Exploring Practical Implementation and Effects of Integrated Media Skills in Short Video Production

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Abstract. The rise of short video platforms has significantly transformed the landscape of artistic creation, presenting new challenges and opportunities for art education, particularly in fields such as theater and film. Traditional pedagogical models often suffer from fragmented skill training and disjointed creative workflows. To address this gap, this study introduces the Integrated Media Skills (IMS) framework, which unifies key competencies including conceptual development, storytelling, technical execution, and audience-targeted dissemination. A 12-week intervention with broadcasting students was conducted through a project titled Urban Cultural Memory, which emphasizes end-to-end short video production. Results demonstrated notable improvements in holistic project completion (100% full-process execution), balanced narrative-technical integration (78% of projects avoided excessive technical effects), and reverse design thinking, where dissemination considerations informed creative decisions (63% of videos included platform-specific strategies). These outcomes suggest the IMS framework effectively nurtures systemic creative thinking, offering a replicable model for cross-disciplinary media education in the digital age.

Keywords: Integrated Media Skills; short video production; art education; project-based learning; transmedia storytelling

1 Introduction

Recent advances in digital media have transformed artistic expression, with short videos emerging as a dominant creative format. In response, theater and film education must evolve to cultivate creators with integrated skills across conceptualization, narrative construction, technical production, and strategic dissemination.[1] However, traditional curricula often separate these elements, limiting students' ability to engage with short videos as complex, ill-structured challenges.[2] This study introduces the *Integrated Media Skills (IMS)* model, drawing from constructivist learning and transmedia storytelling theories. Implemented in a university-level curriculum, IMS aims to unify fragmented training. A 12-week intervention evaluates its potential to foster narrative-technical coherence, strengthen dissemination awareness, and offer a framework for interdisciplinary innovation in media education.

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2 Theoretical Framework and Design Logic of IMS

2.1 Core Concept Definition

Integrated Media Skills (IMS) denote a cross-domain competency framework that systematically amalgamates content planning, audiovisual articulation, technical execution, and dissemination strategies within digital creation contexts [3]. By dismantling isolated skill barriers such as requiring students to align filming apparatus with editing schemes during storyboard development. IMS facilitates a closed-loop integration of narrative intent, technical execution, and platform adaptation.

2.2 Theoretical Anchors from a Science Education Perspective

2.2.1 Constructivist Learning Theory.
Knowledge is actively constructed through complex task engagement. Short video production compels students to iteratively synthesize fragmented skills into personalized, context-sensitive competency frameworks [4].

2.2.2 Transmedia Storytelling Theory.
This emphasizes narrative adaptability across multiple platforms. For instance, Douyin's "Golden 5-Second Rule" compels structural redesign of opening sequences, demonstrating scientific communication principles' infiltration into artistic expression[5].

2.2.3 Project-Based Learning (PBL).
The "begin-with-the-end-in-mind" philosophy and iterative refinement principle furnish methodological scaffolding for holistic workflow training[6].

3 Teaching Practice: Design and Implementation of Integrated Approach

This study conducted a teaching experiment within the *Audiovisual Program Directing and Production* course, involving 24 Broadcasting and Hosting Arts majors. A final project themed *Urban Cultural Memory* was designed, requiring mandatory engagement with all linked competency modules across the production chain (see Figure 1).

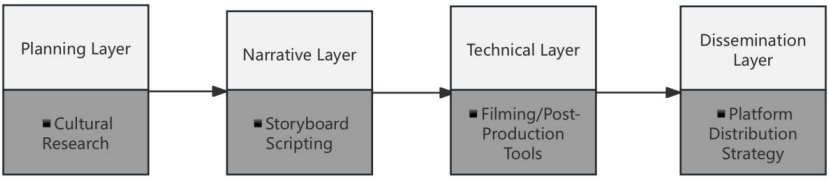

Fig. 1. Integrated capability module design framework

3.1 Integration Strategies and Innovative Design

Task-Driven Cross-Training

3.1.1 Collaborative Workshop System.

Replacing linear "theory-first-practice-later" instruction with cyclical "case deconstruction-technical drilling-immediate implementation" sessions. For example, after teaching montage narrative theory, students immediately filmed with smartphones and edited materials in groups to verify outcomes.

3.1.2 Integrated Toolchain Training.

Abandoning isolated software instruction in favor of tool combinations aligned with task demands. When instructing color grading, instructors juxtaposed efficiency-precision tradeoffs between mobile apps (CapCut) and professional software (DaVinci Resolve), guiding context-dependent tool selection across project phases.

3.1.3 Cross-Dimensional Evaluation.

Implementing dual mentorship (directing instructor + technical instructor) to concurrently assess narrative coherence and technical viability during mid-term reviews, with timely intervention for issues like "masking narrative deficiencies through elaborate transitions".

3.2 Key Integration Scenarios in Practice

3.2.1 Dynamic Narrative-Technical Integration.

In Group A's *Old Teahouse Transition* project, the initial script relied heavily on voiceover narration. During technical workshops, instructors guided students to reframe audiovisual elements, such as close-up shots of tea drinkers' gestures and transitional empty shots of tea sets, as narrative anchors. The storyboard was subsequently reconstructed, resulting in a 60 percent reduction in textual descriptions. Regional characteristics were further emphasized through the use of ambient sounds and flashbacks featuring Sichuan opera face-changing. As a result, narrative efficiency improved significantly, with 15 well-composed shots conveying the same information that previously required 30.

3.2.2 Dissemination Strategy Informing Creation.

For Group B's "Youth Night Running on City Walls" concept, dissemination workshops intervened early. Data analysis of similar content revealed peak completion rates on Douyin occurred within the first 5 seconds for "athletics + urban lighting" videos. The group restructured their opening—replacing planned aerial shots with gyroscope-stabilized running POV sequences, adding suspense captions ("Gen Z Takes Over Ancient Walls!"). Post-release metrics showed 41% higher 3-second retention versus initial proposals.

3.2.3 Individual Skill Conversion to Team Collaboration.

To prevent "technical experts dominating workflows", a "role rotation system" mandated dual responsibilities in planning, filming, post-production, and dissemination. Student C (skilled in editing) reported after filming duty: "I previously blamed poor footage quality, but now recognize the necessity of reserving rhythmic gaps during shooting for editing flexibility."

3.3 Adaptive Adjustments During Implementation

Implementation revealed cognitive overload among some students facing cross-dimensional tasks. Instructors introduced transitional "micro-projects", notably a "1-Minute Mobile Fast-Editing Challenge" in Week 4 requiring topic selection, filming, and editing within two hours. Such high-intensity micro-tasks accelerated skill integration internalization, with students noting: "For the first time, I realized editing points must be considered during planning." These adjustments demonstrated the framework's implementation adaptability.

4 Effect Analysis: Capability Advancement and Challenges

4.1 Multidimensional Evaluation of Outcomes

A four-dimensional framework (artifact quality, process documentation, self-assessment, dissemination metrics) cross-validated integration outcomes:

4.1.1 Enhanced Work Integrity.

All 24 final projects achieved full-process delivery (from proposals to dissemination plans), marking a 35% increase over previous cohorts. Critical advances included:

(1) Narrative-technical synthesis: 78% avoided "technical ostentation", e.g., Group A replaced verbose explanations with animated maps, compressing teahouse history into 90-second audiovisual flows;

(2) Internalized dissemination awareness: 63% incorporated platform-specific adaptations (e.g., vertical edits for Douyin + horizontal director's cuts for Bilibili), vastly exceeding the initial 12%.

4.1.2 Explicit Processual Competence.

Storyboard analysis revealed technical annotation rates rose from 41% (Week 1) to 92% (final) (e.g., "handheld tracking shot + post-production stabilization required"). Student B reflected: "When storyboarding, I instinctively consider mobile feasibility and editing rhythm instead of writing scripts first then filling in shots."

4.1.3 Cognitive Shift Through Self-Evaluation.

End-course questionnaires (5-point scale) indicated: "Understanding interlinkages among creative phases" averaged 4.2 (vs. 2.7 at entry); "Technology serving narrative goals" scored 4.5. Student C acknowledged: "I believed editing determined success, but now see lax planning cannot be remedied in post-production."

4.2 Attribution of Practical Bottlenecks

4.2.1 Persistent Gaps in Cross-Dimensional Coordination.

Despite improved technical application, dissemination strategy formulation remained superficial—only 37% independently analyzed competitor data, with most relying on instructor-provided platform templates. This stems from theater/film students' predominant focus on creative ontology and insufficient methodological training in audience research.

4.2.2 Fatigue from Long-Cycle Integration.

Week 8 progress checks revealed that 43% of groups exhibited task imbalance (e.g., prioritizing filming over dissemination) when managing concurrent planning, filming, and dissemination demands, indicating excessive cognitive load for novices in 12-week workflows.

4.2.3 Over-Reliance on Technical Solutions.

Some productions overutilized motion graphics (e.g., Group E spent 60% of project time reconstructing ancient architecture via 3D modeling), compromising narrative refinement. This reflects the higher "technical visibility" reward perception, necessitating "technical weight ceilings" in assessment criteria.

5 Conclusion and STEAM Education Prospects

IMS training effectively transitions students from "singular technical operators" to "systemic creative thinkers", particularly in enhancing narrative-technical synergy and work completeness. However, challenges persist in deep dissemination data utilization, cross-task coordination endurance, and technical rationality. Future directions for science-art integration include:

5.1 Phased "Micro-Integration" Training

Deconstructing lengthy projects into staged modules to progressively build cross-dimensional task capacity[7].

5.2 Scientific Audience Analysis Tools

Adapting Educational Data Mining (EDM) methodologies to construct predictive models for short video audience behavior, optimizing narrative design[8].

5.3 Technical Weight Assessment Metrics

This study quantifies the equilibrium between technical investment and narrative depth, aiming to prevent technological excess from diminishing artistic expression. The findings confirm that the Integrated Media Skills (IMS) framework not only addresses the intrinsic needs of art education but also serves as a testbed for science-art convergence. Within this intersection, the dissemination of data feedback loops and the rational selection of toolchains highlight the empowering role of scientific methodology in enhancing creative practice.

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