

An Innovative Sentiment Computing Analysis of the Pedagogical Value of Intelligent Content Distribution Platforms for Journalism and Communication Studies

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ABSTRACT

The process of innovative education is not only a purely intellectual activity process, it needs innovative emotion as a driving force, such as strong interest, strong passion, the motivational function of evaluation, harmonious teacher-student relationship and other non-intellectual factors cultivation, in order to obtain a comprehensive effect. This study is oriented to the intelligent distribution platform of journalism and communication content to study its teaching value and innovation emotion. The Information Adoption Model (IAM) was adopted as the theoretical basis for the study of content intelligent distribution platforms, the characteristics of the platforms were summarized, and the impact of the platforms on teaching value was studied using regression analysis. The result table of the study found that the content intelligent distribution platform's exhaustiveness, readability, and objectivity had a significant positive correlation on the usefulness of educational value, and that the influence of interactivity on perception and participation did exist and had a certain impact on educational usefulness. Finally, this paper also takes S colleges and universities as an example to assess and calculate the innovative emotion and innovative ability of the platform's teaching value, further analyzes the teaching value of the intelligent distribution platform, and provides suggestions for the cultivation of the innovative emotion in combination with practical research.

Keywords: IAM, content intelligent distribution platform, regression analysis, innovative emotion

1. Introduction

With the development of the mobile Internet, the public has more and more channels to obtain news, and media multi-platform content distribution has become an important means to realize all-media dissemination, and all kinds of media have set up accounts in the mobile terminal, video terminal, etc.,

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for content distribution [1-3]. Through multi-platform distribution, media can more effectively collect all kinds of feedback and data, deeply analyze user behavior, and then optimize the content production and distribution mechanism, effectively improve the content quality and dissemination efficiency, continuously meet user needs, maintain the authority and leadership of the media brand, and ultimately realize the continuous expansion of media influence [4-8]. Among them, intelligent distribution platform is a recommendation engine product that can accurately match different forms of information content, including text, pictures, videos, and even questions and answers, live broadcasts, etc., with users who are interested in specific content through a recommendation system [9-12]. Its artificial editorial team is small in scale, or even none, and does not produce its own content, and its core function is to realize the matching of users and content through the algorithmic recommendation system [13-14]. Intelligent distribution platform can provide the public with more accurate content access channels, facilitate the public to obtain news through different terminals, expand the influence and coverage of news, and maximize the value of news content [15-16].

In the field of teaching, the substitution of traditional news dissemination methods by content intelligent distribution platforms is realized through the value innovation of news dissemination activities [17-18]. Value innovation is not simply improving product competitiveness through technology, but operating through a strategy of creating more value for users [19]. Different from the traditional strategic logic of "how to beat competitors", value innovation focuses on user needs, and systematically improves services based on conceptual upgrades and technological advances [20-21]. The content intelligent distribution platform is centered on user demand, and realizes systematic value innovation for traditional news dissemination services through Internet thinking and algorithmic technology [22-23].

This study is oriented to the content intelligent distribution platform for news communication firstly, the content intelligent distribution platform for news communication is analyzed in detail, and the characteristics of the content intelligent distribution platform are excavated in depth, which provides theoretical support for the study. On this basis, the characteristics of content intelligent distribution platform are summarized. The information adoption model is used to analyze the impact of the exhaustiveness, readability, objectivity, agreeableness and popularity of the content platform as the independent variables, and the interactivity of the content platform as the moderating variable on the teaching value. Finally, the innovative emotion and innovative ability of the teaching value of the intelligent distribution platform are analyzed in the case of S colleges and universities, and suggestions for the cultivation of the innovative emotion are put forward.

2. Intelligent distribution platform for news and communication content

2.1. Content Intelligent Distribution Platform Concept Analysis

At this stage, there is no clear definition of content intelligent distribution platform in academic research, and it is generally defined as mobile news client in the existing academic literature, but there are three essential differences between the two. First, the mobile news client has the right of news interview, while the content intelligent distribution platform does not have the right of news interview. Second, the content released by the former is mostly time-sensitive news, while the latter obtains content through web crawlers, cooperative media and self-media creation. Third, the content intelligent distribution platform through algorithmic recommendation and other big data technology to realize the accurate docking of information users and information content, mobile news client to ensure timeliness at the same time partially relying on technology to recommend to the user, the two rely on technology to a different degree.

Content intelligent distribution platform information content and user docking as shown in Figure 1, content intelligent distribution platform to achieve information content and information users accurate docking process schematic, content intelligent distribution platform through a variety of

ways to obtain information content content content analysis, at the same time, different users for user behavior big data analysis, the information content in line with the “user portrait By analyzing the information content obtained through multiple channels and analyzing the big data of user behavior of different users, the content intelligent distribution platform pushes the information content that meets the “user profile” and formulates a list of content recommendations.

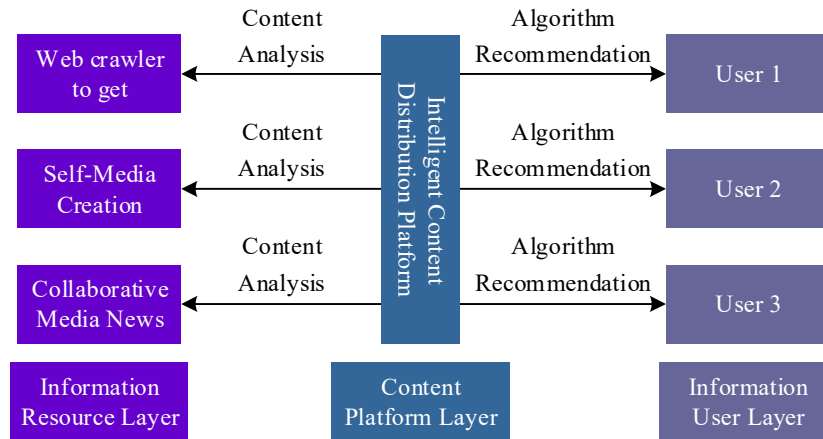


Fig. 1. Content intelligent distribution platform information content and user docking

2.2. Characteristics of Content Intelligent Distribution Platform

In the context of the rapid development of new media, there has been a huge shift in the way information is produced, delivered and consumed. Microblogs, WeChat and content distribution platforms use algorithms to analyze big data on user behavior to accurately match information with the information audience. Content distribution platforms continuously or even repeatedly push hot information to users through algorithmic technology. The information audience carries out multi-point-to-multi-point information dissemination through retweeting, commenting and building. The low threshold of self-media makes information distribution more convenient and timely, and information content production more distributed. The audience of information on the platform can be both consumers and producers of information, the crowd shows a high degree of complexity, and the platform realizes interactivity through user-friendly interactive interface. The intelligent distribution platform of news communication content includes the following characteristics:

- 1) Persistence and repetition of hot information. Content platform through the algorithm to push information content to the user; when the user reading hot information, the algorithm collects information audience reading length, collection, forwarding and commenting on data, through the analysis of user behavioral data, to the user to continue to push the relevant thematic content, the same self-media production of the relevant thematic content with a certain degree of repetitiveness, but still to the information audience to continue to push, resulting in the formation of users trapped in the same kind of information envelopes “information cocoon”. The “information cocoon” formed by the information content envelope of similar topics has similarity, and the trapped users have similar user behavior data, similar cognition and thinking, and the same group attributes, and the group members communicate and discuss through the interactive interface, and the cognition tends to be consistent, which leads to extreme consistency and induces the phenomenon of group polarization.
- 2) Interactivity and Complexity of Content Subjects. The content subject includes information producer (self media, etc.), information disseminator (content platform) and information consumer (information audience), the content platform in the new media environment has interactivity, the self media has interactivity with the information audience, and the information audience has complexity with the self media.

3) Immediacy and distribution of information release. The special nature of the information resource organization of the content platform and the creation mode of “everyone is an editor” make the information release instant and distributed. Self-media space characteristics of the distribution, resulting in the distribution of information release, news hot spots can be created instantly, for example, the self-media in the first scene of the news through the live broadcast and other ways to the first time to the information audience to pass the news hot spots and so on.

3. Research on the Teaching Value of Intelligent Distribution Platform

3.1. Analysis of the Impact of Intelligent Distribution Platforms on Instructional Value

Based on the previous discussion and analysis, this study adopts the Information Adoption Model (IAM) as the theoretical basis to construct the research model, which emphasizes the role of information usefulness for information adoption, and points out that the quality of information and the credibility of the source of information are the keys to consumers' trust and acceptance of information. The study examines the influencing factors of content platforms on educational usefulness in terms of information quality and source credibility, and innovatively introduces the feature of content platform interactivity, and further examines the moderating effect between platform interactivity and other features.

In order to investigate the impact of smart distribution platforms on the value of teaching and learning, in this paper, the smart content platforms of S-schools are used as the empirical objects of the study on the usefulness of teaching and learning. Relevant data were collected for one full year from January 1, 2020 to December 31, 2020, and a total of 39,456 original records were obtained. The dependent variable of this study, the usefulness of instructional value (Usefulness), was measured by students' overall performance. Based on the study of the characteristics of content intelligent distribution platforms the independent variables were categorized as Detailedness, Readability, Objectivity, Average Votes, and Followness of the content platforms. The moderating variable was the interactivity of the content platform (Response).

The descriptive statistics for each variable are shown in Table 1, with usefulness, i.e., current student composite scores, ranging from a minimum of 45 to a maximum of 98 and a standard deviation of up to 53, indicating a large gap between usefulnesses and a more dispersed distribution. In the interactivity approach, the average number of responses in the first five comments of each content platform is about 3, while the maximum number of responses reaches 13. In addition, the popularity of the platforms showed a large gap.

Table 1. Descriptive statistics of variables

Variable	Mean	SD	Min	Max	Skewness
Usefulness	70	40	45	98	17.32
Detailedness	15	17	0	145	1.98
Readability	0.15	0.10	0	1.18	1.99
Objectivity	0.64	0.21	0	1	-0.55
Average Votes	795.9	1905	0.15	34720	4.95
Follower	59293	220576	0	5488395	9.22
Response	2.92	2.28	0	13	0.26

The results of the correlation test are shown in Table 2, the correlation analysis of the variables shows that the correlation coefficients between different variables are not more than 0.70. In addition, the variance inflation factor (VIF) of all independent variables by the covariance test is less than 10, and the value of the VIF of most of the variables is less than 2. It can be assumed that there is not a high degree of linear correlation between independent variables, and that the model does not have a serious problem of multicollinearity.

Table 2. Correlation test results

	1	2	3	4	5	6	7
Usefulness	1						
Detailedness	0.239**	1					
Readability	0.054***	-0.115***	1				
Objectivity	0.032***	-0.084***	0.205***	1			
Average Votes	0.284***	0.082***	0.125***	0.025***	1		
Follower	0.275***	0.072***	0.074***	0	0.637***	1	
Response	0.011	-0.080***	-0.078***	0.051***	-0.012	-0.028***	1

The study used STATA16 software to test and estimate the established model, and the model regression results are shown in Table 3, Model 1 is the basic model of this study, and Model 2 adds the interaction term between interactivity and other variables on the basis of Model 1 to test the moderating effect of interactivity. As can be seen from the regression results, the coefficients of the independent variables of this paper's study are all significant at the 5% level, and the direction of the influence of each variable on the dependent variable after adding interactivity is consistent. The exhaustiveness, readability and objectivity of the content platforms represented have a positive effect on educational usefulness. In the main model 2 with the moderating term added, it can be seen that the p-values of content exhaustiveness, readability, and objectivity are less than 0.05 and are significantly and positively correlated with educational usefulness, which means that the more detailed the content is, the more readable it is, and the less emotive vocabulary is used, the more favorable will be the results of the assessment of usefulness in terms of pedagogical value. The coefficients of the interaction terms between interactivity and content exhaustiveness ($\beta = -0.000$, $p > 0.1$) as well as content readability ($\beta = -0.032$, $p > 0.1$) did not present the expected results, so that an increase in interactivity, exhaustiveness as well as readability did not have a positive effect on educational usefulness. However, the coefficient of the interaction term between interactivity and content objectivity was significantly positive ($\beta = 0.063$, $p < 0.05$), indicating that increased interactivity enhanced the positive effect of content objectivity on educational usefulness. The interaction term coefficients of interactivity with community identity ($\beta = -0.018$, $p < 0.01$) and popularity ($\beta = -0.012$, $p < 0.01$) were significantly negative, and had no positive effect on educational usefulness. The combined results suggest that the effect of interactivity on perception and engagement does exist and has an impact on educational usefulness in content intelligent distribution platforms.

Table 3. Model regression

	1	2
Detailedness	0.003**	0.003**
	2.473	2.750
Readability	0.316**	0.321**
	2.406	2.395
Objectivity	0.272***	0.312***
	4.745	5.420
Average Votes	0.896***	0.890***
	87.586	86.783
Follower	0.073***	0.071***
	8.665	8.283
Response	0.112***	0.106***
	21.705	20.554
Response*Detailedness		-0.000
		-0.623
Response*Readability		-0.032
		0.531
Response*Objectivity		0.063**
		2.442
Response*Average Votes		-0.018***
		-3.571
Response*Follower		-0.012***
		-4.200
Log likelihood	-90617.561	-90533.388
Pseudo R2	0.0911	0.093
P value chi2	0.00	0.00

3.2. Innovative sentiment analysis of the pedagogical value of smart distribution platforms

The informatization of education and the social demand for innovative talents have driven the emergence of new teaching models, in which the combined use of content intelligent distribution platforms and classroom teaching has become a new breakthrough point. For this reason, this paper investigates and analyzes the innovation emotion of the teaching value of intelligent distribution platform. The questionnaire is analyzed in the two directions of innovation emotion and ability formation in the innovation process. The innovation emotion dimension focuses on students' A1 curiosity, A2 pleasure and A3 achievement, and the innovation ability dimension is B1 innovation consciousness, B2 innovation will and B3 innovation skills. The Cronbach coefficient of the questionnaire is 0.862, which means that the questionnaire has internal consistency, the research data has high reliability, and the results of the study are reliable. And the KMO value is between 0.7-0.8, which has a good scale structural validity.

The Pearson correlation test of each dimension is shown in Table 4, according to the results of the Pearson correlation test, it can be seen that the Pearson correlation coefficients of the measurement dimensions of A1 Curiosity, A2 Pleasure, A3 Sense of Achievement, B1 Creative Awareness, B2 Will to Innovate, and B3 Creative Skill are all between 0.5-0.8, and the two-tailed test is significant, which indicates that the correlation of the measurement dimensions is high. The results of reliability and correlation tests of the scales showed good internal consistency and correlation, which indicated that the design of the questionnaire was reasonable and effective.

Table 4. Pearson correlation test

		A1	A2	A3	B1	B2	B3
A1	Correlation	1	0.705*	0.682*	0.798*	0.791*	0.787*
	Sig.		0.032	0.030	0.015	0.025	0.021
A2	Correlation	0.705*	1	0.540	0.718*	0.653*	0.648*
	Sig.	0.032		0.060	0.022	0.047	0.041
A3	Correlation	0.682*	0.540	1	0.658*	0.610	0.613
	Sig.	0.030	0.060		0.045	0.060	0.062
B1	Correlation	0.798*	0.718*	0.658*	1	0.653*	0.601
	Sig.	0.015	0.022	0.045		0.045	0.055
B2	Correlation	0.791*	0.653*	0.610	0.653*	1	0.368*
	Sig.	0.025	0.047	0.060	0.045		0.015
B3	Correlation	0.787*	0.648*	0.613	0.601	0.368*	1
	Sig.	0.021	0.041	0.062	0.055	0.015	

This questionnaire adopts a quantitative score from 1 to 5 and is analyzed according to the calculated average, with a higher score indicating a higher assessment result. Still taking the smart content platform of School S as an example, the innovative emotion and innovative ability of the teaching value of the intelligent distribution platform for news and communication content is assessed and calculated, and 45 questionnaires are distributed, and the validity rate of the questionnaire is 100%. The scores of innovative emotion and innovative ability are shown in Table 5, from the calculation of the mean value, in terms of innovative emotion, the mean score of students' curiosity and pleasure is higher, which is 4.17 points and 4.04 points respectively. In terms of innovative ability, innovative sense has the highest mean value of 4.00 points. In terms of standard deviation, the degree of fluctuation of the scores of sense of accomplishment and innovation skills is higher than 0.8. The other dimensions are in the middle degree of fluctuation between 0.4 and 0.6. In general, the teaching value of intelligent distribution platform for news communication content in terms of innovation emotion, students get better emotional value in curiosity and pleasure methods, and the sense of achievement is relatively low but still higher than 3.5 points, indicating that the students' assessment of the sense of achievement is still better. And there will be different degrees of differences according to the results obtained. In terms of innovation skills, students' sense of innovation is better represented, and in terms of will to innovate, they are a little less likely to lack the drive and subjective initiative. In terms of innovation skills, most of them expressed relative satisfaction with their innovation skills. Taken together, the teaching value of the intelligent distribution platform is in the middle of the range in terms of innovative emotion and innovative ability, and the students' innovative performance is good.

Table 5. The scoring of innovative emotions and innovation

Measurement dimension		N	Max	Min	M	SD
Innovative emotion	A1 Curiosity	45	5	3	4.17	0.442
	A2 Pleasure	45	5	3	4.04	0.555
	A3 Achievement	45	5	3	3.95	0.845
Innovative ability	Innovation awareness	45	5	2	4.00	0.542
	B2 Innovation will	45	5	3	3.87	0.342
	B3 Innovation skills	45	5	3	3.98	0.953

4. Creative Emotional Development Suggestions for Teaching Intelligent Content Distribution Platforms

Although the intelligent content distribution platform is relatively good in the performance of innovative emotion and innovative ability in teaching methods, there are still some defects, so this paper puts forward suggestions from the following aspects:

1) Stimulate learning interest and cultivate innovative emotions. The success or failure of education and teaching depends to a large extent on the attitude of students towards education and teaching activities. Psychological research shows that positive emotions, interest is any kind of human activity * including physical and mental activities + a powerful driving force and inspirational force. Learning interest is the most realistic and active factors in learning activities, is the students perceive things, the pursuit and exploration of new knowledge, the development of creative thinking of a powerful internal drive. It can drive students to actively and pleasantly strive for knowledge and diligently study with pleasure. Intelligent content distribution platform can effectively make up for the boringness of traditional teaching, stimulate students' interest by targeting recommended content of interest to students, and improve students' desire to explore.

2) Build an excellent teaching team and create a good atmosphere. Teachers are the leading factor in creating a good classroom atmosphere. Teachers' behavior is directly related to the creation of classroom teaching atmosphere. Therefore, in teaching, teachers should be an optimistic person, be a generous person, teaching should adhere to the teaching principles of democracy, teacher-student equality, love for students, respect for students, tolerance for students, praise for students, encourage students to speak freely, so as to cultivate good teacher-student emotions, in order to make the classroom full of vigor and vitality, which in turn will make it possible to achieve the effect of successful education.

3) Cultivate students' spirit of innovation and contact with social life. To promote innovation, the pursuit of innovation, innovation as honor, innovation for fun. Stimulate the need for innovation, generate motivation for innovation, set up innovative goals, give full play to the potential for innovation, release the passion for innovation, and strengthen the will to innovate. Teaching content should be characterized by the times and novelty, and be good at compiling new necessary scientific research results and scientific concepts into teaching materials to broaden students' horizons, enlighten their wisdom, stimulate their interests, guide them to understand the outside world, grasp major scientific research dynamics, explore newer knowledge, and cultivate their spirit of innovation. Emphasis should be placed on exchanges and cooperation between schools, between schools and enterprises or townships, and between schools and scientific research departments, encouraging students to go out of school and take part in social practice, so as to keep abreast of the needs of social modernization and the trends of reform and development, and to make the schools full of creative vitality and energy.

5. Conclusion

In the context of attaching great importance to the cultivation of innovative core quality education, cultivating students' creative emotions is an important initiative to create high-quality creative talents. Based on the characteristics of content intelligent distribution platforms, this paper summarizes the content platforms in terms of exhaustiveness, readability, objectivity, agreeableness, and popularity, and introduces interactivity as a moderating variable to study the impact of the intelligent platforms on the value of teaching and learning. The research results show that the coefficients of the independent variables of exhaustiveness, readability, objectivity, identity and popularity are all significant at the 5% level, which have a significant positive influence on the usefulness of educational value, and the direction of the influence of each variable on the dependent variable is consistent with the addition of interactivity, which has a certain influence on the usefulness of education. In the actual analysis, it can be seen that in terms of innovative emotions, students' curiosity (4.17) and pleasure

(4.04) have higher mean scores. In terms of innovative ability, innovative consciousness (4.00) has the highest mean score. In terms of innovation emotion, students get better curiosity and pleasure. In innovation ability, innovation awareness is better represented. It shows that the teaching value of the intelligent distribution platform is in the middle to high level of performance in both innovation emotion and innovation ability, but there are still some shortcomings, and it is necessary to improve the form of innovation emotion education as a way to promote students' social literacy and development.

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