Republic of the Philippines
# Department of Education
REGION III – CENTRAL LUZON
SCHOOLS DIVISION OF SCIENCE CITY OF MUÑOZ

11 November 2024

**SCHOOLS DIVISION MEMORANDUM**
No. 383, s. 2024

**DISSEMINATION OF REGIONAL MEMORANDUM NO. 765 TITLED IMPLEMENTATION GUIDELINES ON THE INSTITUTIONALIZATION OF COMPUTER-BASED ASSESSMENTS**

To: Assistant Schools Division Superintendent
Chief Education Supervisors
Division Information and Technology Officer
Public Elementary and Secondary Schoolheads
All Others Concerned

1. For information, guidance, and strict compliance of all concerned, enclosed is the Regional Memorandum No. 765 s. 2024 re: Implementation Guidelines on the Institutionalization of Computer-Based Assessments (CBA), dated November 05, 2024. This Regional Memorandum can be downloaded from the link https://tinyurl.com/4wdtd2y8.

2. For concerns or queries, please communicate with Dr. Leilani D. Tidalgo, Education Program Supervisor in Mathematics, through her cellphone no. 09636009845 or email address: leilani.tidalgo@deped.gov.ph.

3. Immediate and wide dissemination of this Memorandum is earnestly desired.

DEP-ED SCIENCE CITY OF MUÑOZ NOV 13 2024

**JOHANNA N. GERVACIO PhD, CESO V**
Schools Division Superintendent

Encl: as stated
Reference: None
To be indicated in the Perpetual Index under the following subjects:

COMPUTER-BASED ASSESSMENT
IMPLEMENTATION GUIDELINES INSTITUTIONALIZATION

*CID/LDT-Dissemination of RM-765*
*26/November 05, 2024*

3935

Republic of the Philippines
**Department of Education**
REGION III-CENTRAL LUZON

NOV 04 2024

**REGIONAL MEMORANDUM**
No. 765, s. 2024

**IMPLEMENTATION GUIDELINES ON THE INSTITUTIONALIZATION OF COMPUTER-BASED ASSESSMENTS**

To : Schools Division Superintendents
Assistant School Division Superintendents
Curriculum Implementation Division Chiefs
School Governance Operations Division Chiefs
Education Program Supervisors
Public Schools District Supervisors
Public Elementary and Secondary School Heads
All Others Concerned

1. The Department of Education Regional III is highly committed to meeting the demands of Education 4.0 in the education setting, which integrates the emerging of ICT to develop not only the instructional and pedagogical processes but also the mode of assessment.

2. The implementation guidelines, anchored on the *MATATAG: Bansang Makabata, Batang Makabansa agenda,* guide the schools in accelerating the achievement of education targets while strengthening the learning recovery and continuity program of the Department.

3. Moreover, this document offers comprehensive guidelines for schools in implementing and integrating computer-based assessments within the classroom assessment framework of the K to 12 Basic Education Program.

4. The shift in the trend of assessing the learners depends on the effectiveness and efficiency of the approach used inside the classroom through valid, reliable, fair, and cost-effective computer-based assessments.

5. The implementation guidelines shall take effect immediately.

6. Immediate and wide dissemination of and compliance with this memorandum is desired.

**RONNIE S. MALLARI, PhD, CESO V**
OIC - Regional Director

Encls.: As stated

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Republic of the Philippines
# Department of Education
REGION III-CENTRAL LUZON

References: DO No. 78, s. 2010; DO No. 46, s. 2011; DO No. 8, s. 2015; DO No. 42, s. 2017; DO No. 21, s. 2019; DO No. 31, s. 2020; DO No. 24, s. 2022; DO No. 13, s. 2023

To be indicated in the Perpetual Index
under the following subjects:

COMPUTER-BASED ASSESSMENT — IMPLEMENTATION GUIDELINES
INSTITUTIONALIZATION

Clmd3/Clmd4
October 29, 2024

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Enclosure No.1 of Regional Memorandum No. ___, s. 2024

**IMPLEMENTATION GUIDELINES ON THE INSTITUTIONALIZATION OF COMPUTER-BASED ASSESSMENTS**

## I. Rationale

Advances in the use of technology in teaching and learning have paved the way for new assessment mechanisms that will allow individualized and collaborative learning while correctly measuring and supporting intended learning competencies. The evolving trend towards assessing learners independently underscores the importance of employing valid, reliable, fair, and cost-effective computer-based assessments within classrooms.

The Department of Education (DepEd) has endorsed the integration of Information and Communication Technology (ICT) into the curriculum, facilitating the development of multimedia instructional materials and ICT-enabled assessments. Policy initiatives such as the DepEd Computerization Program (DCP) aim to equip public schools with technologies that enhance the teaching-learning process, providing e-classrooms for elementary schools and computer laboratory packages for secondary schools. Furthermore, efforts are underway to ensure internet connectivity for all public high schools, empowering learners and educators with ICT literacy.

The strategic use of ICT is emphasized within the Philippine Professional Standards for Teachers, under Domain 1 - Content Knowledge and Pedagogy. ICT-enabled mechanisms serve as potent tools for delivering curriculum content, with technology playing a pivotal role in curriculum development, communication, implementation, and assessment.

To address the needs of 21st-century learners, educators must possess digital skills aligned with the principles of Education 4.0. As outlined in DepEd Order No. 24, s. 2022, the assessment of learning outcomes during key stage transitions necessitates the utilization of tools such as artificial intelligence, machine learning, and analytics to develop predictive models of student readiness, achievement, literacy levels, Senior High School (SHS) tracks, and work readiness. Implementing computer-based assessments can enhance learner performance, improve efficiency, and optimize the teaching and learning process, thus nurturing competent 21st-century learners.

Computer-Based Assessment (CBA) encompasses the use of digital tools for assessment activities, including computers, laptops, tablets, and smartphones. Research indicates that CBA enhances learning outcomes across various content

areas, offering convenience and immediacy in receiving assessment results. Students perceive CBA as a valuable mastery learning tool, favoring it over traditional paper-and-pencil tests, while also demonstrating greater stability in motivation over time.

A research conducted by DepEd Region III in 2019 titled *"Reexamining the Determinants of the Quality of Basic Education: The Case of Region III"* highlights the unfamiliarity of learners with computer-based assessments as a contributing factor to poor performance in international assessments like the Programme for International Student Assessment (PISA). Thus, there is a pressing need to adopt digitalized assessment approaches to align with the demands of contemporary society and the future of education.

DepEd Region III issues this implementation guidelines to bridge the gap in learning recovery and continuity while improving education outcomes through the institutionalization of computer-based assessments in schools.

## II. Scope

This document offers comprehensive guidelines for schools in implementing and integrating computer-based assessments within the classroom assessment framework of the K to 12 Basic Education Program. It encompasses a wide range of assessment types, approaches, and strategies that teachers in all public schools within DepEd Region III can utilize. The primary objective is to support learners in achieving high performance aligned with prescribed learning standards; assist the teachers and school heads in the implementation of the program. The guidelines on Computer-Based Assessments stipulated in this document may be adapted in the conduct of the region-wide and division-wide assessments considering the availability of resources as provided and supported by the immediate school heads and stakeholders.

## III. Definition of Terms

For purposes of Computer-Based Assessment, the following terms are defined and understood as follows:

a. **Computer-Based Assessment (CBA)** refers to the use of digital tools or gadgets such as laptops/computers, tablets, and other electronic gadgets in which the learners can take assessments instead of traditional paper and pen.

b. **Computer-Based Formative Assessment (CBFA)** refers to any form of assessment, using a computer or any other gadgets, which may be given at any time during the teaching and learning process. It can be an

assessment for learning and assessment as learning wherein teachers can make adjustments in their instruction and students reflect on their progress respectively.

c. **Computer-Based Summative Assessment (CBSA)** refers to any form of assessment, using a computer or any other gadgets, which occurs at the end of a period of learning or a particular unit to measure whether the learners have met the content and performance standards. It is an assessment of learning which is recorded, graded, and used to report on the learners' achievement.

d. **Digitization of Assessment** pertains to the conversion of traditional modes of assessment in the form of paper and pen to e-assessment which can be operated with the use of computers and/or other gadgets and the internet.

e. **Offline Computer-Based Assessment** pertains to the method by which schools can run in remote areas where there is no reliable internet connection available.

f. **Online Computer-Based Assessment** pertains to the digitalization of assessment in electronic format which can be operated only with a reliable internet connection available.

## IV. Implementation Arrangement

As the national institution responsible for high-quality basic services, DepEd Region III ensures accessible and inclusive learning for all Filipinos by maximizing teachers' competencies and learners' potential. Integrating digital tools in curriculum delivery and assessment, aligned with 21st-century learning and Education 4.0, improves learning outcomes. Therefore, DepEd Regional Office III promotes CBA adoption for enhanced teaching and learning, to provide accessible, inclusive, and liberating education.

### A. Adaption of Computer-Based Assessment in the Classroom

A streamlined and innovative approach to e-assessment design is essential for meeting 21st-century demands in technology-based instruction. Integrating ICT effectively in assessment expands the array of methods available to teachers, anchoring e-learning assessments on frameworks like the Technological, Pedagogical, and Content Knowledge (TPCK) framework, Substitution, Augmentation, Modification, and Redefinition (SAMR) Model, and Analyze, Design, Develop, Implement, and Evaluate (ADDIE) Model, and Bloom's Digital Taxonomy.

CBA involves the use of technology to measure and evaluate students' learning progress, knowledge, and skills. The common technology used in CBA includes computer-based tests, online quizzes, adaptive assessments, and other interactive tools. Teachers can leverage CBAs using tools like MS Excel, Microsoft Forms on Teams, and other offline software for seamless assessments. **Computer-Based Formative Assessments (CBFA)** provide prescriptive feedback to assist students in reaching their goals while **Computer-Based Summative Assessments (CBSA)** help to establish whether students have attained the goals set for them.

CBFAs help students identify their strengths and weaknesses, monitor their progress, and offer feedback to enhance their learning. An example of CBFAs is the use of online and offline quizzes, which can assess student knowledge and skills while providing immediate and personalized feedback, thereby enhancing their learning experience. Online quizzes are straightforward to administer and grade, and they can be tailored to align with students' learning objectives and preferences.

Teachers can use CBFAs through online quizzes or surveys, creating them via platforms such as Microsoft Forms and other open-access online tools. Students can then answer questions using their computer or mobile device. With results immediately accessible, teachers gain valuable insights into students' learning progress and areas requiring further assistance. Moreover, these platforms enable teachers to generate reports comprising student grades and assessment results.

Furthermore, teachers can employ CBFAs for real-time feedback during lectures. Students can use response systems to provide instant feedback to teachers. Teachers can then adapt lessons in real time based on the results and offer immediate feedback to students regarding their comprehension of the material.

Meanwhile, CBSAs are electronic assessments typically administered at the end of a learning period. They also utilize digital platforms and tools, like online tests or quizzes, to gauge students' mastery of covered material. CBSAs offer a comprehensive overview of students' learning progress and are commonly employed for grading purposes. In general, CBSAs are graded as compared with the CBFAs which are non-graded.

CBSAs feature the following characteristics:

a. ***Standardization:*** CBSAs offer standardized evaluation criteria and scoring processes, ensuring consistency across different administrations and evaluators.

b. ***Objectivity:*** The use of computer algorithms for scoring reduces subjectivity and biases often associated with human grading. This enhances the objectivity and reliability of the assessment results.

c. ***Efficiency:*** CBSAs save time and effort through automated grading and result generation. This enables a seamless assessment of scores and giving feedback.

d. ***Data generation and analysis:*** CBSAs generate extensive data on learner performance, which can be analyzed to gain insights into overall class performance, identify trends, and inform instructional decision-making.

e. ***Accessibility and flexibility:*** CBSAs can be accessed remotely, providing flexibility in terms of time and location. Learners can take assessments at their convenience, and teachers can administer assessments to multiple classes simultaneously.

Teachers can adapt CBSAs through various applications, including:

a. ***Efficient grading:*** CBSAs can be automatically graded, saving teachers significant time and effort compared to manual grading processes. This allows for a quick turnaround of results and efficient evaluation of students' performance.

b. ***Standardization and consistency:*** CBSAs ensure standardized evaluation criteria, eliminating potential biases associated with human grading. This leads to more consistent and objective assessment results.

c. ***Large-scale administration:*** CBSAs can be administered to many learners simultaneously, making it suitable for large-scale testing situations such as district-wide or national assessments.

d. ***Enhanced test security:*** CBSAs can incorporate security features like randomizing question order, disabling copying or printing, and implementing time limits. These measures help maintain the integrity and security of the assessment process.

e. ***Data analysis and reporting:*** CBSAs comprehensive data reports that provide insights into learners' performance, item analysis, class averages, and individual scores. These reports support data-driven decision-making at various levels, including instructional planning and intervention strategies.

The teachers can employ CBSAs through the following:

a. *Streamlined assessment administration:* Teachers can use CBSAs to streamline the administration process. Online platforms or assessment software allow teachers to create, deliver, and monitor assessments efficiently, saving time and reducing administrative burdens.

b. *Timely feedback and reporting:* CBSAs provide immediate feedback to learners, allowing them to understand their performance and areas of improvement. Additionally, teachers can access detailed reports that enable them to analyze class-wide or individual learner performance and identify areas that require further attention.

c. *Individualized feedback and differentiation:* With CBSAs, teachers can provide individualized feedback based on learners' performance. Adaptive assessments can adjust the difficulty level of questions based on students' responses, ensuring that each learner receives an assessment tailored to their abilities.

d. *Targeted intervention and instruction:* The data generated by CBSAs can inform teachers' instructional strategies and help them identify specific areas where learners require additional support. Teachers can use the assessment results to design targeted interventions and differentiate instruction based on individual learner needs.

e. *Progress monitoring and growth tracking:* CBSAs allow teachers to track students' progress over time. By comparing assessment results from different points in the academic year, teachers can identify learner growth, monitor learning trajectories, and make informed decisions about instructional adjustments.

Alignment of CBSAs with the cognitive process dimensions/levels based on revised Bloom's Taxonomy can be achieved in the following ways:

a. *Remembering:* Multiple-choice questions that assess students' ability to recall factual information, dates, or vocabulary.

b. *Understanding:* Matching or labeling activities that require students to demonstrate comprehension and understanding of concepts.

c. *Applying:* Scenario-based questions or simulations that assess students' ability to apply knowledge and skills in practical situations.

d. *Analyzing:* Data interpretation tasks that require students to analyze information, conclude, or identify patterns.

e. *Evaluating:* Extended response questions that prompt students to evaluate arguments, solutions, or strategies, providing justifications or evidence to support their assessments.

f. *Creating:* Project-based assessments or open-ended questions that ask students to generate original ideas, designs, or solutions, demonstrating higher-order thinking and creativity.

The following are examples of how cognitive process dimensions can be integrated with CBSAs:

| Cognitive Process Dimension | Sample CBSA Questions/Tasks | Suggested Examples |
|---|---|---|
| *Remembering* | Multiple-choice questions ask learners to recall specific facts, dates, or definitions from the course material. | 1. Fill-in-the-blank questions that require learners to recall specific details, formulas, or equations from memory.<br>2. Matching exercises where learners match terms with their corresponding definitions or examples. |
| *Understanding* | Labeling diagrams or matching terms with their corresponding explanations to assess learners' understanding of concepts. | 1. True or false questions that assess learners' comprehension of key concepts or principles.<br>2. Multiple-choice questions that assess learners' comprehension of concepts by asking them to identify the best explanation or interpretation. |
| *Applying* | Simulations or interactive tasks where learners must apply scientific or mathematical principles to solve real-world problems. | 1. Virtual simulations or interactive scenarios where learners must apply their knowledge and skills to solve practical problems or make decisions.<br>2. Interactive simulations or virtual labs that require learners to apply scientific |

| | | |
|---|---|---|
| | | principles or mathematical formulas to solve practical problems. |
| *Analyzing* | Data analysis questions that require learners to interpret graphs, charts, or tables and draw conclusions based on the data provided. | 1. Short answer questions that ask learners to analyze and interpret a given text, passage, or case study.<br>2. Drag-and-drop activities where learners organize and categorize information or data to identify patterns or relationships. |
| *Evaluating* | Extended response questions that ask learners to critically evaluate and compare different arguments, theories, or solutions, providing reasoning and evidence to support their assessments. | 1. Peer review or self-assessment activities where learners evaluate and provide feedback on each other's work based on specific criteria or rubrics.<br>2. Essay questions prompt learners to critically evaluate and assess the strengths and weaknesses of different arguments or theories, providing a well-supported analysis. |
| *Creating* | Project-based assessments require learners to design and present their original ideas, solutions, or innovations in the form of multimedia presentations or reports. | 1. Design-based projects or multimedia presentations where learners develop and showcase their original creations, such as a website, video, or artwork, demonstrate their ability to synthesize and apply knowledge creatively.<br>2. Project-based assessments task learners with designing and developing a solution, product, or creative piece based on their knowledge and skills in the subject area. |

Teachers are strongly encouraged to incorporate Higher Order Thinking Skills (HOTS) into both Formative and Summative Classroom Assessments using the CBA modality. It is highly recommended to integrate the Structure of the Observed

Learning Outcomes (SOLO) model to promote HOTS. This integration empowers teachers to tailor learning experiences to individual students' comprehension levels, fostering advancement toward deeper levels of knowledge.

**B. Lesson Preparation and Instructional Delivery**

Achieving effective teaching in ICT-enhanced learning environments demands more than just acquiring ICT skills; it necessitates the development of appropriate pedagogical competencies. Teachers must not only familiarize themselves with the requisite ICT tools but also learn how to leverage these tools effectively within the subject areas and learning strands. This includes employing them in facilitating classroom assessments, thereby ensuring a comprehensive integration of technology into the teaching and learning process.

CBA in learning delivery harnesses the interactive capabilities of computer applications and software, enabling the presentation of various types of media to learners. This approach offers numerous benefits, notably the flexibility for learners to progress at their own pace. Teachers, serving as facilitators, provide guidance and assistance, ensuring a supportive learning environment tailored to individual needs.

Item no. 27 of DO 42, s 2016, on the Policy Guidelines on Daily Lesson Preparation for the K to 12 Basic Education Program, encourages teachers to integrate technology throughout various parts of a lesson. This provision also calls for teachers to employ CBA, using various instructional strategies and methods that can be delivered using ICT equipment, peripherals, and applications. Teachers can also employ the use of the lesson plan for the phased implementation of the MATATAG Curriculum.

Emphasizing the use of Computer-Based Assessment (CBA) is crucial in both the instructional delivery and evaluation components of lesson preparation. Teachers are encouraged to plan learning opportunities that enable learners to access, organize, and process information effectively. Additionally, they should facilitate the creation and development of products that support differentiated instruction aligned with the K to 12 Basic Education Curriculum. Given that teachers utilize Daily Lesson Logs (DLL) and Daily Lesson Plans (DLP), the integration or inclusion of CBA is expected to facilitate classroom learning effectively.

Teachers can integrate CBA into the preparation of a lesson plan through the following:

a. Creating a checklist of tools to identify parts of the lesson plan suitable for the application of computer applications, using an appropriate format.


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the following dimensions to effectively evaluate students' ICT literacy levels:

i. knowing the knowledge of technology;
ii. relevant skills to use technology; and
iii. an attitude from the reflection of the use of technology.

The comprehensive information on the three dimensions is presented in the following table:

| Dimensions | Conceptual Name | Indicators |
|---|---|---|
| Knowledge | Basic knowledge | • Accustomed to using smartphones, computers, the internet, and other ICT supporters<br>• Having the ability to use ICT support tools<br>• Using the function of ICT in everyday life |
| Skills | Technical Skills | • Having the ability to use applications in ICT equipment<br>• Able to access and search through the website<br>• Able to use basic internet services<br>• Able to search and process electronic data information<br>• Having the ability to convert electronic information into graphic or other visual forms<br>• Using ICT to support critical, creative, and innovative thinking skills<br>• Able to distinguish trustworthy or untrustworthy information |
| Attitude | Critical assessment skills | • Able to use ICT to work individually or collaborate in teams to find solutions to problems.<br>• Having sensitivity in using the internet safely and responsibly.<br>• Having a critical and reflective attitude when assessing information |

The ICT Focal Persons are tasked with documenting best practices and compiling issues and challenges related to the implementation of Computer-Based Assessment (CBA) both within classrooms and throughout the entire school. Additionally, the school and/or division may conduct an inventory assessment to evaluate the ICT competency of learners, considering the specific contexts and available resources. These assessment results can then inform the development of

b. Identifying the specific types of computer applications, both online and offline, that are relevant to the lesson objectives and content.

c. Adapting readily available and accessible free online applications to supplement and enhance the lesson delivery and assessment process.

**C. Competency of Teachers**

Embracing the positive impact of ICT in teaching and learning, particularly in conducting classroom assessments, is imperative for teachers. The role of teachers has evolved from being the traditional dispensers of knowledge to being facilitators of learning. To ease this transition, educators should cultivate a habit of using ICT regularly. Furthermore, they must actively seek opportunities to enhance their competencies, share insights, and foster a collaborative culture to support one another.

Empowering teachers in the effective utilization of ICT for teaching and learning is essential. This empowerment should focus on ICT integration, utilization of tools, adoption of innovative learning models, and staying abreast of emerging trends to enhance their ICT competencies, encompassing knowledge, skills, and abilities.

Embedded within the Philippine Professional Standards for Teachers, which serve "as basis for all learning and development programs for teachers" (DepEd Order No. 42, s. 2017), lies a framework for the positive integration of ICT. Specifically, within Domain 1, Content Knowledge and Pedagogy, Strand 1.3 delineates various career stages emphasizing the positive use of ICT across all levels of professional growth.

a. Beginning Teachers - Show skills in the positive use of ICT to facilitate the teaching and learning process.

b. Proficient Teachers - Ensure the positive use of ICT to facilitate the teaching and learning process.

c. Highly Proficient Teachers - Promote effective strategies in the positive use of ICT to facilitate the teaching and learning process.

d. Distinguished Teachers - Mentor colleagues in the implementation of policies to ensure the positive use of ICT within or beyond the school.

The ICT focal persons within schools play a pivotal role in supporting teachers to develop and maintain their competency in utilizing ICT effectively in their classrooms. During Learning Action Cell (LAC) sessions, in alignment with DepEd Order No. 35, s. 2016, which emphasizes ICT integration in instruction and assessment, potential topics focusing on the integration of ICT should be emphasized. Additionally, competency-based assessments on teachers' ICT skills may be conducted by the school or division offices. The results of these assessments can then be utilized to provide targeted technical assistance to teachers, including the development of both offline and online CBA materials. This approach ensures that teachers receive tailored support to enhance their ICT proficiency and effectively integrate technology into their teaching practices.

**D. Competency of Learners**

The effective development of Computer-Based Assessment (CBA) hinges on several factors, including students' interests, capabilities, and acceptance of the assessment method. Additionally, the success of CBA may be influenced by students' familiarity with computers or various computer environments. Considering these aspects ensures that the assessment aligns with students' needs and preferences, ultimately enhancing engagement and facilitating more accurate evaluation of their learning outcomes. Teachers then should strive to design CBAs that are sensitive to students' individual characteristics and conducive to their overall learning experience.

ICT literacy serves as a foundational knowledge that reflects a learner's proficiency in effectively searching, organizing, and processing information across various digital media platforms. It encompasses a comprehensive understanding of technology systems and media forms, while also considering moral and ethical values.

a. Schools can analyze the authentic Information Communication Technology (ICT) literacy situations of learners to formulate a Strategic Plan for ICT Integration. Additionally, teachers can undertake curriculum mapping to identify and address ICT competencies within the curriculum.

b. Schools may conduct a Learners' Need Assessment of ICT literacy covering digital literacy skills. They can leverage open access and available online tools, with guidance from the school research committee, to select appropriate assessment tool.

c. The assessment of ICT literacy should be structured around three key dimensions. Schools can develop a localized assessment tool aligned with

programs, projects, and activities aimed at enhancing the competency of learners in utilizing ICT effectively.

The institutionalization of CBA in schools can significantly enhance the competency of learners by:

a. providing learners with meaningful activities that are embedded in purposeful content-related contexts across all learning areas and key stages;

b. understanding how the students use ICT and learn how to match the ICT resource to the intended learning and how ICT relates to other key skills;

c. promoting a high level of decision-making among learners as to how ICT can apply to their contexts;

d. preparing the students for life in the 21st century through the acquisition of knowledge and skills in digital standards;

e. maximizing the use of ICT for distance learning and self-paced learning to expand the capacity of learning outcomes and allow for more customized learning requirements; and

f. training students in life-long learning skills that they will need in further education and as an ongoing learning process throughout the rest of their lives and for their future jobs, e.g., wording processing, email communication, etc. while transforming the teaching and learning in.

**E. Computer-Based Assessment Support Mechanisms**

The success of the CBA in an ICT-enabled learning environment lies in the robust support mechanisms. These mechanisms encompass technical assistance for resolving issues promptly and training/resources to empower the teachers and learners to utilize the assessment tools effectively.

**Teacher Professional Development**: Enhancing teachers' competencies in using Computer-Based Assessments is facilitated through professional development programs initiated by the Regional Office, Division Office, and School levels. These programs shall aim to update teachers' knowledge, skills, attitudes, and approaches relevant to CBA. Additionally, needs assessments shall be conducted to identify teachers requiring capacity building.

**Technical Assistance Support:** Effective monitoring and evaluation activities shall strengthen the implementation of CBA, with Regional and Division Offices providing necessary technical assistance support to schools for seamless implementation. Governance levels may establish partnerships with various EdTech Solutions providers to further support CBA implementation.

**Funding Sources:** The Regional Office, Division Office, and Schools shall allocate funding for the implementation of CBA, integrating it into their strategic and operational plans such as in the Division Education Development Plan (DEDP) and particularly in the work and financial plans. Furthermore, schools shall ensure the inclusion of CBA-related initiatives in schools' improvement plans and annual implementation plans.

**Peer Collaboration:** Teachers can engage in exchanging information and ideas regarding CBA implementation through collaborative learning expertise, Learning Action Cells, and In-Service Training. This collaboration fosters support among colleagues and provides an avenue for school heads to support the teachers. Additionally, teachers can adopt existing DepEd initiatives on assessment strategies, which can be adapted for CBA.

**Roles and Functions of RO, SDO, and School:** The roles and functions of support groups per governance level are as follows:

A. Regional Office (RO) through the Curriculum and Learning Management Division (CLMD) shall
   1. oversee the implementation of CBA in the Region.
   2. mobilize resources to support the implementation of CBA in the Region.
   3. explore potential partnerships with relevant stakeholders, such as educational technology providers or local businesses, in coordination with the Education Support Services Division (ESSD).
   4. initiate capacity building program for school leaders and teachers in coordination with the Human Resources Development Division (HRDD).
   5. provide technical assistance to Schools Division Offices in implementing the CBA in coordination with the Regional Field Technical Assistance Division (FTAD).
   6. conduct an inventory of online and offline-based teaching and learning materials relative to the implementation of CBA.
   7. facilitate the conduct of the Regional Quality Assurance of online and offline-based CBA materials.
   8. provide policy recommendations to the Central Office based on the identified issues and concerns in the implementation of the CBA in coordination with the Policy, Planning, and Research Division (PPRD).

9. intensify the conduct of monitoring and evaluation in coordination with the Quality Assurance Division (QAD) relative to the implementation of CBA in the School Division Offices.
10. ensure that the processing of data and information from learners and teachers are followed by the SDOs in view of the Data Privacy Act of 2012 under Republic Act No. 10173.

B. Schools Division Office (SDO) through the Curriculum Implementation Division (CID) shall
1. oversee the implementation of CBA in the schools.
2. mobilize resources to support the implementation of CBA in the schools.
3. explore potential partnerships with relevant stakeholders, such as educational technology providers or local businesses.
4. provide technical assistance to schools in implementing the CBA in coordination with the School Governance and Operations Division (SGOD).
5. develop an action plan for the implementation of CBA and submit it to the Regional Office. (The division may include the provision of computers/laptops/tablets to priority schools that need that equipment.) The template can be found in Annex 3.
6. conduct an inventory of online and offline-based teaching and learning materials relative to the implementation of CBA.
7. conduct capacity building program for school leaders and teachers in coordination with the Human Resource Division (HRD).
8. check the inclusion of CBA-related activities in the School Improvement Plan and Annual Implementation Plan.
9. facilitate the conduct of the Division Quality Assurance of online and offline-based CBA materials.
10. submit a monitoring and evaluation report of the implementation of CBA to the Regional Office. The template can be found in Annex 5.
11. ensure that the processing of data and information from learners and teachers are followed by the schools in view of the Data Privacy Act of 2012 under Republic Act No. 10173.

C. At the school level, school heads and ICT coordinators play important roles in giving support to teachers to effectively implement CBA.

a. School Heads/Principals shall
   i. lead in facilitating, supervising, and monitoring the CBA in the school.
   ii. provide technical support to teachers in developing CBA initiatives and practices consistent with standards and pedagogies in the

implementation of the K to 12 Curriculum during the conduct of instructional supervision (e.g. classroom observation).

iii. explore and coordinate with potential external partners in the provision of CBA Tools, such as educational technology providers or local businesses (e.g. EdTech Tools/Equipment), to address computer acquisition challenges and improve internet connectivity for seamless implementation of computer-based assessments.

iv. lead in crafting the schools' action plan on the implementation of CBA in the school. The action plan should be submitted to the SDO every fourth week of the opening of the school year. The template can be found in Annex 3.

v. prepare and submit the accomplishment report at the end of the school year. The template can be found in Annex 4.

b. ICT School Coordinators shall

i. maintain the effective use ICT Lab/room suitable for ICT-based teaching and learning (such as the Hardware, Software, Google Suite, Microsoft Office365 Suite, and other technical consultations).

ii. provide technical assistance to the school head, class advisers, co-teachers, and learners regarding CBA initiatives and practices such as preparation of the test results and analysis and other reports.

iii. suggest the availability of functional ICT solutions in the school, including but not limited to DCP packages.

iv. create a database of available EdTech tools that are being utilized by the schools.

v. ensure the updating of computer equipment in cases where there is a lack of or outdated devices.

vi. evaluate the adequacy of internet connectivity to support computer-based assessments effectively.

**F. Computer-Based Assessment-Related Resources/Materials**

The schools may conduct an inventory of the existing materials, both offline and online-based materials, used by the teachers relative to the integration of CBA in teaching and learning. All quality-assured materials may be adapted at the school level. To support the professional learning community of teachers in utilizing the CBA resources/materials, the school may conduct a Learning Action Cell (LAC) session.

At the division and regional level, an inventory shall be done to determine the existing CBA materials (online and offline that are self-developed and/or adapted) utilized by the teachers. The regional and division levels through the Learning

Resource Education Program Supervisors shall conduct quality assurance of those materials for division-wide and region-wide utilization following a system to control the sharing of digital assessment tools.

All learning resources/computer-based assessments intended for utilization shall undergo the process of quality assurance. A systematic process that takes place between the design and development and quality assurance teams on the evaluation, review, and revision of learning resources/computer-based assessment until it reaches the final version intended for digital distribution.

The Learning Resource (LR) Management Team shall form the Quality Assurance (QA) Teams based on DepEd Order No. 217, s. 2016, titled "Guidelines on the Screening and Selection of Potential Learning Resource Evaluators (LREs). QA teams may also involve evaluators from the regional office, division office, and schools.

The QA team members shall be screened and selected based on the qualification guidelines and shall perform the tasks stated in the Terms of Reference. The members of the QA team may vary depending on the type of resource intended to be evaluated.

a. QA Teams consisting of selected LREs shall be oriented on the QA process before the actual evaluation of the assigned LR.
b. The LREs shall be assigned to evaluate LRs by learning area, key stage, and/or grade level. Each QA team shall be composed of the following:
    i. the Content Evaluator shall be assigned to evaluate LR in his/her learning area of expertise;
    ii. the Language Evaluator shall be assigned to evaluate LR written in the language of his/her expertise such as English, Filipino, or mother tongue; and
    iii. the Design and Layout Evaluator shall be assigned to evaluate the presentation of the format and visual layout design.
c. There may be additional members of the QA teams depending on the type of LR to be quality assured.
    i. QA team shall undertake the tasks based on the Terms of References given to each member.
    ii. QA team members should not be part of the development team/s of the same LR for evaluation to avoid conflict of interest.

**G. Region-wide and Division-wide Computer-Based Assessment**

The Regional Office and Schools Division Offices may adopt the use of CBA in various division-wide and region-wide assessments such as in reading, numeracy,

science process skills assessments, and other assessment initiatives to provide opportunities for the learners to be exposed to the use of ICT-enabled assessment. A pilot testing of the CBA may be conducted in select SDOs and schools from elementary, junior high school, and senior high school that have capacity in terms of physical facilities and equipment needed and have already initial practices in conducting CBA-related activities in the classroom, in school, and in SDO level. The conduct of the pilot testing should be initiated by the Regional Office through the CLMD with proper coordination with the target SDOs and schools.

## IV. Monitoring and Evaluation

The Regional Office through the Curriculum and Learning Management Division (CLMD) shall monitor the compliance of the schools with these guidelines while the Regional and Division field Technical Assistance shall provide technical assistance to the SDO/School respectively, when necessary.

The Schools Division Office through the Curriculum Implementation Division (CID) shall conduct monitoring of the applications of these guidelines to gather issues and challenges. The CID shall then prepare a semi-annual analysis report for submission to the Regional Office.

The School Heads shall be primarily responsible for monitoring the application of these implementation guidelines in their respective schools and they shall ensure that the provisions are being communicated to all concerned stakeholders in the school community. The school heads should document the issues and challenges identified using the template found in Annex 1. The School Heads shall include in their monthly supervisory plan the monitoring of the provisions stated in these implementation guidelines to ensure that teachers are integrating computer-based modality as part of their assessment strategies. The School Heads shall prepare a quarterly report that includes the issues and challenges encountered in the application of the guidelines to the Schools Division Office for consolidation, analysis, and provision of technical assistance.

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Annex 1: Monitoring and Evaluation of the Implementation of CBA

Name of School:
School ID:
School Address:
Schools Division:
Name of School Head:
Contact Number of School Head:

**Part A. Implementation of Computer-Based Assessment (CBA)**

***A.1 Physical Facilities/Infrastructure***

| Indicators | Evident (/) | Not Evident (/) | Remarks |
|---|---|---|---|
| The school has sufficient electronic equipment (laptops/desktops, tablets) | | | |
| The room is airconditioned, well-ventilated and clean | | | |
| The school has a strong and stable internet connection | | | |
| The school has an approved action plan for the provision of electronic equipment | | | |
| The school has functional DCP packages | | | |

***A.2 Support for Teachers***

| Indicators | Evident (/) | Not Evident (/) | Remarks |
|---|---|---|---|
| The teachers are given the appropriate technological support relative to CBA | | | |
| The teachers are capacitated with the CBA online and offline applications | | | |
| The teachers have MS 365 accounts that are accessible and usable by them | | | |
| The teachers are aware of the available and accessible EdTech Tools provided | | | |

***A.1 Support for Learners***

| Indicators | Evident (/) | Not Evident (/) | Remarks |
|---|---|---|---|
| The learners are given the appropriate technological support relative to CBA | | | |
| The learners have MS 365 accounts that are accessible and usable by them | | | |

| | | | |
|---|---|---|---|
| The learners are aware of the use and functions of the EdTech Tools provided | | | |

***A.4 Support of Stakeholders/Partners***

| Indicators | Evident (/) | Not Evident (/) | Remarks |
|---|---|---|---|
| The school has forged a memorandum of agreement/memorandum of understanding with the stakeholders/partners | | | |
| The school has CBA materials issued by stakeholders/partners | | | |
| The school has partners for the provision of EdTech Tools for teachers and learners | | | |

**Part B. Issues and Challenges Encountered in the Implementation of CBA in Schools**

| Issues | Action Taken |
|---|---|
| | |
| | |
| | |
| | |
| **Challenges**<br>1.<br>2.<br>3. | |

Prepared by:

_____
School Head

Noted:

_____
Public Schools District Supervisor/
In-charge of Cluster/District

_____
CES, CID

Annex 2: Computer-Based Assessment Action Plan (School Level)

Name of School:
Schools Division:

I. Rationale/Background

II. General Objectives

III. Action Plan Matrix

| Objectives | Activities | Time Frame | Persons Involved | Resources Needed | | | Expected Output | Long Term Outcome |
|---|---|---|---|---|---|---|---|---|
| | | | | Human | Non-Human | Financial | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Prepared by:

_____
School Head

Checked and Reviewed:

_____
Public Schools District Supervisor/
In-charge of Cluster/District

Approved:

_____
CES, CID

Annex 3: Computer-Based Assessment Action Plan (Division Level)

Schools Division:

I. Rationale/Background

II. General Objectives

III. Action Plan Matrix

| Objectives | Activities | Time Frame | Persons Involved | Resources Needed | | | Expected Output | Long Term Outcome |
|---|---|---|---|---|---|---|---|---|
| | | | | Human | Non-Human | Financial | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Prepared by:

_____
Division Focal Person

Checked and Reviewed:

_____
CES, CID

Recommending Approval:

_____
Assistant Schools Division Superintendent

Approved:

_____
Schools Division Superintendent

Annex 4: Accomplishment Report on the Implementation of Computer-Based Assessment (School Level)

Name of School:_____
School ID:_____
School Address:_____

I. Executive Summary

II. Highlights and Analysis of the Monitoring and Evaluation Results

III. CBA Implementation
a. General Observations on CBA Implementation
b. Physical Facilities/Infrastructure
c. Support for Teachers
d. Support for Learners
e. Support of Stakeholders/Partners

IV. Best Practices

V. Attachments *(Photos, and Link of AVP if applicable)*

Prepared by:

_____
School Head

Noted:

_____ _____
Public Schools District Supervisor/ In-charge of Cluster/District

CES, CID

Annex 5: Accomplishment Report on the Implementation of Computer-Based Assessment (Division Level)

Name of SDO:_____
Address of SDO:_____

I. Executive Summary

II. Highlights and Analysis of the Monitoring and Evaluation Results

III. CBA Implementation
a. General Observations on CBA Implementation
b. Physical Facilities/Infrastructure
c. Support for Teachers
d. Support for Learners
e. Support of Stakeholders/Partners

IV. Best Practices

V. Attachments *(Photos, and Link of AVP if applicable)*

Prepared by:

_____
Division Focal Person

Noted:

_____
CES, CID

_____
Schools Division Superintendent