

AI-Generated Content Integrity Framework for Curriculum

ACIF v1.0

Standards | Verification | Integrity

2026

Developed by Harmony Digital Consults Ltd for schools, curriculum developers, and EdTech platforms operating in Nigeria and across Africa.

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Executive Summary

The AI-Generated Content Integrity Framework for Curriculum (ACIF) is a comprehensive policy and operational standard developed by Harmony Digital Consults Ltd to ensure that artificial intelligence-generated educational content is safe, accurate, age-appropriate, culturally relevant, and fully aligned with Nigeria's national curriculum standards before it reaches any student.

Why this framework exists. AI tools -- large language models, writing assistants, image generators, and tutoring systems -- are increasingly used by educators and curriculum developers to accelerate content creation. However, AI systems can confidently produce factually wrong information (hallucinations), generate age-inappropriate material, introduce cultural biases, and misalign with the NERDC curriculum. Without a structured verification process, these risks translate directly into harm for Nigerian learners.

Who ACIF serves. This framework is designed for three overlapping contexts: (1) internal governance at The Incubators Secondary Academy, Ufuma, Anambra State; (2) product integration within Harmony Digital Consults Ltd's platforms -- EduTrack Nigeria and Harmony School Suite; and (3) any Nigerian or African school or EdTech platform seeking an adoptable AI content integrity standard.

What ACIF provides. The framework delivers ten interlocking components:

1. Scope and Definitions -- Clearly bounded applicability across all grade levels, subjects, and AI tool types.
2. Core Principles -- Eight foundational principles derived from UNESCO, ISO 42001, NDPA 2023, and NERDC standards.
3. Risk Classification -- A four-tier risk system that determines the verification intensity required for each content type.
4. Age-Appropriateness Framework -- Six detailed age bands with vocabulary, theme, and reading-level specifications.
5. Hallucination Detection Protocol -- Pre-generation controls and the FACT method for post-generation verification.
6. Five-Gate Verification Pipeline -- A structured gate-by-gate pipeline from AI generation to classroom delivery.
7. Data Privacy Standards -- NDPA 2023-aligned requirements for student data protection in AI workflows.

8. Governance Structure -- Roles, responsibilities, and an escalation procedure for every verification function.
9. Standards Alignment -- Explicit mapping to UNESCO, ISO 42001, NERDC, and NDPA 2023.
10. Implementation Guide -- Practical monthly rollout steps for schools and integration guidance for platform providers.

Standards alignment. ACIF is explicitly designed to align with UNESCO's Generative AI in Education guidance (2023), ISO/IEC 42001:2023 (AI Management Systems), the Nigeria Data Protection Act 2023, and the NERDC National Curriculum framework. This ensures that institutions adopting ACIF are simultaneously meeting their obligations under Nigerian law and international best practice.

Living document. ACIF v1.0 is the initial release. The framework includes built-in provisions for annual review cycles, ensuring it keeps pace with the rapidly evolving AI landscape in education.

How to Use This Framework

This framework is structured for two kinds of readers: those implementing ACIF for the first time, and those using it as an ongoing operational reference.

For First-Time Implementers

If you are setting up ACIF at your institution for the first time, follow this reading path:

Step 1: Read Section 2 (Core Principles) Establish shared understanding of why ACIF exists and what it is built to protect against.

Step 2: Read Section 3 (Risk Classification) Learn how to categorise every piece of AI-generated content your school produces. This is the entry point of the entire pipeline.

Step 3: Read Section 6 (Five-Gate Pipeline) Understand the verification gates and what each reviewer must confirm before content advances.

Step 4: Read Section 8 (Governance) Identify who in your institution will fill each role: AI Content Officer, Curriculum Lead, Data Protection Lead.

Step 5: Review Appendix A (Quick Reference Checklist) Print and distribute the quick reference checklists to all teachers who generate AI content.

Step 6: Follow Section 10 (Implementation Guide) Use the Month 1, 2, and 3 rollout plan to introduce ACIF systematically.

For Ongoing Operational Use

Once ACIF is operational, staff will primarily use:

- Appendix A: Quick Reference Checklist -- at the point of content generation and review
- Section 6 Gate Checklists -- when reviewing specific content through the pipeline
- Section 5 (FACT Method) -- when performing factual verification at Gate 2
- Section 4 (Age Bands) -- when checking content against the target audience specifications
- Appendix B (Registry Template) -- when logging approved content in the AI Content Registry

For Platform Administrators and EdTech Developers

If you are integrating ACIF into an educational platform (such as EduTrack Nigeria or Harmony School Suite), the key technical reference sections are:

- Section 3: Risk Classification -- maps to your content tagging and routing logic
- Section 6: Five-Gate Pipeline -- maps to your workflow states and approval gates
- Section 8: Roles Matrix -- maps to your role-based access control configuration
- Section 10.2: Platform Integration -- specific guidance for Harmony Digital Consults platforms
- Appendix B: Registry Template -- maps to your AI Content database schema

Version and Review

This document is ACIF Version 1.0, effective from January 2026. The framework undergoes mandatory annual review by the AI Content Integrity Committee (ACIC). Sections most likely to require updates are Section 3 (as AI tool capabilities evolve) and Section 4 (as NERDC curriculum standards are updated). Check with your institution's AI Content Officer for the current version in use.

Version	Date	Key Changes	Approved By
1.0	January 2026	Initial release	ACIC Founding Members
1.1 (plan ned)	January 2027	Annual review cycle	ACIC

Introduction & Rationale

Artificial Intelligence tools are increasingly used by educators, curriculum developers, and content creators to generate lesson notes, scheme of work, assessments, explanatory texts, and instructional materials. While AI accelerates content creation, it introduces unique risks for classroom use: factual inaccuracies (hallucinations), age-inappropriate content, culturally insensitive outputs, misalignment with national curriculum standards, and data privacy concerns when student data is involved.

This framework -- the AI-Generated Content Integrity Framework (ACIF) -- defines the standards, processes, and verification pipelines that must be followed before any AI-generated curriculum content reaches students in Nigerian schools and educational institutions at all levels (K-12+).

ACIF is designed to serve three contexts:

1. Internal policy at The Incubators Secondary Academy, Ufuma, Anambra State
2. Product integration within Harmony Digital Consults Ltd platforms (EduTrack Nigeria, Harmony School Suite)
3. Adoptable standard for any Nigerian or African school using AI in curriculum delivery

The Problem ACIF Solves

Without structured verification, AI-generated educational content poses the following risks to Nigerian learners and institutions:

Hallucinations in the Classroom

AI systems frequently generate plausible-sounding but false information. When this appears in a lesson note, students (and sometimes teachers) may absorb and repeat incorrect facts. Unlike the internet, where multiple sources compete, a lesson note carries the authority of the school.

Age-Inappropriate Content

AI models have no inherent understanding of developmental appropriateness. Without explicit constraints, generated content may use vocabulary, themes, or scenarios that are unsuitable for the target age group.

Cultural Misalignment

Most AI systems are trained predominantly on Western-centric data. Nigerian cultural contexts, names, institutions, legal frameworks, and social norms are frequently misrepresented or absent unless explicitly specified.

Curriculum Misalignment

AI tools have no inherent knowledge of the NERDC curriculum framework. Without grounding, AI-generated lesson content may teach topics out of sequence, at the wrong level, or using pedagogical approaches inconsistent with Nigeria's student-centred education philosophy.

Data Privacy Violations

Educators who submit student names, grades, or personal information into AI platforms may inadvertently violate the Nigeria Data Protection Act 2023 (NDPA) and expose institutions to regulatory risk.

Accountability Gaps

Without documentation of what AI tool was used, what prompt was given, and who verified the output, there is no audit trail when content errors are discovered. Institutions lack the records needed to improve or defend their processes.

How ACIF Works

ACIF operates as a layered quality control system. It assigns every piece of AI-generated content a Risk Tier based on content type and audience, then routes that content through a proportional number of verification gates before it reaches students. Lower-risk content (administrative templates, open-ended prompts) passes through minimal gates and can be approved the same day. Higher-risk content (health education, historical facts, civic content, early childhood materials) undergoes full five-gate review including factual verification, age-appropriateness screening, and curriculum alignment checking.

Throughout this process, ACIF maintains a clear documentation trail: every piece of AI-generated content that passes through the pipeline is logged in an AI Content Registry, with records of the generating tool, the prompt used, the reviewers who checked it, and any hallucinations that were found and corrected. This log serves both operational quality improvement and regulatory compliance.

ACIF is designed for Nigerian institutional reality: it does not require expensive technology or large teams. It is implementable by a single-campus school with one AI Content Officer, a basic spreadsheet log, and a committed teaching staff. At the same time, for schools using Harmony Digital Consults platforms, the framework is embedded digitally with automated checklists, readability tools, and reporting.

1.1 Scope

This framework applies to:

- All AI-generated or AI-assisted lesson plans, notes, worksheets, assessments, and study aids
- All grade levels: Early Childhood (ages 3-5), Primary 1-6 (ages 6-11), Junior Secondary JSS1-3 (ages 12-14), Senior Secondary SS1-3 (ages 15-17), and Pre-Tertiary/Bridge programs (ages 18+)
- All subjects aligned with the NERDC National Curriculum
- All AI generation tools used by staff including large language models (LLMs), AI writing assistants, image generators, and AI tutoring systems
- All digital and print content derived from AI outputs

1.2 Key Definitions

AI-Generated Content (AGC)	Any text, image, audio, or multimedia produced by an artificial intelligence system in whole or in part.
Hallucination	A confident but factually incorrect, fabricated, or misleading statement produced by an AI model.
Age-Appropriateness	Content that matches the cognitive, emotional, social, and developmental stage of the target age group.
Factual Verification	The process of checking AI-generated factual claims against authoritative, primary, or peer-reviewed sources.
Content Integrity	The state of curriculum content being accurate, age-appropriate, culturally safe, pedagogically aligned, and free from harmful or misleading information.
Verification Gate	A required checkpoint in the content pipeline where a specific standard must be met before content progresses.

ACIF is built on eight core principles derived from UNESCO's Generative AI in Education Guidance (2023), ISO/IEC 42001:2023 (AI Management Systems), the Nigeria Data Protection Act 2023 (NDPA), and NERDC curriculum standards.

Principle 1

Human Agency and Oversight

AI is a tool that supports human educators -- never a replacement for teacher judgment. Every piece of AI-generated content must pass through a human review gate before student delivery.

Principle 2

Factual Accuracy First

Inaccurate information in the classroom causes lasting harm. All AI-generated factual claims must be verified against reliable sources. No unverified factual content reaches students.

Principle 3

Developmental Appropriateness

Curriculum content must match the cognitive, emotional, and social development of the target age group. Age bands, not just grade levels, govern content standards.

Principle 4

Cultural and Contextual Relevance

Content must be appropriate for the Nigerian socio-cultural context, respect religious and ethnic diversity, and align with national values as specified in the NERDC curriculum philosophy.

Principle 5

Transparency and Documentation

The AI source, generation prompt, verification steps taken, and human reviewers must all be documented for every piece of AI-generated content used in classrooms.

Principle 6

Privacy and Data Protection

Student personal data must not be used as input to AI generation tools without explicit NDPA-compliant consent. AI tools must be evaluated for data handling practices before institutional use.

Principle 7

Continuous Improvement

This framework is a living document. Verification methods, risk ratings, and age-band standards must be reviewed at minimum annually to keep pace with AI capability changes.

Principle 8

Equity and Inclusion

AI-generated content must not perpetuate bias, stereotyping, or discrimination based on gender, ethnicity, religion, or socioeconomic status. Bias screening is a required verification step.

3 Content Risk Classification

All AI-generated curriculum content is assigned a Risk Tier before entering the verification pipeline. Risk Tier determines the number of required verification gates.

Risk Tier Matrix

TIER 1 -- LOW RISK

- Administrative and logistical content (timetables, activity schedules)
- Creativity prompts and open-ended discussion questions
- Template-based content (fill-in-the-blank worksheets)
- Required gates: Tier 1 Checklist + Educator Review
- Review time target: Same day

TIER 2 -- MEDIUM RISK

- Lesson plans and scheme of work
- Explanatory notes for science, social studies, English, mathematics
- Story-based or narrative content for literacy
- Assessment questions (objective)
- Required gates: Tier 1 + Tier 2 Checklist + Subject Expert Review + Curriculum Alignment Check
- Review time target: 1-2 school days

TIER 3 -- HIGH RISK

- Health and science content with factual claims (anatomy, reproduction, disease)
- History, government, and civic education content
- Religious and moral education content
- Essay-type and evaluation assessments
- Content mentioning real people, places, events, or statistics
- Any content for Early Childhood (ages 3-5)
- Required gates: Full 5-Gate Pipeline + Senior Educator Sign-off
- Review time target: 3-5 school days

TIER 4 -- CRITICAL RISK (RESTRICTED)

- Content on sexuality, puberty, or sensitive health matters for minors
- Political or controversial social topics
- AI-generated content for students with special needs or trauma backgrounds
- Any AI content to be published externally or used for formal examinations
- Required gates: Full Pipeline + Institutional Director Approval + Legal/Compliance Review
- Review time target: 5-10 school days

Tier Summary

Tier	Level	Gates Required	Review Time
1	Low Risk	Gates 1 & 5	Same day
2	Medium Risk	Gates 1-5	1-2 days
3	High Risk	Full Pipeline + Sign-off	3-5 days
4	Critical (Restricted)	Full Pipeline + Director + Legal	5-10 days

4.1 Age Band Classification

BAND 1: Early Childhood (Ages 3–5, Nursery/Pre-Primary)

Maximum reading level	Pre-literacy (oral/visual content only)
Vocabulary	Simple, concrete, single-syllable dominant
Sentence length	Maximum 8 words
Themes allowed	Friendship, family, animals, colours, shapes, basic numbers, nature, community helpers
Themes prohibited	Conflict, death, illness, fantasy violence, any sexual or romantic reference, moral complexity
AI image content	Must be cartoon-style only, no photorealistic depictions of people
Review	All BAND 1 content requires specialist Early Childhood reviewer

BAND 2: Lower Primary (Ages 6–8, Primary 1–3)

Reading level	Lexile 200–500
Vocabulary	Familiar words with limited challenging vocabulary introduced in context
Sentence length	Maximum 15 words
Themes allowed	Expanded to include simple cause-and-effect, mild challenge and resolution, community, national identity
Themes prohibited	Violence, explicit death descriptions, romantic or sexual content, fear-inducing scenarios
AI content	Factual accuracy mandatory; cultural Nigerian context required where applicable

BAND 3: Upper Primary (Ages 9–11, Primary 4–6)

Reading level	Lexile 500–800
Vocabulary	Grade-level, subject-specific terms introduced with definitions
Themes allowed	Multi-step narrative, national and civic themes, basic scientific concepts, global topics with Nigerian perspective

Themes to handle with care	Death (natural, historical), simple discussions of illness, historical injustice
Review	Subject teacher review required for all factual content

BAND 4: Junior Secondary (Ages 12-14, JSS 1-3)

Reading level	Lexile 800-1100
Vocabulary	Secondary-level academic vocabulary
Themes allowed	Critical thinking topics, puberty (within Health Education framework), religious diversity, historical conflicts with balanced framing
Special handling	Puberty and reproductive health content requires Senior Health Educator sign-off and parental communication protocol
Review	Subject teacher + departmental review for Tier 2 and above

BAND 5: Senior Secondary (Ages 15-17, SS 1-3)

Reading level	Lexile 1100-1400
Vocabulary	Advanced academic and subject-specific terminology
Themes allowed	Complex moral and ethical questions, current affairs, comparative religion, detailed biological sciences, economics, law
Review	Subject Expert + Head of Department for Tier 3 and above

BAND 6: Pre-Tertiary / Bridge (Ages 18+)

Reading level	University entry level
Requirement	All WAEC/NECO-aligned content must reflect official syllabus
Expectation	Critical thinking and independent analysis expected
Sourcing	Content sourcing must be explicitly cited

4.2 Age-Appropriateness Screening Checklist

For each piece of AI-generated content, the reviewer must confirm all of the following:

- ☐ Target age band is clearly identified before AI generation
- ☐ Vocabulary complexity matches band specifications
- ☐ Themes do not include prohibited content for the band

- ☐ Cultural references are Nigerian or universally familiar (not geographically alien)
- ☐ Gender representation is balanced; no gender stereotyping
- ☐ Religious or ethnic references are respectful and balanced
- ☐ Visuals (if AI-generated) comply with age band visual guidelines
- ☐ Reading level assessed using Flesch-Kincaid or equivalent tool
- ☐ Content reviewed by an educator familiar with the specific age group

AI hallucinations in educational content are especially dangerous because students and sometimes teachers lack the prior knowledge to identify them. This protocol provides a structured approach to detecting and eliminating hallucinations before content delivery.

5.1 Pre-Generation Controls (Prevention)

Before generating content, the content creator must apply these controls:

1. Constrain the prompt

Specify exact curriculum standards, grade level, subject, topic, and authoritative sources the AI should draw from. Example: "Generate a lesson note for JSS2 Basic Science on photosynthesis, following the NERDC curriculum. Only use established scientific facts."

2. Use Retrieval-Augmented Generation (RAG) where available

Where AI tools support RAG (grounding responses in provided documents), supply authoritative source documents (NERDC curriculum texts, approved textbooks) as context.

3. Request citations

Always prompt the AI to cite sources for factual claims. Uncited factual claims are treated as unverified.

4. Avoid high-uncertainty topics in AI prompts

Topics with rapidly changing facts (current events, recent statistics) or highly specific local knowledge (local government data, specific Nigerian laws) must not rely primarily on AI generation.

5. Generate multiple outputs

For critical content, generate 2-3 AI outputs for the same prompt and compare for consistency. High variation between outputs signals low reliability.

5.2 Post-Generation Verification (Detection)

RED FLAGS -- Automatic Tier Upgrade Required

The following in any AI output immediately escalate content to the next risk tier:

- Specific dates, statistics, or numerical claims without citation
- References to real living people in Nigeria or globally (risk of fabricated quotes)
- Claims prefaced by "According to [specific author/institution]" -- must be verified
- Any mention of specific laws, regulations, or government policies
- Medical or health claims of any kind
- Historical events post-2020 (AI training cutoff risk)
- Claims that appear to contradict what the reviewer knows

Verification Methods by Content Type

Scientific and Mathematical Facts

- Cross-reference with NERDC-approved textbooks
- Use multiple search queries across authoritative sources (WHO, NASA, NAN, government databases)
- Verify numerical values, formulas, and processes against at least 2 independent sources

Historical and Civic Content

- Cross-reference with Nigerian history textbooks and NERDC curriculum
- Verify dates and events through National Archives, established encyclopaedias
- Check for anachronisms, incorrect names of historical figures, or invented events

Statistical Claims

- Verify statistics against the source cited; if no source, require the reviewer to find original data
- Check National Bureau of Statistics (NBS) Nigeria for Nigerian data claims
- Check WHO, World Bank for global health/development statistics
- Flag all statistics older than 5 years as potentially outdated

Biographical Information

- Cross-reference biographical details with official sources (government websites, institutional biographies)
- Treat AI-generated biographical claims as UNVERIFIED until confirmed

5.3 The FACT Verification Method

Apply the FACT method to all Tier 2-4 content:

Letter	Step	Action
F	Find the claim	Identify every factual assertion in the content (not opinions, not questions)
A	Assess the risk	Is this claim checkable? Is it specific enough to be wrong?
C	Cross-reference	Verify against at least 2 independent authoritative sources
T	Tag the result	Mark each claim as VERIFIED [YES], MODIFIED (corrected), or REMOVED [NO]

A content piece may not proceed to the next gate until all claims are tagged and no UNVERIFIED claims remain.

5.4 Hallucination Log

Every instance where hallucinated content is found and corrected must be logged in the institution's Hallucination Log, which records:

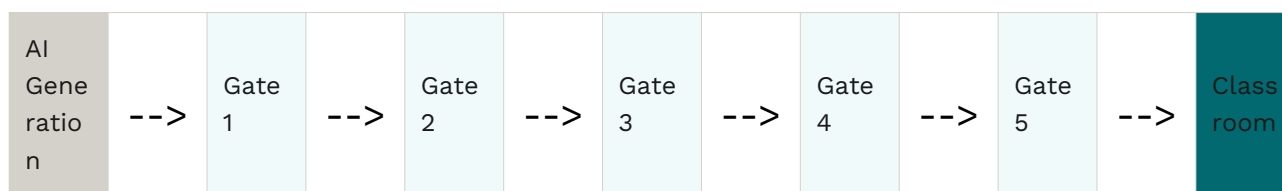
- Date of detection
- AI tool used
- Content type and subject
- Description of hallucination
- How it was detected
- Corrective action taken

This log informs periodic reviews of which AI tools and prompt types are most prone to hallucination.

6 The Five-Gate Verification Pipeline

All Tier 2, 3, and 4 content must pass through a structured Five-Gate Pipeline before reaching students. Tier 1 content requires Gates 1 and 5 only.

Pipeline Flow



GATE 1 Pre-Delivery Screening

Who: Content Creator (Teacher, Curriculum Developer)

What to check:

- ☐ Content is properly labelled as AI-generated
- ☐ Risk Tier assigned
- ☐ Age Band confirmed
- ☐ AI tool name and version recorded
- ☐ Generation prompt documented
- ☐ Red flags screened (see Section 5.2)
- ☐ Readability score checked (target Flesch-Kincaid grade level matches band)

Pass criteria: All items checked, no Red Flags present (or Tier upgraded if Red Flags found)

GATE 2 Factual Verification (FACT Method)

Who: Subject Teacher or Content Reviewer

What to check:

- ☐ FACT method applied to all factual claims
- ☐ All claims tagged VERIFIED, MODIFIED, or REMOVED
- ☐ Zero UNVERIFIED claims remain
- ☐ Sources documented for verified claims
- ☐ Statistics checked against original source or flagged as unverifiable

Pass criteria: 100% of factual claims resolved; Hallucination Log updated if any hallucinations found

GATE 3 Age-Appropriateness Review

Who: Educator with experience in the target age band

What to check:

- ☐ Vocabulary complexity matches band specifications
- ☐ Prohibited themes absent
- ☐ Cultural sensitivity verified
- ☐ Gender and ethnic representation checked for balance
- ☐ Reading level confirmed
- ☐ Sensitive topics (health, religion, social issues) handled per band guidelines

Pass criteria: All age-band criteria met; no prohibited themes present

GATE 4 Curriculum Alignment Check

Who: Head of Department or Curriculum Lead

What to check:

- ☐ Content aligns with NERDC curriculum objectives for the specified level and subject
- ☐ Learning outcomes match curriculum expectations
- ☐ Assessment items (if present) match WAEC/NECO standard format where applicable
- ☐ Content does not introduce topics outside the curriculum scope for the level
- ☐ Pedagogical approach is appropriate (student-centred where required by NERDC)

Pass criteria: Confirmed alignment with NERDC curriculum; no scope violations

GATE 5 Final Approval and Labelling

Who: Institutional Deputy Head (Academic) or Designated AI Content Officer

What to check:

- ☐ All previous gates have been completed and signed off
- ☐ Content is labelled with AI-source disclosure stamp
- ☐ Content is filed in the institution's AI Content Registry
- ☐ Any required parental communication (for sensitive topics) is prepared
- ☐ Content is saved in approved format (PDF, Word) for archival

Pass criteria: All gates complete; content formally approved and registered

7.1 NDPA 2023 Compliance Requirements

All AI content creation and delivery activities involving student data must comply with the Nigeria Data Protection Act 2023:

Children's Data (Under 18)

Student data -- including names, academic performance, and classroom responses -- must NOT be entered into external AI platforms without: written parental/guardian consent (for students under 18); assessment that the AI platform has adequate data protection measures; documentation of the specific purpose and data minimisation approach.

AI Platform Assessment

Before institutional use, each AI tool must be assessed for: data retention and deletion policies; cross-border data transfer practices (NDPA restricts transfers outside Nigeria without adequacy determination); whether the platform trains on user-submitted data; whether the platform is registered or recognised under NDPC guidelines.

Data Subject Rights

Students and parents have the right to know what AI tools are used in generating content that affects their education. Schools must maintain a transparent AI Tool Registry that is accessible to parents/guardians on request.

7.2 Prohibited Data Inputs to AI Tools

The following data types must NEVER be submitted to AI generation tools:

[!] Student names or identification numbers

[!] Student academic records or grades

[!] Medical, disability, or special needs information

[!] Home addresses or family background information

[!] Photos or images of students (for AI image/analysis tools)

8.1 AI Content Integrity Committee (ACIC)

Each institution implementing ACIF must establish an AI Content Integrity Committee comprising:

- AI Content Officer (ACO): Designated teacher or ICT coordinator responsible for overseeing pipeline compliance, maintaining logs, and conducting quarterly reviews. Chair of the ACIC.
- Curriculum Lead: Head of Department or Academic Director who manages curriculum alignment verification.
- Data Protection Lead: Responsible for NDPA compliance across all AI tool usage.
- Parent/Community Representative: Ensures community voice in AI content governance (for content transparency and communication).

8.2 Roles and Responsibilities Matrix

Role	Gen AGC	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5	Log Halluc.	Review Fwk
Class Teacher	[YES]	[YES]	[YES]	--	--	--	[YES]	Input
Subject HOD	--	--	[YES]	[YES]	[YES]	--	[YES]	[YES]
AI Content Officer	--	[YES]	--	--	--	[YES]	[YES]	Lead
Deputy Head (Academic)	--	--	--	--	[YES]	[YES]	--	Approve
Data Protection Lead	--	--	--	--	--	--	--	[YES]

8.3 Escalation Procedure

If a verification gate cannot be resolved (e.g., a factual claim cannot be verified or disproved), escalate to the AI Content Officer. The ACO may:

- Reject the AI-generated segment and require human-authored replacement
- Seek external expert review from a subject-matter authority
- Modify the content to remove the unresolvable or ambiguous claim
- Flag for framework review if the issue is systemic or recurring

8.4 Annual Framework Review

The AI Content Integrity Committee must conduct a formal review of the ACIF implementation at least once per academic year. The review must assess:

- Whether the risk classification tiers remain appropriate given new AI tool capabilities
- Volume and category of escalations and rejections logged during the year
- Changes to NERDC curriculum or NDPA regulations requiring framework updates
- Feedback from teachers, students, and parents on AI content quality
- Any emerging hallucination patterns specific to Nigerian educational content
- Performance of each verification gate (pass/fail rates and average time per gate)

Review findings must be documented in a written Annual ACIF Report submitted to school leadership. Where substantive revisions are needed, a revised framework version should be issued and communicated to all stakeholders within 30 days of the review completion.

9.1 UNESCO AI in Education (2023) Alignment

UNESCO Principle	ACIF Implementation
Human-centred AI	Human review gate mandatory at all tiers (Principle 1)
Monitor and validate AI systems	Hallucination Log, quarterly reviews (Section 5.4, 8)
Protect human agency	Teachers retain final authority; AI is advisory only
Develop AI competencies	Framework training for all content-creating educators
Promote inclusion	Age-band, gender, ethnic bias screening (Gate 3)
Age restriction guidance (min. 13 for independent AI use)	Student AI use policies derived from ACIF age bands

9.2 ISO/IEC 42001:2023 Mapping

ISO 42001 Clause	ACIF Section
4.1 Understanding the organisation and context	Sections 1.1, 2 (Scope and Principles)
5.1 Leadership and commitment	Section 8 (Governance)
6.1 Risk assessment	Section 3 (Content Risk Classification)
8.1 Operational planning	Sections 5, 6 (Verification Pipeline)
8.4 AI impact assessment	Gates 3 and 4 (Age and Curriculum checks)
9.1 Monitoring and measurement	Hallucination Log, AI Content Registry
10.2 Nonconformity and corrective action	Section 8.3 (Escalation Procedure)

9.3 NERDC Curriculum Alignment

ACIF Gate 4 directly enforces alignment with the NERDC 9-Year Basic Education Curriculum and Senior Secondary curriculum:

- All content verified against approved NERDC subject objectives
- Learning outcomes checked against NERDC competency framework (ICT literacy, critical thinking, citizenship, creativity)
- Subject scope verified per NERDC subject listing (Primary 1-6, JSS 1-3, SS 1-3)
- Instructional approach verified to support NERDC's student-centred methodology

9.4 Nigeria Data Protection Act 2023 Alignment

NDPA Requirement	ACIF Implementation
Consent for children's data	Section 7.1 parental consent requirements
Data minimisation	Section 7.2 prohibited data inputs
Cross-border transfer restrictions	AI Platform Assessment criteria
Data subject rights (transparency)	AI Tool Registry, parental access policy
DPIAs for high-risk processing	Required for Tier 4 content involving student data
Security measures	AI platform security assessment criteria

10.1 For Schools Implementing ACIF for the First Time

Month 1: Foundation

- Establish the AI Content Integrity Committee (ACIC)
- Appoint AI Content Officer
- Complete AI Tool Inventory (list all AI tools currently used by staff)
- Conduct NDPA assessment of current AI tools in use
- Train all teaching staff on ACIF principles and Tier 1/2 gates

Month 2: Pipeline Setup

- Implement the Five-Gate Pipeline for all new AI-generated content
- Set up Hallucination Log (digital spreadsheet or this framework's companion tool)
- Set up AI Content Registry
- Conduct trial runs of pipeline with low-risk content

Month 3: Full Operation

- All AI-generated content entering the classroom passes through appropriate gates
- First quarterly review scheduled
- Parental communication prepared about AI tool usage and data protection

10.2 For Harmony Digital Consults Platforms

For schools using EduTrack Nigeria or Harmony School Suite, this framework is embedded into the AI Content Workflow module, which provides:

- Digital verification checklists for all five gates
- Automated readability scoring
- Hallucination log database

- AI Content Registry with search and reporting
- Role-based access control aligned with the Roles Matrix (Section 8.2)
- Compliance reporting for NDPA and ISO 42001 audit purposes

10.3 Annual Review Schedule

Review Item	Frequency	Lead
Hallucination Log analysis	Quarterly	AI Content Officer
Age-band standards update	Annually	Curriculum Lead
AI tool re-assessment (data privacy)	Annually	Data Protection Lead
Full framework revision	Annually	ACIC
Staff training refresh	Bi-annually	AI Content Officer
Parental communication review	Annually	ACIC + Community Rep

10.4 Staff Training Requirements

All staff who generate or review AI content must complete induction training on the ACIF before being permitted to approve content for classroom use. Training must cover:

Module	Description
ACIF Principles Module	Overview of the framework, risk tiers, and age-band standards. Estimated duration: 2 hours.
Five-Gate Pipeline Workshop	Hands-on walk-through of each gate with sample content exercises. Estimated duration: 3 hours.
NDPA and Data Privacy Briefing	Summary of Nigeria Data Protection Act obligations relating to student data in AI tools. Estimated duration: 1 hour.
Hallucination Recognition Training	Case studies of common AI hallucinations in educational contexts; use of the FACT method. Estimated duration: 1.5 hours.
Annual Refresher	Mandatory one-hour refresher every academic year covering framework updates and logged issues from the prior year.

10.5 Adoption by External Institutions

Schools and platforms outside of the Harmony Digital Consults ecosystem are encouraged to adopt ACIF under the terms specified on the back cover. When adopting this framework, institutions should:

- Retain the ACIF version number and attribution to Harmony Digital Consults Ltd
- Adapt the AI Platform Assessment criteria to reflect the specific tools in use at the institution
- Localise the age-band standards to the institution's grade structure if different from NERDC
- Align the Standards Alignment Matrix with applicable national or regional standards
- Notify Harmony Digital Consults Ltd of adoption for tracking and support purposes
- Share documented improvements or adaptations with the ACIF community where possible

Harmony Digital Consults Ltd welcomes collaboration on refining and expanding this framework to serve the broader Nigerian and pan-African education sector. Contact details are on the back cover of this document.

Tier 1 Content -- Minimum Checklist

- ☐ Content labelled as AI-generated
- ☐ Age Band identified
- ☐ Educator has read and verified the content
- ☐ No student personal data was input to the AI tool
- ☐ Content filed in AI Content Registry

Full Five-Gate Summary Checklist

- ☐ Gate 1: Pre-Delivery Screening
- ☐ Gate 2: Factual Verification (FACT Method)
- ☐ Gate 3: Age-Appropriateness Review
- ☐ Gate 4: Curriculum Alignment Check
- ☐ Gate 5: Final Approval and Labelling

Prohibited Actions -- NEVER DO

- | |
|---|
| ☒ Submit student names or data to AI tools without NDPA consent |
| ☒ Use AI-generated content in class without at least Tier 1 review |
| ☒ Treat AI citations as verified without independent confirmation |
| ☒ Allow students under 13 to independently use AI platforms without supervision |
| ☒ Use AI tools not assessed under the AI Platform Assessment criteria |

Gate-by-Gate Verification Checklist

Use the following gate-specific sub-checklists when performing detailed verification. All items must be confirmed before a gate is considered passed.

Gate 1 -- Pre-Delivery Screening

- ☐ AI tool is on the approved platform list
- ☐ No student personal data was used in the prompt
- ☐ Content type and purpose are clearly stated
- ☐ Risk tier has been assigned
- ☐ Initial read-through completed by generating teacher

Gate 2 -- Factual Verification (FACT Method)

- ☐ All factual claims cross-referenced with at least two authoritative sources
- ☐ All cited references verified as real and accurately quoted
- ☐ Any claims about Nigerian history, law, or culture checked against NERDC sources
- ☐ Hallucination log updated if any errors found
- ☐ Revised content re-reviewed after corrections

Gate 3 -- Age-Appropriateness Review

- ☐ Readability level matches the target age band
- ☐ No adult themes, violent imagery, or culturally insensitive material
- ☐ Language complexity appropriate (vocabulary, sentence length)
- ☐ Cultural references verified as positive and locally relevant
- ☐ Content reviewed using Afe Babalola Age-Band Rubric or equivalent

Gate 4 -- Curriculum Alignment

- ☐ Content maps to specific NERDC learning objectives
- ☐ Assessment items (if any) align with WAEC/NECO question formats
- ☐ Terminology matches the official NERDC curriculum language
- ☐ Scope and sequence are appropriate for the grade level

Gate 5 -- Final Approval and Labelling

- ☐ AI Content Label applied ('AI-Assisted Content' marking)
- ☐ Final approval signature from designated approver
- ☐ Entry added to AI Content Registry
- ☐ Content stored in approved file location
- ☐ Teacher briefed on any caveats or known limitations of the content

Use this template to track all AI-generated content that passes through the verification pipeline. Assign each entry a unique Content ID and keep records on file for a minimum of 3 years.

Field	Description / Notes
Content ID	Unique identifier (e.g., ACIF-2026-001)
Date Created	Date the AI-generated content was produced
AI Tool Used	Name and version of the AI tool (e.g., ChatGPT-4o, Gemini 1.5)
Generation Prompt	Full prompt used (may be summarised for length)
Content Type	Lesson plan / Assessment / Study note / Worksheet / Other
Subject	The school subject the content was created for
Grade Level / Age Band	Specific grade and corresponding ACIF age band
Risk Tier	1 / 2 / 3 / 4 (assigned at Gate 1)
Gate 1 Reviewer	Full name + date of completion
Gate 2 Reviewer	Full name + date of completion
Gate 3 Reviewer	Full name + date of completion
Gate 4 Reviewer	Full name + date of completion
Gate 5 Approver	Full name + date of final approval
Hallucinations Found	Yes / No -- if Yes, include Hallucination Log reference number
Storage Location	File path or document management system link
Status	Approved / Pending Review / Rejected

Hallucination Log Template

When a hallucination is identified at any gate, it must be logged in the Hallucination Log. Each entry requires the following fields:

Field	Description / Notes
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Log ID	Unique identifier (e.g., HL-2026-001)
Date Detected	Date the hallucination was identified
Content ID	Reference to the AI Content Registry entry
Hallucination Type	Factual error / Fabricated reference / Anachronism / Cultural misrepresentation / Other
Description	Brief description of the incorrect claim and what the correct information is
AI Tool	Tool that generated the content containing the hallucination
Gate Found	The verification gate at which the error was detected (Gate 1-5)
Corrective Action	What was done: content rejected / modified / human-replaced
Detected By	Name of reviewer
Resolved	Yes / No -- date of resolution

This glossary defines key terms used throughout the ACIF framework. Terms are listed alphabetically.

Term	Definition
ACIC	AI Content Integrity Committee. The institutional governance body responsible for overseeing ACIF implementation, conducting reviews, and approving framework changes.
ACIF	AI-Generated Content Integrity Framework. This document. The full set of standards, processes, and pipelines for verifying AI-generated curriculum content.
ACO	AI Content Officer. The designated staff member responsible for day-to-day pipeline compliance, log maintenance, and quarterly ACIF reviews.
AGC	AI-Generated Content. Any text, image, audio, or multimedia produced in whole or in part by an artificial intelligence system.
Age Band	One of six developmental groupings (Bands 1-6) used to specify appropriate content standards for different age groups of learners.
AI Tool	Any software system using artificial intelligence to generate, edit, or augment content. Includes LLMs (e.g., ChatGPT, Gemini), AI writing assistants, image generators, and AI tutoring systems.
Content Integrity	The state of curriculum content being factually accurate, age-appropriate, culturally safe, pedagogically aligned, and free from harmful or misleading information.
Content Registry	The AI Content Registry. The institutional log of all AI-generated content that has passed through the verification pipeline. See Appendix B.
DPIA	Data Protection Impact Assessment. A risk assessment required under NDPA 2023 for high-risk data processing activities, including Tier 4 AI content involving student data.
EduTrack Nigeria	A Harmony Digital Consults Ltd platform for school management and curriculum delivery. ACIF is embedded into its AI Content Workflow module.
FACT Method	Find, Assess, Cross-reference, Tag. The four-step hallucination verification method applied to Tier 2-4 content at Gate 2 of the pipeline.

Gate	A required verification checkpoint in the Five-Gate Pipeline. Each gate has defined criteria that must be fully met before content advances.
Hallucination	A confident but factually incorrect, fabricated, or misleading statement generated by an AI system. Hallucinations are the primary accuracy risk in AI-generated educational content.
Hallucination Log	The institutional record of all hallucinations detected in AI-generated content, including date, tool, description, detection method, and corrective action.
ISO 42001	ISO/IEC 42001:2023. The international standard for AI Management Systems. ACIF governance structures and risk processes are mapped to this standard.
JSS	Junior Secondary School. In Nigeria, JSS covers ages 12-14 (JSS 1-3), corresponding to ACIF Age Band 4.
K-12+	Kindergarten through Senior Secondary (and beyond). ACIF covers all levels from Early Childhood (Age Band 1) through Pre-Tertiary/Bridge programs (Age Band 6).
Lexile Level	A quantitative measure of text complexity used to match reading material to reader ability. Used in ACIF age band specifications as a reading level benchmark.
LLM	Large Language Model. A type of AI system trained on large volumes of text data. Examples include GPT-4, Gemini, and Claude. LLMs are the primary source of AI-generated text in educational contexts.
NDPA 2023	Nigeria Data Protection Act 2023. The primary data protection legislation in Nigeria. Governs how student personal data may be used in AI workflows.
NDPC	Nigeria Data Protection Commission. The regulatory body established by NDPA 2023 to enforce data protection standards in Nigeria.
NERDC	Nigerian Educational Research and Development Council. The body responsible for developing and updating the national curriculum standards to which ACIF content alignment is verified.
NBS	National Bureau of Statistics (Nigeria). The authoritative source for Nigerian statistical data referenced in ACIF's hallucination verification guidance.
NECO	National Examinations Council. Together with WAEC, sets the standard format for Senior Secondary examinations referenced in Gate 4 curriculum alignment checks.
Prohibited Data	Categories of student information that must never be submitted to AI tools. Listed in Section 7.2.

RAG	Retrieval-Augmented Generation. A technique where AI systems are provided with authoritative source documents to ground their responses, reducing hallucination risk.
Risk Tier	One of four content risk levels (Tier 1-4) assigned to AI-generated content based on content type and audience sensitivity. Tier determines the verification gates required.
SS	Senior Secondary School. In Nigeria, SS covers ages 15-17 (SS 1-3), corresponding to ACIF Age Band 5.
UNESCO	United Nations Educational, Scientific and Cultural Organization. ACIF Core Principles are derived in part from UNESCO's Guidance for Generative AI in Education and Research (2023).
Verification Gate	See Gate.
WAEC	West African Examinations Council. Sets the WASSCE examination format and syllabus that Gate 4 curriculum alignment checks reference for Senior Secondary content.

References & Sources

ACIF v1.0 draws on the following authoritative standards, guidelines, and regulatory frameworks. All cited sources have been used to inform the principles, verification methods, age-band specifications, and governance structures in this document.

1. UNESCO. Guidance for Generative AI in Education and Research (2023). <https://unesdoc.unesco.org/ark:/48223/pf0000386693>
2. ISO/IEC 42001:2023. Artificial Intelligence -- Management Systems. International Organization for Standardization. <https://www.iso.org/standard/81230.html>
3. NERDC. National Curriculum for Senior Secondary Schools (Revised). Nigerian Educational Research and Development Council. <https://nerdc.edu.ng/>
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5. Nigeria Data Protection Act 2023 (NDPA). Federal Republic of Nigeria Official Gazette. National Information Technology Development Agency (NITDA). <https://nitda.gov.ng/ndpa/>
6. NDPC. Nigeria Data Protection Commission -- Guidelines and Regulations. <https://ndpc.gov.ng/>
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9. NBS. National Bureau of Statistics Nigeria -- Statistical Reports and Data. <https://nigerianstat.gov.ng/>
10. Harmony Digital Consults Ltd. EduTrack Nigeria and Harmony School Suite -- Product Documentation and AI Workflow Specifications (2025). <https://harmonydigi.com/>

Further Reading

The following resources provide additional context for practitioners implementing ACIF:

11. UNESCO. Recommendation on the Ethics of Artificial Intelligence (2021). <https://unesdoc.unesco.org/ark:/48223/pf0000381137>
12. UNICEF. Policy Guidance on AI for Children (2021). Version 2.0. <https://www.unicef.org/globalinsight/reports/policy-guidance-ai-children>
13. European Commission. Ethics Guidelines for Trustworthy AI (2019). High-Level Expert Group on Artificial Intelligence. <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>
14. NITDA. National Artificial Intelligence Strategy for Nigeria (2024). <https://nitda.gov.ng/>
15. African Union. Continental AI Policy Framework (2024). African Union Development Agency (AUDA-NEPAD). <https://au.int/en/agenda2063>

Document Version History

Version	Date	Changes	Author
v0.1 (Draft)	January 2026	Initial internal draft for ACIC review	Harmony Digital Consults Ltd
v0.5 (Beta)	February 2026	Added Five-Gate Pipeline; expanded age bands	Harmony Digital Consults Ltd
v1.0 (Release)	April 2026	Full release: all 10 sections, appendices, standards alignment	Harmony Digital Consults Ltd

Harmony Digital Consults Ltd

harmonydigi.com | Anambra State, Nigeria

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