



# Comprehensive Ability Evaluation System Design for Digital Media Entrepreneurs in the Perspective of Big Data

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**Abstract.** With the continuous development and innovation of the digital media industry, the comprehensive ability evaluation of digital media entrepreneurs is getting more and more attention. The traditional manual evaluation method can hardly meet the needs of the big data era, so it is necessary to establish a set of comprehensive ability evaluation system for digital media entrepreneurs based on the big data perspective. This paper builds on the background of new media entrepreneurs' competency and integrates digital media entrepreneurial competency by providing entrepreneurs' personal information, work experience, professional skills and professional achievements as leading questions in the input layer, and using AHP hierarchical analysis in the analysis layer for competency data statistics and mining, and finally generating individual entrepreneurial competency reports [10]. The competency report produced according to the system is based on the corresponding competency enhancement methods to help digital media entrepreneurs.

**Keywords:** evaluation system · system design · digital media · entrepreneur · comprehensive competency

## 1 Introduction

In recent years, digital media entrepreneurship has become popular and big data has become important in various industries. To evaluate the comprehensive abilities of digital media entrepreneurs from the perspective of big data, a digital media entrepreneurship evaluation system is needed. The system should consider factors such as educational background, work experience, technical skills, business acumen, and creativity, as well as the entrepreneur's ability to collect, analyze and interpret data and use data insights to drive business growth. The system can help identify promising digital media startups, guide entrepreneurs to improve their big data skills, and help investors make informed investment decisions. The design of such an evaluation system is an important step towards promoting the development of the digital media industry and creating a thriving startup ecosystem.

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## **2 Research Background of Comprehensive Competency Evaluation System for Digital Media Entrepreneurs**

The development of digital media is growing and becoming one of the important drivers of economic growth, and the competency evaluation of digital media entrepreneurs is especially important [2]. In the process of digital media entrepreneurship, entrepreneurs need to have rich knowledge and skills, as well as comprehensive abilities in various aspects such as innovation, leadership, communication skills, and business awareness. However, how to evaluate the comprehensive ability of digital media entrepreneurs is a complex issue. Traditional manual evaluation methods suffer from many limitations and are unable to evaluate large-scale data quickly and accurately. Currently, the evaluation of digital media entrepreneurs' competencies mainly relies on the personal experience and subjective judgment of authorities or employers, and lacks scientific and objective evaluation standards and methods. Therefore, the establishment of a scientific and objective comprehensive competency evaluation system for digital media entrepreneurs can improve the objectivity, accuracy and efficiency of evaluation, and has a positive role in promoting the development of digital media industry. In this context, this study aims to explore the design and implementation of a comprehensive ability evaluation system for digital media entrepreneurs in order to improve the effectiveness of comprehensive ability evaluation of digital media entrepreneurs [1].

## **3 Design of Comprehensive Ability Evaluation System for Digital Media Entrepreneurs**

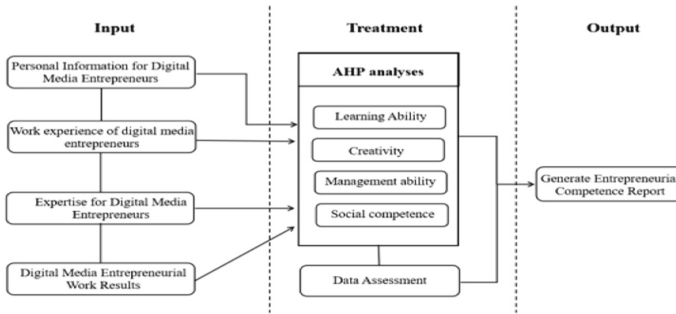
### **3.1 System Requirement Analysis**

#### **3.1.1 Functional Requirements**

- (1) User management: The system administrator can add, modify and delete users, as well as reset user passwords. Users can register, login and modify personal information.
- (2) Ability assessment: The system can provide a variety of assessment methods, including self-assessment, expert assessment and mutual user assessment [5].
- (3) Ability report: The system can provide users with detailed ability reports, including ability scores, sub-scores, analysis of ability strengths and weaknesses and personal suggestions.
- (4) Data analysis: The system supports analysis and visualization of user competency data to help system administrators and users understand changes and trends in user competency levels.

#### **3.1.2 Performance Requirements**

- (1) Responsiveness: The system needs to ensure that it can respond quickly when users perform operations in order to provide a good user experience.
- (2) Stability: The system needs to be stable to avoid crashes or failures.
- (3) Security: The system needs to take appropriate security measures to ensure the safety of user data.



**Fig. 1.** The operation mode of the index evaluation module of the digital media entrepreneurship evaluation system

### 3.1.3 Usability Requirements

- (1) **Friendly interface:** The system needs to provide a concise and easy-to-use interface to facilitate the user's operation.
- (2) **Accessibility:** The system needs to support multiple devices and browsers and ensure that it can operate normally on different devices and browsers.

## 4 System Module Design

### 4.1 System Input Layer

**User information input:** This system needs to let users input basic personal information, such as name, gender, age, education background, work experience, etc.

**Evaluation metrics input:** This system needs to allow administrators or professionals to input specific evaluation metrics and criteria.

**Evaluation Method Input:** This system requires the administrator or professional to enter specific evaluation methods.

**Assessment Information Input:** This system requires the administrator or assessor to enter specific assessment information, including user competency scores, interview records, etc. [4].

### 4.2 System Analysis Layer

The system analysis layer mainly uses the AHP algorithm to analyze and process the data in the data layer with statistics to provide information support for generating capability reports, and its operation process is shown in Fig. 1 [9].

### 4.3 Output Layer

This layer is used for statistical analysis of the evaluation data, including information on the scores of different indicators, the overall scores of students, and the weights of each indicator, so that the administrators can analyze and compare the students' abilities [3].

Finally, a report on students' digital media venture ability evaluation is generated based on the statistical data, including information on students' basic information, scores and weights of each index, and overall scores, so that administrators can easily summarize and give feedback on students' ability.

## **5 Elements of Entrepreneurial Competence Development**

### **5.1 Overall Quality**

Comprehensive quality is the basis of success for digital media entrepreneurs, including innovation consciousness, leadership ability, communication ability, teamwork ability, and execution ability.

### **5.2 Professional Knowledge**

Digital media industry is a highly specialized field, and entrepreneurs need to have rich professional knowledge, such as data analysis, technology development and other aspects.

### **5.3 Business Thinking**

Digital media entrepreneurs need to have keen business thinking, including market analysis, risk control and other aspects.

### **5.4 Data Analysis Ability**

The digital media industry requires strong data analysis ability. It is suggested that entrepreneurs can improve their data analysis ability by learning data analysis skills and mastering data analysis tools.

## **6 Conclusion**

This study provides a comprehensive competency evaluation system for digital media entrepreneurs based on the big data perspective, through the steps of establishing a competency ladder model, calculating the weights of competency elements, and formulating a way to quantify competencies, to make a comprehensive evaluation of digital media entrepreneurs' competencies [6]. Compared with the traditional manual evaluation method, this system can reflect the real ability level of digital media entrepreneurs more objectively and can provide more accurate reference and support for talent evaluation in digital media industry [7]. The research method of the system is highly operable and practical, and can provide a new visualization method for talent identification in the digital media industry to more effectively explore and evaluate outstanding digital media entrepreneurs and talents [8]. In addition, the feasibility and validity of the system is verified through the analysis of the matching degree study of the entrepreneurial comprehensive ability evaluation system for students of digital media-related majors in colleges and universities, which provides a practical reference for the talent evaluation in the digital media industry.

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