



# Research of a Comprehensive Ability Evaluation System for Digital Media Entrepreneurs

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**Abstract.** The rapid development of the digital media industry has given birth to a large number of digital media entrepreneurs. The success of digital media entrepreneurs often depends on their comprehensive abilities. Starting from the research basis of domestic and foreign scholars, it proposes an ability evaluation index system and a comprehensive ability evaluation system for digital media entrepreneurs. Additionally, this paper also studies the matching degree of the comprehensive ability evaluation system for digital media entrepreneurs among students in digital media-related majors. This is done to verify the system's effectiveness and applicability.

**Keywords:** Digital Media · Entrepreneur · Comprehensive Ability · Evaluation System · Big Data

## 1 Introduction

This research aims to explore the competencies and skills required for success in the digital media field by focusing on the role of big data. A framework for evaluating the competencies of digital media entrepreneurs and proposing strategies to overcome challenges will be developed. This research will contribute to a better understanding of success in the digital media field by providing insights for entrepreneurs who are entering the industry.

## 2 Research Related to the Comprehensive Ability of Domestic and Foreign Digital Media Entrepreneurs

Scholars both domestically and internationally have developed multiple models for fostering entrepreneurial abilities [1]. For instance, Li Anran and Xiao Youping's "KSAOs" model analyzed the innovation and entrepreneurship collaborative system among university students and categorized necessary entrepreneurial competencies into knowledge [7], skills, abilities, and other personality traits [1, 10]. Although scholars have conducted detailed research, investigation [4], and analysis on the competencies of innovation and entrepreneurship talents [5, 8], there is still a lack of analysis of talent competencies and the makeup of entrepreneurial abilities in the digital media industry [2, 6, 9].

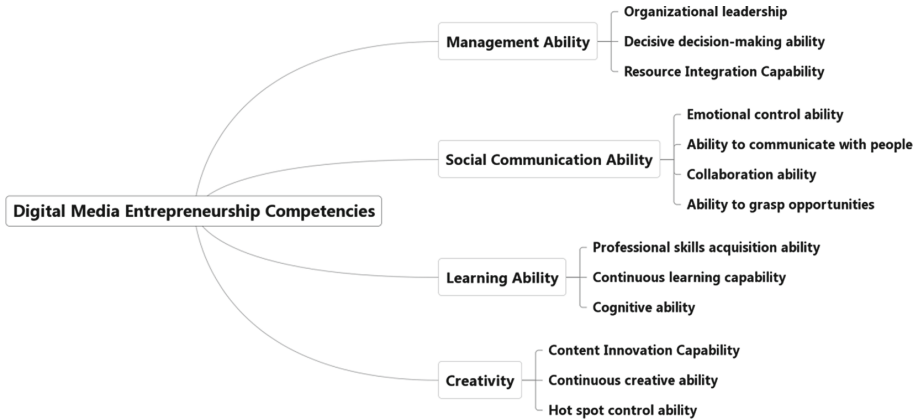


Fig. 1. Digital Media Content Entrepreneurship Talent Competency Ladder Model

### 3 Evaluation Index System of Digital Media Entrepreneurs' Ability

#### 3.1 Progressive Model of Digital Media Entrepreneurial Talent Competency Levels

Based on these competencies, we established a stepwise evolutionary model of content entrepreneurial talents' competencies in the context of digital media, which is detailed in Fig. 1.

#### 3.2 AHP Hierarchical Analysis-Based Competency Weighting Index for Digital Media Entrepreneurs

To systematically and visually examine the competency dimensions of digital media entrepreneurs, this study quantified these dimensions and utilized hierarchical analysis (AHP) to determine their respective weights. Afterward, a hierarchical single ranking is performed as follows: The eigenvector of the largest eigenvalue of the judgment matrix is normalized and denoted as W. This ranking is determined using formula (1).

$$CI = \lambda - n/n - 1 \tag{1}$$

To test its consistency (CI = 0 indicates complete consistency, CI tends to 0 indicates satisfactory consistency, the larger the CI, the more serious the inconsistency) In order to measure the CI, the consistency index is introduced here  $RI : CR = CI/RI$ , the consistency ratio is generally considered  $CR < 0.1$ , the degree of inconsistency of A is considered to be within the tolerance range and there is satisfactory consistency, and it passes the consistency test. Finally, the total ranking of levels from high level to low level and test its consistency should be done, and the consistency ratio of total ranking of levels is:  $CR = (a_1CI_1 + a_2CI_2 + \dots \dots a_mCI_m)/(a_1RI_1 + a_2RI_2 + \dots \dots a_mRI_m)$ , the hierarchical total ranking was considered to pass the consistency test when  $CR < 0.1$ , and this was used to obtain Table 1.

**Table 1.** Competency weighting indicators for digital media entrepreneurs

ITEMS	PROJECT WEIGHTS	ASSESSMENT FACTORS	WEIGHTING OF MEASUREMENT FACTORS
LEARNING ABILITY B1	0.513	Hot spot control ability C1	0.655
		Content creation ability C2	0.250
		Continuous learning ability C3	0.095
CREATIVITY B2	0.261	Continuous creative ability C4	0.655
		Professional skills acquisition ability C5	0.250
		Cognitive ability C6	0.095
MANAGEMENT ABILITY B3	0.150	Resource Integration Capability C7	0.655
		Organizational leadership C8	0.250
		Decisive decision-making ability C9	0.095
SOCIAL INTERACTION SKILLS B4	0.076	Ability to communicate with people C10	0.529
		Collaboration ability C11	0.239
		Opportunity grasp degree C12	0.142
		Emotional control C13	0.091

### 3.3 Quantitative Method of Digital Media Entrepreneurial Talent Evaluation Index

The questionnaire scores students' abilities using weightings assigned by digital media entrepreneurs, with the overall value calculated cumulatively. Self-assessment and other-assessment modes are used to avoid subjective and objective bias. The final score ranges from 0–10, with 0–2.5 being low match, 2.6–5 being low-medium match, 5.1–7.5 being high-medium match, and 7.6–10 being high match for digital media entrepreneurship abilities.

## 4 Matching Study of Entrepreneurship Comprehensive Ability Evaluation System Based on Digital Media Related Majors

### 4.1 Research Subjects and Information Collection

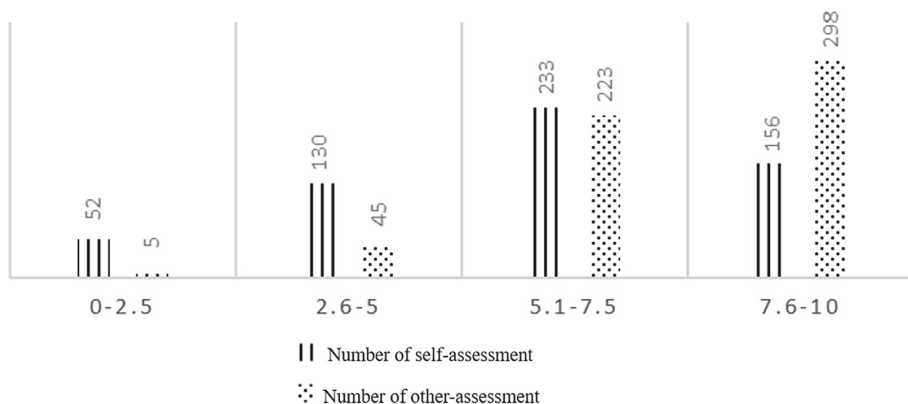
This study investigates the comprehensive ability of digital media content innovation and entrepreneurship talent cultivation. This study adopts the research method of sampling questionnaire, taking Wuhan East Lake College as the research site and collecting accurate news using a double questionnaire (self-evaluation+others' evaluation), excluding the error caused by unstructured factors.

A total of 571 self-assessment questionnaires and 571 other assessment questionnaires were gathered.

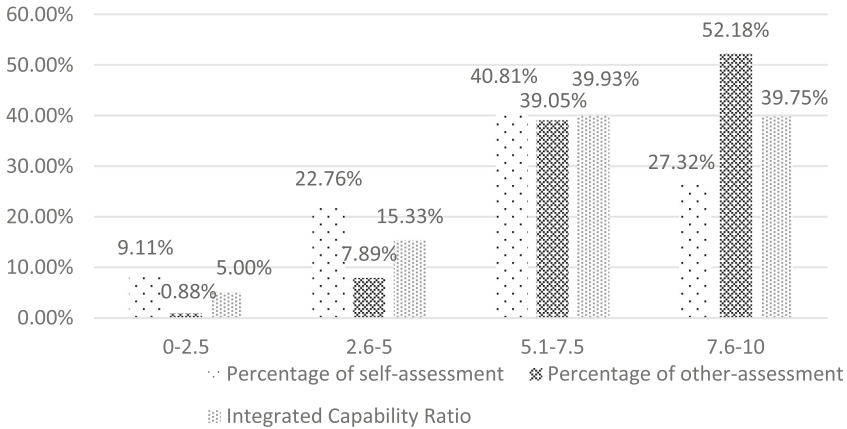
### 4.2 Data of Questionnaire Information

For the collected questionnaires for data processing, the competencies correspond to the weights to calculate the total ability score, as Fig. 2 is a stepwise classification of statistical scores. Most self-assessments are concentrated on 5.1–7.5, and most other assessments focus on 7.6–10, reflecting that most students have critical digital media entrepreneurship abilities.

As shown in Fig. 3, digital media innovation and entrepreneurial talent have the highest percentage of 5.1–7.5 points, and the percentage of 7.6–10 points is similar to that of 5.6–7.5, both of which are more than 39%. Among university students with digital media-related majors, the entrepreneurial ability of students with digital media-related majors is significant, and the majority of students with digital media-related majors match the entrepreneurial talent requirements of digital media.



**Fig. 2.** Survey and statistics on comprehensive scores of digital media innovation and entrepreneurship talents



**Fig. 3.** Survey and statistics on the matching degree of digital media innovation and entrepreneurship talents

### 5 Conclusion

This paper takes the comprehensive ability evaluation system of digital media entrepreneurs under the perspective of big data as the research object, starts from the research related to the comprehensive ability of digital media entrepreneurs at home and abroad, constructs the ability evaluation index system of digital media entrepreneurs, and further verifies the scientificity and feasibility of the constructed index system through the matching degree study of the comprehensive ability evaluation system of entrepreneurship based on digital media related majors.

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