in Nepal

In the context of Nepal, the curriculum provides a framework comprising learning content, teaching–learning activities, assessment, and intended learning outcomes, designed to facilitate the holistic development of children by fostering their physical, socio-emotional, cognitive, non-cognitive, and intellectual development (Ministry of Education, Science and Technology [MoEST], 2022). Education at the school level is expected to foster learners' competencies to demonstrate ethical behaviour, show sensitivity to social harmony and environmental sustainability, manage conflicts constructively with a commitment to sustainable peace, effectively apply modern knowledge, skills, and information and communication

technologies (ICT), and cultivate self-reliance through the acquisition and practice of vocational and entrepreneurial skills (Curriculum Development Centre [CDC], 2023). According to the National Curriculum Framework [NCF], the principal objective of internal (formative) assessment is to enhance students' learning outcomes. To achieve this objective, teachers should provide repeated learning opportunities tailored to each student's individual learning achievement and progress, thereby supporting continuous improvement in learning (CDC, 2019). Therefore, the school-level curriculum recognizes assessment as an integral part of the teaching–learning process and mandates its use as a continuous mechanism for providing feedback to facilitate and improve student learning (MoEST, 2022).

Schools are expected to systematically manage the student assessment process by maintaining comprehensive records of each student's individual learning progress. These records should be continuously updated based on evidence collected from students' classroom performance, participation in learning activities, project-based work, creative assignments, homework, achievement assessments, attendance, disciplinary records, and observations of behavioural development (CDC, 2019). For formative purposes, Schools commonly assess students' non-cognitive competencies using a variety of methods, including observation checklists, anecdotal records, rating scales, student portfolios, presentation of project work, classroom participation, peer assessment, self-assessment, and group work and collaborative activities (CDC, 2019; 2021; 2023).

Formative (internal) assessment emphasises ensuring that students achieve the minimum learning competencies while maintaining systematic and evidence-based records of their learning progress and achievement. It aims to accurately determine students' learning status and facilitate continuous improvement through timely remedial and corrective instructional interventions (CDC, 2021). Despite supportive policies, several challenges remain in the smooth implementation of the formative assessment system. Sometimes, the implementation of formative assessment places an additional workload on teachers, which may reduce its effectiveness (Pandey, 2025). It is found that many schools continue to prioritize examination scores because of high-stakes examinations and parental expectations.

The Buddha’s Educational Philosophy

The Buddha’s teachings provide a comprehensive framework for understanding human nature and experience, offering insights that extend to disciplines such as neuroscience, physics, chemistry, anthropology, sociology, and psychology (Long et al., 2022). Buddhist educational

philosophy provides a significant alternative perspective on learner assessment. The Buddha did not establish formal assessment mechanisms to evaluate learners in the manner of contemporary schooling. Instead, learning was assessed through continuous observation of learners' behavior, cognitive development, and personal growth. According to Rahula (1974), the core of Buddhist teaching is not theoretical conjecture but the practical realization of truth via lived experience.

Buddhist teachings uphold that learning is meaningful only when it leads to ethical and behavioral transformation. The *Dhammapada* emphasizes that genuine understanding of the *Dhamma* is demonstrated not through extensive recitation or verbal expression, but through its practical application and the cultivation of ethical conduct. (Bodhi, 2005). In this context, the learner's assessment system in Buddhist education is fundamentally formative, ongoing, and based on experiential learning rather than conventional examinations.

The Buddha's educational philosophy offers a unique model of assessment that fundamentally contrasts with contemporary examination-based systems. Rather than utilizing written tests or standardized examinations, the Buddha evaluated learning through ongoing observation of behavior, mental development, ethical conduct, and personal transformation. Harvey (2013) observes that Buddhist practice primarily focuses on the transformation of mental states rather than the accumulation of conceptual knowledge. The Buddha's teachings encompass various approaches to assessing and cultivating non-cognitive attributes, including morality, emotional regulation, mindfulness, wisdom, compassion, self-discipline, and character development.

This paper investigates some non-cognitive assessment methodologies inherent in the Buddha's teachings and discusses their applicability to modern educational institutions. The objective is to establish fundamental Buddhist assessment concepts and examine their potential contributions to contemporary educational discourse, especially concerning character education, social-emotional learning, and holistic assessment methodologies.

The Buddha as an Educator

Many scholars of Buddhist education, such as Thich Nath Hanh and others, have increasingly interpreted the Buddha not only as a spiritual leader but also as an educator whose teaching methods reflect sophisticated pedagogical principles (Adarkar & Keiser, 2007; Ashcraft & Calvert, 2023).

Although the Buddha had no teacher for his own enlightenment, he became one of the greatest teachers in human history. Motivated by compassion for all beings, he devoted himself to investigating the causes of human suffering and the path leading to its cessation. While physical pain can often be alleviated through medical treatment, the Buddha taught that mental suffering and psychological distress can be overcome through ethical conduct, mental cultivation, and the practice of meditation. Through applying these methods in daily life, individuals can develop wisdom, inner peace, and ultimately liberation from suffering (Piya Tan, 2020). The Buddha is such a figure whose teachings are always being followed and practiced. There are many external features and internal virtues of the Buddha's character to be the honorable, exemplary, and the greatest character in this world (Piyarathana,2016).

Buddha's teaching methods, pedagogical strategies, and learner-centered approach reflect a deep comprehension of human psychology and learning processes. Gethin (1998) posits that the Buddha's teachings are primarily practical, focusing on transforming human experience through insight rather than engaging in theoretical speculation. 'Buddha' denotes the 'Awakened One' or the 'Enlightened One' (Rahula, 1974). Thittilla (1997) states, “A Buddha is one who has attained *Bodhi*. By *Bodhi* it meant an ideal state of intellectual and ethical perfection which can be attained by man by purely human means” (p. 9).

The Buddha was not primarily concerned with speculative philosophy or an ordinary thinker; rather, his teaching was fundamentally pragmatic, aimed at addressing the existential problem of suffering and its cessation. Through the doctrine of the Four Noble Truths, he taught that suffering arises from craving, ignorance, and other mental defilements, which perpetuate the cycle of rebirth (*samsara*). Consequently, the purpose of Buddhist education and practice is the cultivation of wisdom, ethical conduct, and mental discipline leading to the eradication of greed, hatred, and delusion. In this way, the Buddha's teaching serves as a practical path toward liberation (nibbāna) and the attainment of eternal well-being (Rahula, 1974; Harvey, 2013; Gethin, 1998).

The Buddha is perceived as a human who achieved enlightenment through personal endeavor. Rahula (1974) asserts, “He was a man, but an extraordinary man,” highlighting his simultaneously human and exceptional qualities. Keown (2005) emphasizes that the Buddha should be regarded as a historical teacher whose insights arose from profound contemplative practice rather than from divine revelation.

The Buddha's enlightenment is fundamentally linked to the direct realization of reality as it is (*yathabhuta-nanadassana*), which translates to "knowledge and vision of things as they really are" (Bodhi, 2005). This experiential understanding provided the basis for his educational philosophy, emphasizing direct experience instead of abstract theorization.

Non-cognitive Approaches in Teaching of the Buddha

Buddha *Dhamma* is not simply an academic subject to be studied, in preference it is a comprehensive moral and philosophical system that presents a unique path to enlightenment through ethical conduct, mental cultivation, and wisdom (Mahathera,1998).

Buddhist philosophy and its educational approaches inherently emphasize the development of non-cognitive skills, including mindfulness, ethical conduct, emotional regulation, compassion, and critical thinking. These principles are embedded in Buddhist pedagogy and contemplative practices that promote the holistic development of individuals. Buddhist meditation provides systematic methods for cultivating mental stability, clarity, and awareness, thereby facilitating the progressive development of consciousness and self-understanding. Basically, three core meditation practices *Samatha* (tranquility meditation), *Vipassan*ā (insight meditation), and *Mettā* (loving-kindness meditation) are widely discussed in both classical Buddhist scriptures and contemporary empirical research as effective approaches for fostering cognitive, emotional, and ethical development (Aich, 2015; Wang, 2025).

Assessment in Buddha's teachings was not formalized through examinations, grading systems, or any standardized tests. It was characterized by continuity, observation, and integration within the teaching-learning process. The Buddha's teachings focused on the comprehensive development of individuals, emphasizing ethical conduct, mental cultivation, and the attainment of wisdom, but not merely the transmission of knowledge. His educational approach integrated teaching, learning, and assessment into a continuous process focused on personal transformation. Hence, the Buddha emphasized that the *Dhamma is* "for the purification of beings, for the overcoming of sorrow and lamentation, for the disappearance of pain and grief, for the attainment of the right path, and for the realization of *Nibbana"(*Bodhi, 2012).

Nanamoli and Bodhi (1995) note that in The Middle Length Discourses of the Buddha, the Buddha employed various methods, including storytelling, dialogue, questioning, analysis, repetition, and contemplation, to convey the *Dhamma* effectively. The Buddha is known as *Tiloguru*, the teacher of the three worlds (Heaven, the human world, and the Brahma world). The

doctrine preached by the Buddha for forty-five years is the Four Noble Truths. He applied various teaching methods while delivering the doctrine, such as storytelling, listening and memorization, learning through observation and repetition, experiential learning, understanding via discussion, the lecture method, the debate and logic method (analytical discourse), the seminar and *Shastrartha* method, the self-study method, the excursion method, and many others used in a modern context to globalise ethics to create a sustainable society (Acharya, 2025; Piyarathana, 2019)

The Buddha's teaching exemplifies pedagogical flexibility, which contemporary educational theory describes as differentiated instruction and experiential learning. Rather than adhering to a single teaching method, the Buddha adapted his instructional approach according to each learner's readiness, disposition, and intellectual capacity (Harvey, 2013). Furthermore, the Buddha prioritized experiential knowledge over mere theoretical understanding. As Rahula (1974) explains in *What the Buddha Taught*, the Buddha consistently rejected blind faith and encouraged individuals to verify the truth through personal experience, critical reasoning, and disciplined practice. Similarly, Keown (2005) argues that Buddhist ethics is fundamentally grounded in intentional action (*kamma*), whereby the moral quality of an action is determined primarily by the intention underlying it, but not only by external conformity. Consequently, assessment within Buddhist education focuses on the quality of an individual's mental states and their manifestation in ethical conduct and behavior.

This assessment approach closely aligns with formative assessment principles in contemporary education, emphasizing feedback, observation, and continuous improvement instead of summative evaluation (Harvey, 2013).

Self-Assessment

Know yourself is the basic principle of the Buddha (Swamy, 2020). This reflective orientation is grounded in the Buddha's teaching focus on causality, in which mental states and actions yield corresponding consequences (Keown, 2005).

The Buddha's teaching is generally based on cause and effect. In every *Sutta*, the Buddha pointed out what is the cause of something and its effect to lead to the termination of suffering (Swamy,2020). The purpose of his teachings was to help people find true happiness. He didn't assume that all beings are inherently good or inherently bad, but he did assume that they all

want happiness (DeGraff, 2011). From the Buddhist perspective, the idea of individual self is an illusion. It is not possible to separate the self from its surroundings (Oh, 2021). Therefore, *Anatta* or selflessness, is a core concept in Buddhism; according to the Buddha, the notion of a permanent self. Buddhism proposes that the world, including the self, is not eternal or permanent but changes continually (Bui, 2025).

Huwang (2023) provides a compelling interpretation of the Buddhist model that explains the distinction between the *self* and non-self. According to this model, the realization of non-self (*anattā*) represents the true nature of reality, whereas the notion of an enduring self is merely an illusion arising from ignorance and attachment. From this perspective, *Vipassan*ā meditation serves as a bridge to understanding the transition from the illusion of *self* to the direct realization of non-self. Through systematic insight into the impermanent, unsatisfactory, and selfless nature of phenomena, *Vipassana* enables practitioners to recognize the essence of non-self and understand how the illusion of a permanent self is constructed and sustained. The Buddha frequently encouraged individuals to examine their own thoughts, actions, and intentions. Through mindfulness and reflection, practitioners assessed their moral conduct and mental development. Through the practice of mindfulness (sati) and insight meditation (*Vipassana*), practitioners cultivate a deep awareness of the body, feelings, and thoughts as they arise and pass away (Bala, 2024).

Behavioral Assessment Through Moral Conduct

Buddhism has its own unique teachings on psychology that offer a comprehensive view of the workings of the human mind based on meditative observation (Regulagadda, 2026). In the Buddha's teachings, the true measure of learning is not the amount of *Dhamma* heard, recited, or memorized, but true wisdom comes from practice and personal experiences, which transform one's conduct. According to *Dhammapada* verse 260, it is stated as: A man is not versed in *Dhamma* because he speaks much. He who, after hearing a little Dhamma, realizes its truth directly and is not heedless of it, is truly versed in the *Dhamma* (Buddhanet, 2026). The meaning of life lies in *karma;* its true meaning in Buddhism is action *(*MOIFE, 2019*).* In Buddhist ethics, all human actions are classified into three clear categories, viz., bodily, verbal, and mental, and the Buddha frequently emphasized wholesome conduct in these domains as indicators of spiritual progress and ethical development (Buddhist learning.org, 2026). Human actions determine a person’s happiness and suffering in life, because when they perform good actions, the results are beneficial, and when a person performs harmful actions, the results are likewise harmful. This

reflects the principle that one reaps the fruits of one's actions (MOIFE, 2019). It is not a system of divine judgment; rather, it is a principle of natural causality in which every intentional action, whether it is expressed through the body, speech, or mind, generates corresponding effects (Buddhist learning.org, 2026).

Assessment of Character Transformation

In Buddhist education, the success of learning is evaluated based on its manifestation in behavior and ethical decision-making. This approach aligns with contemporary perspectives that character development cannot be achieved solely through instruction; although it necessitates practice, reflection, and lived experience (Lickona, 1991). Transformation is assessed by the progressive diminishment of the three unwholesome roots: greed (lobha), hatred (dosa), and delusion (moha), alongside the development of positive attributes such as loving-kindness (mettā), compassion (*karuna*), and wisdom (paññā) (Gethin, 1998; Bodhi, 2012).

The educational philosophy of Buddhism views education as the complete acquisition of knowledge accompanied by ethical and moral refinement. Accordingly, ethical conduct assists as the fundamental foundation of the Buddhist educational system, guiding the development of wisdom, character, and responsible behavior (Acharya, 2025). Bhikkhu Bodhi (1998) notes that Buddhist training seeks a profound transformation of personality in which ordinary individuals progressively enhance their mental and ethical capacities through practice.

Character education has emerged as a central priority in contemporary educational systems, aiming to cultivate values such as integrity, responsibility, respect, and empathy. The Buddha's focus on moral conduct (*sīla*) and ethical transformation closely aligns with these educational objectives. In this context, global education frameworks increasingly prioritize the development of responsible global citizens who are equipped to contribute to peace, sustainability, and social harmony. UNESCO (2021) further emphasizes that education for sustainable development is essential for addressing global challenges and fostering an inclusive and sustainable future.

Therefore, the assessment philosophy of Buddha's teachings offers a foundational perspective for integrating moral and ethical development into curriculum and assessment frameworks. Character transformation signifies the pinnacle of non-cognitive evaluation within Buddhist education. As a result, successful learning is defined by some observable changes in personality, behavior, and mental attributes.

In conclusion, self-assessment, moral conduct, and character transformation are the fundamental principles of the Buddhist approach to learning, emphasizing the individual's responsibility for moral, mental, and spiritual development. The Buddha consistently encouraged individuals to examine their thoughts, intentions, and actions as a means of cultivating wisdom, ethical conduct, and self-awareness. From an educational perspective, this approach closely aligns with contemporary concepts of metacognition and self-regulated learning, in which learners actively monitor, evaluate, and reflect on their own learning and development. Thus, the Buddhist practice of self-assessment offers a holistic and enduring framework that remains highly relevant to modern educational theories and practices.

Relevance of the Buddha's Non-Cognitive Assessment to the Modern Education System

Contemporary educational theories, particularly within school education systems, increasingly advocate holistic and formative approaches to assessment that continuously evaluate learners' progress rather than relying solely on summative or final examinations. Formative assessment emphasizes ongoing feedback, self-reflection, and continuous improvement, thereby supporting learners' academic, personal, and social development (Black & Wiliam, 1998).

The growing global focus on holistic education has resulted in a reorientation of educational priorities that extends beyond cognitive achievement. Modern education systems are increasingly recognizing the importance of non-cognitive skills, including emotional regulation, ethical behavior, social awareness, and character development. International organizations such as the OECD and UNESCO emphasize that twenty-first-century education should equip learners for both academic achievement and personal well-being, as well as for responsible citizenship (OECD, 2015; UNESCO, 2021).

Buddhist education can be viewed as a precursor to Social-Emotional Learning (SEL) rooted in ethical and contemplative practices. The Buddha often urged individuals to examine their thoughts, intentions, and actions via mindfulness and reflective awareness. This practice aligns closely with contemporary SEL frameworks that highlight emotional regulation and self-monitoring as critical competencies for student development (CASEL, 2020).

In this context, the Buddha's non-cognitive assessment approaches provide a significant conceptual framework for re-evaluating contemporary assessment practices. Modern educational initiatives increasingly emphasize the holistic development of students, an approach that closely aligns with the Buddha's teachings, which emphasize self-awareness, ethical conduct, and character transformation.

The Buddha's assessment approach embodies principles of continuous observation of behavior, dialogue, and personal development, rather than relying on formal assessment to evaluate learning. Consequently, Buddhist non-cognitive assessment aligns with modern initiatives to foster education for sustainable development and global citizenship. This perspective aligns with current demands for authentic assessment, wherein students are evaluated based on the real-world application of knowledge and skills.

Conclusion

This paper analyzed some non-cognitive assessment methods within the context of the Buddha's teachings and their applicability to modern educational practices. The findings suggest that Buddhist education offers a holistic, continuous assessment model by prioritizing behavioral observation, ethical conduct, mindfulness, and character transformation. At present, school-aged children are experiencing a wide range of mental health challenges from an early age, arising from various social, educational, and personal factors. In response to these concerns, educational policies within school systems increasingly emphasize the holistic development of learners, including their physical, mental, emotional, social, and overall well-being. In this context, the assessment principles embedded in the Buddha's teachings have the potential to make a significant contribution to contemporary educational practice. The Buddha's approach to assessing learners, which emphasizes moral development, self-awareness, emotional regulation, mindfulness, and character transformation, aligns closely with the goals of holistic education. Incorporating these principles into contemporary education can enhance a more balanced, humane, and holistic method of student assessment.

Consequently, the non-cognitive assessment practices advocated in the Buddha's teachings and the modern school education system's aspiration for the comprehensive development of students are closely interconnected and can complement one another.

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Students' Errors in Mathematics and Their Impacts on Teaching and Learning: A Review of ERO Assessment Reports

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Abstract

This article explores and analyses the students' errors in mathematics committed by school students in Nepal. It seeks to address the following research questions: What are the impacts of students' performance according to reports of the Education Review Office (ERO) regarding student achievement? What suggestions does ERO offer? What do the related national and international studies reveal about mathematical errors? Drawing on document analysis of various research findings, the article investigates how the findings can be utilized to improve classroom teaching and learning. Students' responses to mathematical tasks are classified into three categories: no response, partially correct response, and correct response. Mathematical error analysis is essential for effective classroom instruction, as it helps teachers build students'

confidence and guide them toward producing correct responses. The past reports of the Education Review Office (ERO) provide valuable insights for improving classroom teaching and learning in mathematics; however, their implementation remains somewhat challenging owing to the entrenched traditional classroom practices.

Keywords: mathematical errors, misconceptions, assessment, learning improvement, classroom teaching and learning

Introduction

In Nepal, the study of mathematics begins in Grade 1 and remains a compulsory subject up to Grade 10. Mathematics teaching and learning involves various levels of content acquisition. To support student motivation, practical application, and written task performance, the Government of Nepal employs three complementary evaluation frameworks: Assessment as Learning, Assessment for Learning, and Assessment of Learning. The National Assessment of Student Achievement (NASA) has been conducting assessments since its establishment, covering Grades 3, 5, 8, and 10, with the aim of providing stakeholders with continuous information about students' learning achievement. The NASA reports in the mathematics subject across different years consistently reflect that students produce no responses, partially correct responses, and correct responses on their answer sheets (National Assessment of Student Achievement, 2012). No responses and partially correct responses must be converted into correct responses through systematic mathematical error analysis. Mathematical error analysis assists teachers in identifying instructional gaps, building a comprehensive understanding of students' difficulties, and guiding students toward responding with greater accuracy and confidence. When a teacher looks at an incorrect answer, they treat it as an informational data point to uncover the exact breakdown in logic. By categorizing errors into specific types—such as careless slips, procedural missteps, or deep conceptual misunderstandings—teachers can pinpoint exactly where a student's thinking veered off track. This allows educators to move away from generic, unhelpful feedback like "try harder" and instead provide highly targeted interventions. Over time, integrating error analysis into daily lessons transforms the classroom culture. Mistakes are no longer viewed as failures to be ashamed of, but rather as valuable steppingstones that build a student's self-correction skills, reduce math anxiety, and foster long-term academic confidence.

According to Radatz (1979), "errors can be a powerful tool to diagnose learning difficulties and consequently direct remediation" (p. 163). This assertion underscores the importance of implementing the feedback provided by NASA results in classroom teaching

and learning. The school education system in Nepal has deliberately shifted from a traditional, content-heavy model toward a holistic, competency-based curriculum framework (Curriculum Development Center [CDC], 2020). Rather than evaluating students strictly on the memorization of abstract formulas, the Ministry of Education, Science and Technology has re-anchored mathematics instruction around core level-wise competencies. These foundational capacities dictate how students process mathematical ideas, specifically focusing on five core operational capabilities: mathematizing real-world issues, choosing accurate mathematical representations, delivering sound logical reasoning, engaging in mathematics-specific communication, and exhibiting flexible strategic thinking (Ministry of Education, Science and Technology [MoEST], 2019). These benchmarks ensure that the overall competency of a student is gauged by how fluidly they can solve functional, open-ended tasks rather than how accurately they replicate standard algorithms.

These core priorities are systematically distributed across the basic and secondary tiers of the Nepalese educational system to maximize relevance and capability. At the basic education level (Grades 1–8), the framework places structural emphasis on mastering basic mathematical skills directly tied to everyday life, including currency conversions, localized units of measurement, and foundational geometric forms (CDC, 2020). As students transition into secondary and higher secondary levels (Grades 9–12), the focus shifts directly toward practical applications of mathematics and deep curricular relevance. High-school topics like algebra, coordinate geometry, commercial mathematics, and statistics are mapped closely to the socioeconomic realities and trade environments of contemporary Nepalese learners. Furthermore, to deliberately challenge mathematically talented students at the secondary level (Grades 11–12), the National Curriculum Framework incorporates a multi-pathway system consisting of Compulsory Mathematics and Optional Mathematics (MoEST, 2019). This track exposes gifted STEM learners to abstract algebraic structures, introductory calculus, vectors and mechanics, preparing them directly for global technical disciplines. The effectiveness of these factors can be measured through standardized achievement tests, with results analyzed through the lens of error analysis.

Research Design

This study adopted a qualitative and descriptive document analysis research design, specifically utilizing Mathematical Error Analysis (MEA) as the primary framework. Instead of

evaluating student output solely through quantitative grading, this design focused on examining regular student learning artifacts to understand the systematic cognitive breakdowns, procedural gaps, and conceptual misconceptions behind incorrect responses.

Research Site and Context

The study was conducted within the Kathmandu District of Nepal. To ensure a comprehensive overview of the localized educational ecosystem, data were collected from two distinct operational categories of schools:

1. Community Schools: Government-funded public institutions.
2. Institutional Schools: Privately managed, self-funded institutions.

Population and Sampling Technique

The target population comprised students across multiple grade levels (spanning basic to secondary Level) enrolled in the selected schools during the academic session. A purposive sampling technique was used to select the schools and specific classrooms. This non-probability sampling method ensured that the analyzed student artifacts contained a diverse range of foundational mathematical concepts, including arithmetic, algebra, geometry, statistics, probability, and sets.

Timeline and Duration (*When* and *How Long*)

Duration: The active field research and data collection phase spanned a total of twelve (12) weeks (approximately 3 months).

Timeframe: Data collection occurred during the middle of the academic term. This timeframe was strategically selected because students were regularly engaged in continuous formative assessments and substantial homework assignments, providing a high density of fresh mathematical artifacts for review.

Data Collection Procedure

The step-by-step process used to collect raw data from student homework copies was strictly systematized to avoid random or biased selection:

1. **Permission and Ethical Clearance:** Formal permission was obtained from school principals and subject teachers to access student homework records anonymously.

2. **Artifact Retrieval:** At the end of every instructional week, the researcher gathered the regular homework notebooks and exercise copies of the sampled students.

3. **Targeted Assessment Scanning:** Rather than looking at mock exam papers, the researcher systematically audited regular, day-to-day formative assignments. A total of approximately 100 students' homework copies were reviewed across the selected school types.

Data Analysis Process

The raw data gathered from students' artifacts underwent a systematic four-phase analysis process to construct the final diagnostic error matrix:

Phase 1: Screening and Identification: Every homework assignment was scanned for final incorrect answers. When an error was spotted, the entire mathematical layout—including rough work, crossed-out lines, and intermediary steps—was transcribed onto an observation sheet.

Phase 2: Error Categorization: Missteps were cross-referenced against standardized error classifications (e.g., Radatz's or Newman's Error Analysis model). Errors were systematically categorized into:

- *Careless/Technical slips* (e.g., calculator mismanagement, place value spacing).
- *Procedural gaps* (e.g., algorithmic execution failures, failure to expand formulas).
- *Conceptual misunderstandings* (e.g., adding numerators/denominators straight across, fundamental division confusion).

Phase 3: Validation and Diagnosis: For ambiguous steps, the researcher engaged in informal, brief follow-up clinical interviews with a sub-sample of students ("Can you explain how you arrived at this step?") to confirm whether the error stem was a random oversight or an ingrained conceptual misconception.

Phase 4: Synthesis and Tabulation: The verified error codes and their corresponding underlying mathematical explanations were synthesized, resulting in the qualitative representation outlined in Table 1.

Table 1

Common Mathematical Errors and Their Possible Causes

S.N.	Mathematical Error	Possible Cause of Error
1	$2200 + 110 = 3300$	Incorrect use of place value
2	$(2 \times 4) + (6 - 3) + (150 \div 3) = 8 + 3 + 5 = 16$	Lack of conceptual understanding of division

3	$(2a)^2 = 2a^2$ or $4a$	Lack of understanding of the concept of exponentiation
4	$40 \div 1/2 = 20$	Lack of conceptual understanding of fractions and division
5	$1/2 + 2/3 = (1+2)/(2+3) = 3/5$	Lack of conceptual understanding of fractions
6	$15000 - (15/100 \times 1500) = 15000 - 2250$	Incorrect use of calculator
7	$n(A) = 30\%$, $n(U) = 100\%$	Lack of meaningful use of mathematical symbols
8	$(a+b)^2 = a^2 + b^2$	Lack of conceptual understanding of algebraic expansion
9	$5x^2 = x$; $x = 1/5$	Lack of conceptual understanding
10	$80 \div 10 \times 8 = 1$	Lack of understanding of order of operations
11	$3.6 \div 0.3 = 1.2$	Lack of conceptual understanding of decimal division
12	$(1/2\ a) \times (1/2\ b) = 1/2\ ab$	Lack of procedural understanding (process error)
13	$(3a+6)^2 = 3(a+2)^2$	Lack of visual/spatial understanding
14	Construction of 60° and 120° and locating positions	Improper use of protractor and compass
15	$(x^2)^3 = x^5$	Lack of knowledge of laws of exponents
16	$(a + ax)/a = a + x$	Lack of conceptual understanding of algebraic simplification

Note: *Errors were drawn from students' homework across different grades in community and institutional schools in Kathmandu District.*

These errors reflect common misconceptions encountered in students' daily academic tasks, and they manifest primarily in written assignments. Similar errors may also be observed in practical and oral tasks.

Causes of Mathematical Errors

In the Nepalese educational context, conceptual misconceptions and computational mistakes made by students across different grades, subjects, exercises, and examinations are frequently encountered. The main causes of such errors, as reflected through the observations, can be identified and categorized as follows:

(i) Insufficient instructional coverage relative to the weightage of questions assigned.

(ii) Inadequate classroom coverage of the content required to complete assigned tasks.

(iii) Ambiguously framed questions that do not allow sufficient time for students to formulate responses.

(iv) Unclear or poorly worded mathematical problems.
(v) Poor student handwriting that leads to misreading of mathematical symbols and numerals.
(vi) Sign errors involving the incorrect use of operational symbols (−, +, ×, ÷).
(vii) Incorrect simplification through undistributed cancellation (e.g., (9b + c)/9 = b + c).
(viii) Dimensional errors resulting from failure to maintain consistent units.
(ix) Errors in notation and the incorrect application of mathematical properties (e.g., a (b+c) = ab+ac, and by analogy, sin(A+B) = sinA+sinB).
(x) Uncritical reliance on calculators without verifying the reasonableness of results.
(xi) Unwarranted generalization of mathematical rules beyond their applicable domains.
(xii) Mathematical language and communication barriers, where students articulate mathematical statements incorrectly (e.g., "minus into minus is plus").

Mathematical errors of this nature can impede learning across related disciplines, including science, social studies, economics, computer science, and accounting.

Strategies for Minimizing Mathematical Errors

According to Confrey (1990) and Zepp (1987), three principal areas must be addressed to minimize mathematical errors in learning:

The Influence of Language Factors on Mathematics Learning: Factors such as the language of mathematical notation, specialized vocabulary, and contextual interpretation must be explicitly addressed in instruction.

The Appropriateness of Remedial Mathematics Programs in Schools: An excessive emphasis on the revision of standard algorithms in school mathematics may result in the entrenchment of irrelevant procedures rather than fostering genuine conceptual understanding.

The Importance of Developing Supportive Learning Environments: Creating environments conducive to active mathematical inquiry is essential for reducing errors and promoting deeper understanding.

According to Casey (1978), "problem solvers often return to lower stages of the hierarchy when attempting to solve problems" (p. 296). When solving mathematical problems, students frequently resort to lower-level procedures, thereby forfeiting higher-order thinking and rational

analysis. The school mathematics curriculum expects learners to develop competencies in creative thinking, critical reasoning, and problem solving; however, reliance on lower-level hierarchical procedures does not fulfill these expectations.

According to Clements (1980), "errors due to the form of questions are essentially different from those in the other categories. Carelessness and motivation are the more prominent errors that can occur at any stage of the problem-solving process" (p. 136). Carelessness and lack of motivation among students are not inherent, immutable characteristics; rather, they are challenges that can be addressed through continuous monitoring of academic learning and progress. This represents a significant concern in mathematics teaching and learning, underscoring the need to motivate students to engage actively in error analysis.

Newman (1983) has identified five levels of mathematical competency that can be used to diagnose appropriate solutions to students' errors in problem solving:

(1) Reading: Can the student read the question?

(2) Comprehension: Can the student explain what the question is asking?

(3) Transformation: Can the student identify a method for finding the answer?

(4) Process Skills: Can the student demonstrate and explain the solution process?

(5) Encoding: Can the student correctly record the final answer?

Collectively, these frameworks indicate that achievement results obtained through ERO, National Examinations Board (NEB), and other assessment agencies provide valuable feedback through error analysis, enabling teachers and students to engage in collaborative learning, foster learner autonomy, and refine instructional approaches. Consequently, the assignments and tasks given to students can yield more accurate responses and improved learning outcomes. ERO and NEB assessments are particularly significant in high-stakes examination contexts, where the judicious use of error analysis results can be made available to benefit students.

Impact of Mathematical Errors on Teaching and Learning

Error analysis has a direct impact on learning in every classroom. It reduces and eliminates the mathematical errors and misconceptions for both teachers and students rather than treating mistakes as mere metrics of failure, this diagnostic approach shifts the classroom focus toward cognitive transparency, allowing teachers to see exactly where a lesson's delivery failed to

align with students' understanding. When anchored to established theoretical frameworks—such as Newman's Error Analysis or Radatz's error classification—this practice provides educators with a systematic toolkit to decode the specific nature of a student's struggle, whether it stems from a superficial reading slip or a deep-seated structural misunderstanding. By uncovering these underlying cognitive patterns, teachers can design highly targeted, corrective interventions that dismantle persistent academic misconceptions before they solidify. Consequently, students learn to view errors as constructive, navigable data points rather than permanent intellectual barriers, fostering a resilient classroom culture where metacognitive reflection, self-correction, and long-term academic accuracy can thrive. In conjunction with theoretical frameworks, it helps dispel misconceptions. Various issues were identified as follows:

Development of Misconceptions: A range of audio-visual and manipulative material is used to support learning achievement across different content areas. However, misconceptions that take root in the classroom are difficult to eradicate from the student's mind and tend to impede productive learning.

Poor Academic Achievement: Mathematics is a discipline grounded in rules and formulas. Failure to understand and apply these rules reduces students' academic achievement. Mathematical error analysis must be integrated as a core component of the remedial process.

Loss of Confidence: When mathematical error analysis is conducted repetitively without constructive feedback, students may lose confidence in their mathematical ability.

Negative Attitude Toward Mathematics: Of the approximately 500,000 students who appear for the Secondary Education Examination (SEE) each year, only 60,000 to 80,000 students appear for the School Leaving Certificate Examination (SLCE). Given that mathematics is compulsory through Grade 12, this substantial disparity between Grade 10 and Grade 12 enrollments suggests that the cumulative effect of unaddressed mathematical errors cultivates a negative attitude toward mathematics in students' daily lives.

Difficulty in Problem Solving: Without systematic mathematical error analysis, students are unable to identify appropriate strategies for solving mathematical problems. ERO's longitudinal reports provide important evidence in this regard.

Diagnostic Tool for Teachers: Error analysis provides teachers with a diagnostic instrument for identifying learning gaps within the classroom.

Improvement of Teaching Strategies: Through error analysis, teachers are able to continuously review and refine their instructional strategies.

Promotion of Deep Learning: Mathematical error analysis fosters deep, meaningful learning rather than surface-level memorization and assists students in arriving at solutions through multiple approaches.

Development of Critical Thinking: Error analysis is a prerequisite for problem solving, creative reasoning, and reflective thinking. It cultivates and develops students' higher-order thinking capacities.

Encouragement of Reflective Learning: When students reflect on their own learning and articulate their own weaknesses, mathematical error analysis can encourage each student to become a reflective learner in the classroom.

Motivation for Examination and Assessment: When students are intrinsically motivated to participate in examinations and other forms of assessment, mathematical error analysis can serve as a means of demonstrating and validating their learning outcomes.

ERO Reports and Findings on Mathematical Error Analysis

The Education Review Office (ERO) has published a series of reports addressing mathematical error analysis (as mentioned in references). The findings of these reports support efforts to minimize errors if effectively implemented in classroom teaching and learning. ERO has provided feedback through its website and booklets concerning teacher-related factors (e.g., teaching experience, teacher attendance, instructional methods, and motivation levels), learning environment factors (e.g., peer influence, class size, and disciplinary climate), and assessment-related factors (e.g., test frequency, feedback and practice, and evaluation fairness) in mathematics learning. Selected annual reports have presented the following principal findings and their implications for students.

Annual Report (Bikram Sambat 2075/2076)

The overall state of students' achievement in mathematics remains critically poor. Recent educational data revealed that 32% of students performed below the basic competency level in mathematics. This baseline deficiency is particularly severe in the benchmark years; in Grade 5, for instance, students adequately learned only 5% of the prescribed content items. This systemic underperformance is heavily tied to foundational literacy gaps, as insufficient

support for daily reading and writing activities at school has had a documented negative effect on overall mathematics learning. To remedy these deep-seated instructional challenges, institutional evaluation strategies must evolve past the traditional publication and distribution of examination results. The study strongly recommends establishing active parental participation in both comprehensive result analysis and collaborative student improvement planning.

Annual Report (Bikram Sambat 2076/2077)

Beyond overall performance trends, a significant inequality in learning achievement among Grade 10 students was identified, highlighting profound disparities within the student cohort. Age-based data revealed that students aged 14 and 15 demonstrated stronger achievement levels compared to those aged 16, 17, 18, and 19, signaling that older, over-aged students were underperforming and failing to meet expected grade-level benchmarks. Furthermore, the systematic reliance on the continuity of classroom examinations and the mere repetition of content items proved ineffective, revealing that student learning achievement had not improved meaningfully over time despite these assessment routines. Consequently, to break this cycle of instructional stagnation and bridge existing equity gaps, the institutionalization of effective student self-evaluation practices was identified as a critical necessity for driving authentic academic progress.

Annual Report (Bikram Sambat 2079/2080)

Even with access to home support, students' self-directed exploratory learning did not increase. Structured self-directed exploratory learning was not found to be consistently effective.

Annual Report (Bikram Sambat 2080/2081)

The performance distribution was as follows: Below Basic, 0.9%; Basic, 19.5%; Proficient, 78.2%; and Advanced, 1.4%. The smallest proportion of students fell in the Below Basic category, while the largest proportion performed at the Proficient level.

Annual Report (Bikram Sambat 2081/2082)

The report recommended the development of plans for improving learning achievement through result analysis, the use of student support materials, and the integration of technology in teaching and learning.

Study on Students' Performance in SLC (2006)

The following suggestions were offered:

(i) Undertake targeted activities to minimize the negative backwash effects of SLC examination practices.

(ii) Ensure the provision of adequate remediation for struggling students.

(iii) Cultivate reading habits among students as a foundation for mathematical literacy.

The findings from the above discussed annual reports collectively indicate that error analysis should be systematically incorporated into students' examinations to improve results and foster learner autonomy. Through error analysis — encompassing the application of mathematical knowledge in learning, and the identification and classification of misconceptions — durable, life-applicable learning can be cultivated.

Illustrative Error Analysis: ERO Model Items

To illustrate the practical application of error analysis, the ERO published model items in 2025 for Grade 8 student achievement assessment. The following examples demonstrate the types of errors students make on selected response items.

Item DATIM SS 17: Solving a Linear Equation

Item: If $3(2x - 1) + 2x = 21$, what is the value of x?

(a) −3 (b) −11/4 (c) 11/4 (d) 3

The correct response is (d) 3. However, two distinct types of errors are observed when students fail to reach the correct answer:

Error Type (i):

$3 \times 2x - 1 + 2x = 21$ $6x - 1 + 2x = 21$ $8x - 1 = 21$ $8x = 22$ $x = 11/4$

In this error, the student fails to distribute the factor of 3 across the entire expression $(2x - 1)$, multiplying only 2x rather than applying the distributive property to both terms. Consequently, the student arrives at $x = 11/4$ or $-11/4$ without verification.

Error Type (ii):

$3 \times 2x - 3 \times 1 + 2x = 21$ $6x - 3 + 2x = 21$ $8x - 3 = 21$ $8x = 24$ $x = 3$

In this instance, the student correctly applies the distributive property and arrives at $x = 3$. However, despite reaching the correct numerical result, the student may mistakenly conclude that $x = -3$, arriving at an incorrect conclusion through a sign error.

These examples demonstrate that misapplication of the operations +, −, ×, and parentheses leads to incorrect results. When subjected to systematic error analysis, these errors reveal specific areas where students require targeted support and identify effective points for classroom intervention.

Item DATIM SS 17: Addition of fractions

Item: $2/5 + 5/4 + 9/8 + \ldots = ?$

(a) 16/17 (b) 41/40 (c) 81/40 (d) 111/40

In this selected-response item, students are often unable to clearly identify what the question is asking and consequently choose an alternative at random. When attempting to solve the problem correctly, many students cannot arrive at the correct response (d) 111/40. Students frequently encounter the answer choices (distractors) before fully processing the question and then attempt to reason toward a solution. This approach leads to inaccurate answers, as the distractors function as misleading pathways that deflect students from the correct solution.

Item MID 30: Algebraic Identity

Item: Which of the following is the product of $(b + a)(b - a)$?

(a) $a^2 - b^2$ (b) $a^2 + b^2$ (c) $-b^2 - a^2$ (d) $b^2 - a^2$

Students may know the identity $(a + b)(a - b) = a^2 - b^2$, but they often fail to recognize that the order of the terms in the present item is reversed. Consequently, they are unable to identify the correct response, (d) $b^2 - a^2$. Selecting option (b), $a^2 + b^2$, or option (c), $-b^2 - a^2$, represents further distinct categories of errors arising from flawed reasoning in the classroom.

Item DATIM SS 14: Algebraic Simplification

Item: Which of the following is equal to $2(x + y) - (2x - y)$?

(a) 3y (b) y (c) 4x + 3y (d) 4x + 2y

Although the alternatives in this item are straightforward, students frequently fail to arrive at the correct answer, (a) 3y, in a systematic manner. ERO's algebra-based test items are designed in alignment with the curriculum for the relevant grade level and are constructed in relation

to expected performance of the students. Each of the incorrect alternatives reflects distinct conceptual and procedural errors that students are likely to commit.

Conclusion

In conclusion, this review of the Education Review Office (ERO) assessment reports underscores that the overall state of school mathematics performance in Nepal remains a critical challenge characterized by persistent conceptual and procedural errors of students written task. Systemic proficiency gaps—such as the high proportion of students performing below basic competency levels and the distinct underperformance of older student cohorts—reveal that traditional assessment repetitions have failed to yield meaningful learning improvements over time. These challenges are further compounded by foundational literacy deficiencies and a lack of instructional alignment in daily classroom practices. However, rather than viewing these student mistakes as definitive failures, the systematic application of Mathematical Error Analysis (MEA) offers a transformative diagnostic pathway for school education. By dissecting the underlying cognitive breakdowns behind common mistakes in arithmetic, algebra, and geometry, mathematics teachers and other concerned educators can shift from passive grade distribution to targeted, framework-driven interventions. Moving forward, integrating error analysis into regular classroom instruction, fostering effective student self-evaluation, and encouraging strategic parental involvement are imperative to dismantle deeply rooted misconceptions, minimize educational inequalities, and cultivate lasting conceptual growth and confidence among Nepalese learners.

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Competency-Based Education in Nepal: Aligning Curriculum, Pedagogy, and Assessment

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Abstract

Competency-based education has become a major focus of educational reform in Nepal through the National Education Policy (2019), the National Curriculum Framework (2019), the Basic and Secondary Education Curricula, and the School Education Sector Plan (2022–2032). This study has examined the alignment among competency-based curriculum, pedagogy, and assessment in Nepalese school education. A qualitative document analysis was employed using national policy documents, relevant literature, and experiential evidence from curriculum dissemination and teacher professional development programs conducted across all seven provinces of Nepal. The findings indicate that national policies consistently advocate learner-centered pedagogy, inquiry-based learning, project work, formative assessment, and competency-based assessment. However, considerable gaps remain between policy intentions and classroom practices. Participants reported overloaded curriculum content, inadequate emphasis on psychomotor and affective learning, limited teacher professional development, insufficient instructional resources,

and continued reliance on paper-and-pencil examinations. Weak implementation of school-based assessment and limited assessment literacy further constrain competency development. The study concludes that effective implementation of competency-based education requires stronger alignment among curriculum, pedagogy, and assessment, supported by continuous practice-oriented teacher professional development, adequate learning resources, strengthened instructional leadership, and systematic institutional support.

***Keywords*:** competency-based curriculum, learner-centered pedagogy, school-based assessment, teacher professional development, Nepalese school education

Introduction

Competency-based education (CBE) has become a major direction of educational reform worldwide, shifting the focus from the acquisition of subject knowledge to the development of learners' knowledge, skills, attitudes, values, and the ability to apply learning in authentic contexts (OECD, 2018; UNESCO, 2017). This approach emphasizes learner-centered pedagogy, active engagement, critical thinking, problem-solving, collaboration, and continuous assessment to prepare learners for the demands of the twenty-first century. Constructive alignment among curriculum, pedagogy, and assessment is therefore considered fundamental to achieving intended learning outcomes (Biggs, 1996).

In line with these global developments, Nepal has introduced several policy reforms to strengthen competency-based school education. The Constitution of Nepal (2015) recognizes education as a fundamental right, while the National Education Policy (2019), the National Curriculum Framework (NCF) for School Education (2019), the Basic Education Curriculum (Grades 6–8), 2020, the Secondary Education Curriculum (Grades 9–10), 2021; and the School Education Sector Plan (SESP) 2022–2032 collectively emphasize competency-based curriculum, learner-centered pedagogy, project-based learning, inquiry-based learning, formative assessment, and continuous teacher professional development (Curriculum Development Centre [CDC], 2019; Government of Nepal, 2019; Ministry of Education, Science and Technology [MoEST], 2022). These policy documents aim to develop competent, creative, productive, and socially responsible citizens capable of responding to national and global challenges.

Despite these progressive policy provisions, the implementation of competency-based education in Nepal continues to face significant challenges. Previous studies have reported that

classroom practices remain largely teacher-centered and examination-oriented, with limited use of learner-centered pedagogy, formative assessment, and competency-based instructional strategies (Education Review Office, 2021; Sigdel & Acharya, 2023). Similarly, teachers often experience difficulties in translating curriculum intentions into classroom practice because of limited professional support, inadequate instructional resources, and insufficient assessment literacy. These challenges indicate a persistent gap between intended curriculum and enacted curriculum.

Although previous studies have examined curriculum reform, pedagogy, and assessment separately, limited research has explored their alignment within Nepal's competency-based education framework by integrating policy analysis with evidence from curriculum dissemination and teacher professional development programs. Understanding this alignment is essential because curriculum, pedagogy, and assessment function as interdependent components of an effective education system.

Therefore, this study examines how competency-based curriculum, pedagogy, and assessment are conceptualized in Nepal's major education policy documents and explores the extent to which these policy intentions are reflected in educational practice. Using qualitative document analysis supported by experiential evidence from curriculum dissemination and teacher training programs conducted across Nepal, the study identifies major implementation challenges and proposes recommendations for strengthening constructive alignment among curriculum, pedagogy, and assessment in Nepalese school education.

Literature Review

Competency-Based Education: Concept and International Perspectives

Competency-based education (CBE) has emerged as a dominant paradigm in educational reform worldwide, reflecting a shift from content-oriented instruction towards the development of learners' ability to apply knowledge, skills, attitudes, and values in authentic contexts (OECD, 2018; UNESCO, 2017). Unlike traditional education systems that primarily emphasize content acquisition and examination performance, competency-based education focuses on what learners are able to know, understand, and do after completing learning experiences. Competence is therefore viewed as an integrated demonstration of cognitive, practical, social, and behavioral capabilities required to solve real-world problems and participate effectively in society (Mulder, 2017).

International organizations have increasingly recognized competency-based education as essential for preparing learners for the demands of the twenty-first century. The OECD Learning Compass 2030 identifies competencies such as critical thinking, creativity, collaboration, communication, self-regulation, and responsible citizenship as fundamental learning outcomes that enable learners to respond effectively to complex social, economic, and technological changes (OECD, 2018). Similarly, UNESCO (2017) emphasizes that quality education should promote holistic learner development by integrating knowledge, skills, attitudes, and values through learner-centered and inclusive educational practices.

The theoretical foundation of competency-based education is closely associated with constructivist learning theory, which views learning as an active process in which learners construct knowledge through meaningful experiences, interaction, inquiry, and reflection (Bruner, 1966; Vygotsky, 1978). Consequently, teaching shifts from teacher-directed knowledge transmission towards facilitating active learning, collaborative problem solving, project work, experimentation, and authentic assessment. Within this perspective, assessment becomes an integral component of learning by providing continuous evidence of learners' competency development rather than merely measuring content recall.

Although competency-based education has gained widespread international acceptance, research consistently indicates that successful implementation depends on the coherent alignment of curriculum, pedagogy, and assessment (Biggs, 1996; Mulder, 2017). Curriculum should clearly define intended competencies, pedagogy should provide meaningful learning experiences that enable learners to develop those competencies, and assessment should evaluate learners' ability to demonstrate competencies in authentic situations. When these three components are not aligned, curriculum reforms frequently remain limited to policy documents without producing substantial improvements in classroom practice.

Constructive Alignment: Linking Curriculum, Pedagogy and Assessment

One of the most influential theoretical perspectives underpinning competency-based education is Biggs' (1996) theory of constructive alignment. Constructive alignment proposes that effective learning occurs when curriculum objectives, teaching-learning activities, and assessment methods are deliberately aligned to support the achievement of intended learning outcomes. Drawing upon constructivist learning theory, Biggs argues that learners actively construct knowledge through meaningful learning experiences, while teachers design instructional environments that enable learners to achieve predetermined competencies.

Within competency-based education, curriculum specifies the competencies learners are expected to develop, pedagogy provides opportunities to acquire and practice these competencies, and assessment evaluates learners' progress towards achieving them. Consequently, assessment should extend beyond measuring factual knowledge to include practical performance, problem-solving ability, creativity, collaboration, communication, and other higher-order competencies. Black and Wiliam (2009) similarly argue that formative assessment plays a central role in supporting competency development by providing timely feedback that informs both teaching and learning.

However, previous research suggests that educational reforms frequently encounter difficulties because curriculum, pedagogy, and assessment are implemented independently rather than as mutually reinforcing components. In many education systems, including those in developing countries, curriculum reforms advocate competency-based learning, while classroom teaching continues to rely on traditional lecture methods and assessment remains dominated by high-stakes examinations (OECD, 2018). Such misalignment weakens the implementation of competency-based education and limits opportunities for meaningful learning.

The concept of constructive alignment therefore provides an important analytical framework for examining whether educational policies are translated into classroom practices. It also offers a useful theoretical lens for understanding why curriculum reforms often fail to produce expected improvements in student learning despite progressive policy intentions.

Competency-Based Curriculum, Pedagogy and Assessment in Nepal

Nepal has gradually reoriented its school education system towards competency-based education through a series of policy reforms. The National Curriculum Framework (NCF) for School Education (2019) serves as the principal policy document guiding curriculum development and emphasizes competency-based learning, learner-centered pedagogy, internal assessment, contextualized learning, and continuous improvement of educational quality (Curriculum Development Center [CDC], 2019). The framework conceptualizes competency as the integrated application of knowledge, skills, attitudes, values, and work-related abilities required for lifelong learning and productive citizenship.

Building upon the National Curriculum Framework, the Basic Education Curriculum (Grades 6–8) and the Secondary Education Curriculum (Grades 9–10) promote inquiry-based learning, project work, field studies, collaborative learning, problem solving, and competency-

oriented assessment. Likewise, the National Education Policy (2019) emphasizes practical education, experiential learning, ICT integration, continuous teacher professional development, and school-based assessment. The School Education Sector Plan (2022–2032) further reinforces these priorities by advocating improvements in curriculum relevance, instructional quality, digital learning, teacher capacity, and student assessment systems (MoEST, 2022).

Collectively, these policy documents demonstrate a consistent national commitment to improving educational quality through competency-based approaches. They also align closely with international educational agendas, particularly Sustainable Development Goal 4, which emphasizes inclusive, equitable, and quality education for all learners. Nevertheless, successful implementation of these reforms depends on teachers' capacity to translate policy intentions into effective classroom practices.

Challenges in Translating Policy into Classroom Practice

Despite substantial policy reforms, previous studies consistently report that competency-based education has not yet been fully realized in Nepalese classrooms. Education Review Office (2021) found that classroom teaching continued to be dominated by teacher-centered instruction and examination-oriented learning despite policy emphasis on learner-centered pedagogy. Similarly, Sigdel and Acharya (2023) reported that assessment practices remained heavily dependent on written examinations, limiting opportunities for formative assessment and competency development.

Research also identifies teacher professional development as one of the most significant determinants of successful curriculum implementation. Darling-Hammond et al. (2017) argue that sustained, practice-based professional development has a greater impact on classroom practice than one-time orientation programs. Teachers require continuous mentoring, classroom coaching, collaborative lesson planning, and opportunities to reflect on their instructional practices in order to implement competency-based education effectively.

In addition to teacher capacity, several structural barriers affect curriculum implementation. Studies conducted in Nepal have identified shortages of instructional materials, science laboratories, ICT facilities, libraries, internet connectivity, and qualified subject teachers as major constraints to learner-centered pedagogy and competency-based assessment (MoEST, 2022). Large class sizes, inadequate classroom infrastructure, and limited instructional time further reduce opportunities for project work, inquiry-based learning, and authentic assessment.

Assessment practices present another major challenge. Although national policies advocate formative assessment and school-based assessment, classroom evaluation remains largely examination-oriented. The continued dominance of high-stakes examinations encourages teachers to prioritize content coverage and exam preparation over competency development. This phenomenon, commonly referred to as the washback effect, weakens constructive alignment and limits the implementation of competency-based education (Biggs, 1996).

Methodology

This study employed a qualitative research approach using document analysis as the research design. To strengthen the analysis and provide contextual understanding, documentary evidence was complemented by the researcher's professional experiences gained through curriculum and curricular materials dissemination programs and teacher professional development workshops conducted across all seven provinces of Nepal. The integration of document analysis and experiential evidence enabled a comprehensive examination of the alignment between competency-based curriculum, pedagogy, and assessment in Nepalese school education.

The study utilized three complementary sources of evidence. First, primary data sources consisted of major national education policy documents, including the National Education Policy (2019), the National Curriculum Framework for School Education (2019), the Basic Education Curriculum (Grades 6–8), the Secondary Education Curriculum (Grades 9–10), and the School Education Sector Plan (2022–2032). These documents were selected because they provide the official policy directions for curriculum, pedagogy, and assessment in Nepal.

Second, the secondary sources included peer-reviewed journal articles, books, national assessment reports, and publications from international organizations such as UNESCO and the OECD. These sources were reviewed to establish the theoretical and empirical foundation of competency-based education and to compare Nepal's policy directions with international perspectives.

Third, experiential evidence was drawn from curriculum dissemination programs and teacher professional development workshops facilitated by the researcher across all seven provinces of Nepal. Participants included teachers, head teachers, teacher educators, education officers, and local government representatives. During these programs, participants shared their experiences and reflections regarding the implementation of competency-based curriculum, learner-centered pedagogy, and school-based assessment. These field experiences were used to enrich the interpretation of policy implementation rather than independent primary research data.

The collected documents and experiential evidence were analyzed using thematic analysis (Braun & Clarke, 2021). The analysis began with repeated reading of policy documents and relevant literature to identify key concepts related to curriculum, pedagogy, assessment, and competency-based education. Similar concepts and implementation issues were then coded and organized into broader themes. The experiential evidence from dissemination programs was subsequently compared with the documentary findings to identify consistencies and discrepancies between policy intentions and implementation practices. This analytical process resulted in four major themes that guided the presentation of the findings and discussion.

To enhance the credibility of the study, data triangulation was employed by comparing information obtained from policy documents, published literature, and experiential evidence from dissemination and teacher training programs. This triangulation strengthened the consistency and trustworthiness of the findings by examining the same issues from multiple perspectives. Throughout the analysis, interpretations were grounded in documentary evidence and supported by relevant scholarly literature to minimize subjective bias.

The study relied exclusively on publicly available policy documents, published literature, and the researcher's professional observations from curriculum dissemination and teacher professional development programs. No personal identifiers or confidential information were collected or reported. Participants' views are presented in aggregate form without identifying any individual or institution. Consequently, formal ethical approval was not required. Nevertheless, the study adhered to the principles of academic integrity, transparency, and responsible reporting throughout the research process.

Findings and Discussion

Theme 1: Competency-Based Curriculum: Policy Intentions and Implementation Challenges

Nepal's major education policy documents, including the National Education Policy (2019), the National Curriculum Framework (2019), the Basic Education Curriculum (Grades 6–8), 2020, the Secondary Education Curriculum (Grades 9–10), 2021; and the School Education Sector Plan (2022–2032), consistently promote a competency-based curriculum that emphasizes the integrated development of knowledge, skills, attitudes, values, and the ability to apply learning in real-life situations. The policies further advocate learner-centered and practical education through periodic curriculum revision and contextualization (CDC, 2019; Government of Nepal, 2019; MoEST, 2022).

Evidence from curriculum dissemination and teacher professional development programs conducted across all seven provinces indicates that participants generally appreciated the shift towards a competency-based curriculum and considered it more relevant and practical than previous curricula. However, they consistently reported that some subjects, particularly Science and Technology and Social Studies, contain overloaded content, making it difficult to implement practical and competency-based learning activities. Participants also observed that curriculum implementation remains heavily focused on cognitive learning outcomes, while comparatively less attention is given to psychomotor and affective domains. Many participants recommended reducing the weekly instructional load from 32 credit hours to around 30 hours.

These findings suggest that although Nepal's curriculum is conceptually aligned with international competency-based education reforms, effective implementation remains constrained by curriculum overload and limited opportunities for experiential learning. Similar concerns have been reported in previous studies, which argue that competency-based curriculum can only be effectively implemented when curriculum content, instructional time, and classroom learning experiences are appropriately aligned (Biggs, 1996; OECD, 2018). Consequently, strengthening the balance among cognitive, psychomotor, and affective learning domains is essential for achieving the intended curriculum outcomes.

Theme 2: Learner-Centered Pedagogy: Policy Aspirations and Classroom Realities

Nepal's education policies consistently advocate learner-centered and child-centered pedagogy to promote competency development. The National Education Policy (2019), the National Curriculum Framework (2019), and the Basic and Secondary Education Curricula emphasize inquiry-based learning, project work, field studies, problem-solving, collaborative learning, inclusive pedagogy, ICT integration, and continuous teacher professional development as key strategies for improving learning outcomes (CDC, 2019; Government of Nepal, 2019; MoEST, 2022).

Participants in curriculum dissemination and teacher training programs acknowledged that these pedagogical approaches are appropriate for implementing competency-based education. However, they reported several implementation challenges, including limited opportunities for continuous professional development, shortages of science laboratories, ICT laboratories,

libraries, internet facilities, digital learning resources, movable classroom furniture, and qualified subject teachers. These constraints often compel teachers to rely on traditional lecture-based instruction despite their awareness of learner-centered approaches.

These findings indicate that policy intentions are not fully reflected in classroom practice because of institutional and resource constraints. Similar studies have shown that learner-centered pedagogy requires continuous practice-oriented teacher professional development, adequate instructional resources, and supportive school environments rather than one-time orientation programs (Darling-Hammond et al., 2017; UNESCO, 2017). Therefore, strengthening teachers' professional capacity together with improving school infrastructure is essential for translating competency-based pedagogy into classroom practice.

Theme 3: Competency-Based Assessment: Policy Provisions and Assessment Practices

Assessment is an integral component of Nepal's competency-based curriculum. The National Curriculum Framework (2019) and the Basic and Secondary Education Curricula emphasize internal assessment, assessment for learning, school-based assessment, and the use of specification grids that measure learners' cognitive abilities from knowledge to higher-order thinking. Likewise, the National Education Policy (2019) advocates practical examinations, project work, oral assessment, creative performance, and community-based inquiry as important assessment approaches, while the School Education Sector Plan (2022–2032) prioritizes objective, reliable, and competency-oriented assessment systems (CDC, 2019; Government of Nepal, 2019; MoEST, 2022).

Despite these policy provisions, participants consistently reported that assessment practices remain dominated by paper-and-pencil examinations. Parents and schools continue to give greater importance to terminal and final examinations than to formative assessment, practical work, and school-based assessment. Teachers also indicated that they lack practical assessment tools, portfolio formats, documentation systems, and sufficient assessment literacy to implement competency-based assessment effectively.

These findings demonstrate a significant gap between policy intentions and assessment practices. Similar findings have been reported by Sigdel and Acharya (2023), who observed that examination-oriented assessment continues to influence classroom teaching in Nepal. Black and Wiliam (2009) also argue that assessment for learning improves student achievement only when

teachers possess adequate assessment literacy and regularly use feedback to support learning. Therefore, strengthening school-based assessment requires practical guidelines, assessment resources, continuous mentoring, and greater public awareness regarding the value of formative assessment.

Theme 4: Strengthening Alignment among Curriculum, Pedagogy, and Assessment

The findings indicate that Nepal has established a comprehensive policy framework supporting competency-based education; however, effective implementation depends on the constructive alignment of curriculum, pedagogy, and assessment. Participants consistently emphasized that while policy documents clearly promote competency development, classroom practice continues to be constrained by overloaded curriculum, limited teacher capacity, inadequate infrastructure, insufficient instructional resources, and examination-oriented assessment practices.

These findings support Biggs' (1996) theory of constructive alignment, which argues that meaningful learning occurs only when curriculum objectives, teaching-learning activities, and assessment methods are coherently aligned. The present study suggests that strengthening any one component in isolation is unlikely to improve educational quality. Instead, curriculum reform, teacher professional development, learner-centered pedagogy, competency-based assessment, and institutional support should be implemented as interconnected elements of the education system.

Overall, the evidence suggests that Nepal has established a strong policy foundation for competency-based education, but greater investment in teacher capacity, school resources, instructional leadership, and assessment reform is required to translate policy intentions into effective classroom practice.

Conclusion

This study examined the alignment of competency-based curriculum, pedagogy, and assessment within Nepalese school education with a particular focus on the translation of policy intentions into classroom practice. The findings indicate that Nepal has made significant progress in adopting competency-based educational reforms through key policy frameworks such as the National Curriculum Framework (2019), the National Education Policy (2019), and the School Education Sector Plan (2022). These policies reflect global trends that emphasize holistic learning, integration of knowledge and skills, and the development of higher-order competencies.

However, the study reveals that the realization of these policy goals in classroom practice remains limited. A persistent misalignment among curriculum, pedagogy, and assessment continues to hinder effective implementation. Curricular designs are heavily overloaded with cognitive content particularly in Science and Technology and Social Studies, while neglecting the psychomotor and affective domains. Furthermore, the 32-credit-hour weekly workload strains school schedules. Teaching practices are still largely dominated by traditional, teacher-centered approaches due to severe infrastructural constraints, including a lack of Science and ICT labs, missing libraries, and unsupportive classroom spaces with non-movable furniture.

Assessment systems remain heavily focused on traditional paper-and-pencil written tests, heavily driven by parent demand for final marks and a lack of standardized assessment tools and student portfolio management resources. Teacher capacity and professional support systems emerge as critical factors influencing implementation. The findings suggest that teachers require sustained, practice-oriented professional development to effectively adopt competency-based approaches.

While Nepal's policy framework provides a strong foundation for competency-based education, achieving meaningful transformation requires a coherent, integrated, and well-resourced approach. Strengthening alignment among curriculum, pedagogy, and assessment, enhancing teacher capacity, improving school infrastructure, and ensuring supportive institutional mechanisms are essential for bridging the gap between policy and practice. These efforts are crucial for fostering meaningful learning and equipping students with the competencies required for the demands of the twenty-first century.

Recommendations

The findings of this study highlight the need for comprehensive, coordinated, and sustainable reforms to strengthen the implementation of competency-based education (CBE) in Nepal. Although national education, curriculum policies, and plans have adopted a progressive vision emphasizing competencies, skills, contextual learning, and learner-centered approaches, the effective translation of these intentions into classroom practice remains challenging. The study indicates that successful implementation requires stronger alignment among curriculum, pedagogy, and assessment, supported by adequate institutional capacity, infrastructure, teacher professional development, and systemic policy coherence.

Curriculum-Related Recommendations

The findings suggest the necessity of strengthening the alignment between intended curriculum goals and their actual implementation in classrooms. Although Nepal's competency-based curriculum framework emphasizes competency-based learning, life skills, soft skills, creativity, problem-solving, and contextual relevance, many teachers continue to experience difficulties in interpreting competency statements and translating them into measurable learning outcomes. Therefore, the Curriculum Development Center (CDC) should further operationalize curriculum documents through practical, teacher-friendly guidelines, including competency-based lesson plan exemplars, instructional strategies, assessment approaches, and context-specific learning activities.

The curriculum should also be reviewed to reduce content overload, particularly in subjects such as Science and Technology and Social Studies. The present curriculum structure often prioritizes content coverage and cognitive knowledge, leaving limited time for experiential, psychomotor, and affective learning opportunities. Reducing unnecessary content burden and managing weekly instructional hours effectively would provide teachers with sufficient time to engage students in inquiry-based learning, practical activities, projects, and competency development. A balanced curriculum design should move beyond knowledge transmission toward the development of transferable skills, attitudes, and real-life competencies.

Furthermore, curriculum support materials should be developed based on local contexts and school realities. Localized curriculum resources, examples of daily live activities, examples of integrated learning tasks, and community-based learning models would support teachers in adapting curriculum intentions to diverse geographical and socio-cultural contexts. Such

resources are particularly important for implementing competency-based curricula and ensuring that learning becomes meaningful and relevant to students' experiences.

Another critical area requiring attention is the alignment between curriculum and examination systems. Without reforming high-stakes examinations, competency-based curriculum intentions are unlikely to be fully realized. As emphasized through the principle of constructive alignment (Biggs, 1996), learning outcomes, teaching strategies, and assessment systems must function cohesively. Therefore, curriculum reform should be accompanied by examination reform to ensure that assessment practices encourage higher-order thinking, application, creativity, and problem-solving rather than memorization and content recall.

Pedagogy-Related Recommendations

The successful implementation of competency-based education depends largely on transforming classroom teaching practices. The findings indicate that many teachers still rely on traditional teacher-centered approaches due to limited exposure to learner-centered methodologies, inadequate teaching resources, and insufficient opportunities for practice-based professional learning. Therefore, teacher professional development (TPD) should be redesigned as a continuous, school-based, and practice-oriented process rather than being limited to short-term theoretical workshops.

Teacher development programs should incorporate demonstration of lessons, model classrooms, peer coaching, mentoring, lesson study, collaborative planning, classroom observation, and reflective practices. Evidence from educational research demonstrates that sustained professional learning opportunities supported by mentoring and teacher collaboration are more effective in producing meaningful changes in instructional practice (Darling-Hammond et al., 2017). Experiences from teacher training and classroom support programs across Nepal also indicate that teachers benefit most when professional learning is connected directly with their classroom challenges and practices.

Teachers should receive structured support to implement innovative pedagogical approaches such as inquiry-based learning, project-based learning, experiential learning, collaborative learning, and problem-solving approaches. For this purpose, schools should be provided with practical teaching resources, digital learning materials, activity-based teaching guides, and locally relevant instructional examples. Without adequate resources and professional support, teachers often return to conventional lecture-based methods despite policy expectations.

Infrastructure development is also essential for enabling competency-based pedagogy. Federal, provincial, and local governments should prioritize investment in basic educational facilities, including functional science laboratories, ICT laboratories, libraries, internet connectivity, and digital interactive learning facilities. Classroom environments should also be redesigned with flexible furniture arrangements that allow cooperative learning, group discussions, experiments, and project-based activities.

Teachers play a critical role in student achievement. Providing regular feedback, maintaining a consistent presence and managing classroom time effectively are essential strategies. Incorporating digital resources and internet use in classroom activities can further enhance learning. Continuous professional development for teachers should focus on these areas to ensure they can effectively support student learning across all subjects (ERO, 2025).

Strengthening instructional leadership at the school level is equally important. Head teachers and local education authorities should actively support pedagogical innovation through academic supervision, constructive feedback, professional learning communities, and teacher mentoring systems. Effective leadership can create an institutional learning culture that encourages experimentation, collaboration, and continuous improvement in teaching practices.

Assessment-Related Recommendations

Assessment reform is central to achieving the goals of competency-based education; however, it remains one of the most challenging aspects of implementation. The findings indicate that assessment practices in Nepal continue to be dominated by summative examinations, limiting the effective use of internal assessment and assessment for learning. Therefore, assessment systems should be restructured to emphasize formative assessment, continuous feedback, performance-based evaluation, and competency-based assessment criteria.

Teachers require stronger assessment expertise to design, implement, interpret, and use assessment information effectively. The responsible authorities should provide clear operational guidelines, standardized rubrics, sample assessment tools, and practical training materials to support school-based assessment (SBA). Teachers should be supported in developing authentic assessment tasks, including projects, practical demonstrations, portfolios, reflective activities, peer assessment, and self-assessment strategies.

School-based assessment should not be treated merely as an administrative requirement but as a mechanism for improving student learning. Therefore, systematic monitoring, mentoring,

and professional support mechanisms should be established involving teachers, head teachers, local education officials, and curriculum authorities. Standardized templates, student portfolio guidelines, digital record-keeping systems, and documentation frameworks should be provided to help schools maintain reliable records of students' continuous progress.

Community awareness is another important aspect of assessment reform. Parents and communities often value traditional examination results more than competency development and performance-based learning. Therefore, local governments and schools should conduct orientation programs to explain the purpose and benefits of competency-based internal assessment practices and encourage broader acceptance of alternative assessment approaches.

Reforming national examination systems is equally necessary. As long as examinations emphasize factual recall and content reproduction, classroom teaching will continue to be influenced by examination pressures. National examinations should gradually incorporate analytical, application-based, problem-solving, and performance-oriented tasks to promote higher-order competencies and reduce negative washback effects. This reform would ensure greater consistency between curriculum intentions, classroom practices, and assessment outcomes.

Digital assessment systems should also be explored to improve efficiency, transparency, and personalization of assessment practices. Digital platforms can support real-time feedback, student progress tracking, assessment data management, and individualized learning support. However, successful implementation requires parallel investment in technological infrastructure, teacher digital competency, and technical support systems.

Overall Implications

In conclusion, effective implementation of competency-based curriculum, pedagogy, and assessment in Nepal requires a holistic and integrated reform approach. The findings demonstrate that policy-level commitment alone is insufficient to transform classroom practices. Sustainable change requires practical curriculum support materials, continuous teacher professional development, adequate educational infrastructure, effective instructional leadership, assessment literacy, and alignment between internal and external assessment systems.

The study further indicates that strengthening the connection between curriculum intentions and classroom realities is essential for achieving meaningful educational transformation. Therefore, policymakers, curriculum development centers, education training

centers, local governments, and schools should work collaboratively to establish supportive systems that enable teachers to implement competency-based education effectively. Ensuring coherence among curriculum, pedagogy, and assessment will be critical for developing learners who possess not only academic knowledge but also the skills, attitudes, creativity, and competencies required for lifelong learning and participation in a rapidly changing society.

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