Innovation and Management Suggestions for Generation Z Education: Semantic Network Analysis Based on Students' Feedback

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Abstract: In recent years, educators pay more and more attention to students' feedback. Based on students' feedback to the course, semantic network analysis was used in this study to explore the innovation and management suggestions of Generation Z education. The results show that Generation Z students in the sample pay much attention to the process of learning knowledge rather than specific knowledge points; At the same time, they also attach importance to the use of knowledge and the teacher's fair evaluation of student performance. The results of this study will be helpful for educators to further try to optimize educational measures in order to pursue the improvement of teaching effectiveness.

Key words: Generation Z, education, students' feedback, Semantic network analysis

1 Introduction

Generation Z is reshaping the world around us, including the commercial enterprise of the future [1].In order to enable students to achieve success, , education quality needs to be improved[2]. Nowadays, how to educate them has become a hot topic whichattracted lot of scholars' attention. College students are used to having knowledge at a click, and if they're not invested in it, they get bored, and Generation Z may have the potential to help the university education's transformation[3]. Understanding the suitable education form for Generation Z[4] got attention from scholars, and analyzing students' feedback is the fastest way to find ways to improve the curriculum for Generation Z.

The data collection for this study is based on a course named "Festival Event Planning and Management" provided from 2022 to 2023 at a university in western China, where the researchers collected students' feedback (the students of this course are all Generation Z). The researchers then performed word frequency analysis, semantic network analysis, and sentiment analysis on the collected data, combined with detailed and specific comments, to propose some innovative measures to improve the teaching effectiveness of Gen Z education.

2 Theoretical background and course background

Classroom feedback is an important factor that teachers and students will pay attention to[5]. Teachers who actively construct high-quality lectures have a student-centered teaching concept, and will adjust the teaching content and progress in time according to students' feedback information[6]. Students' feedback has special significance for teaching [7]. Therefore, students' feedback about the course were the basis of analysis in the study to guarantee innovative suggestions.

In the School of Management of the university where the data were collected, "Festival Event Planning and Management" is an elective course for tourism management majors. This course introduces the general laws of the social and economic attributes of festival activities through teaching, discussion and practice, so that students can distinguish different types, purposes and scales of festival activities,;master the basic concepts, knowledge, theories and development trends of festival activities, and be able to plan and design specific festival activities by using relevant knowledge; and also acquire basic skills and abilities. The two most important contents in the course are: firstly, knowledge teaching; Secondly, after the students are grouped, they plan and investigate a festival in a project-oriented way, and complete the whole planning process about their selected projects.

3 Research Methods

3.1 Data Collection

The data collection for this study is based on a course named "Festival Event Planning and Management" provided from 2022 to 2023. In order to get rich and authentic feedback results, the researchers collected feedback about the course from 61 students by online questionnaires for three times, focusing on the questions like students' suggestions to the class and their experiences after the implementation of the project of the course, students can write their answers to questions and comment the course. Data were collected in the first round from October 5, 2022, the second round from November 9, 2022 to November 10, 2022, and the third round from December 28, 2022 to January 9, 2023. A total of 117 comments were received. Then, in order to guarantee the validity of the data, manual data screening was carried out, these answers were deleted: (1) that has nothing to do with the course; (2) repeated answers. Finally, 94 valid answers/comments were obtained.

3.2 Method

In this study, ROSTCM6, a text analysis software used in many research fields such as tourism [8] and education[9], was hired to analyze the data. Firstly, word segmentation is performed on the data, and word frequency analysis is done to get the top 100 high-frequency words. Secondly, semantic network analysis was carried out. Finally, the sentiment analysis was carried out.

4 Results

4.1 Word frequency analysis

As Table 1 shows, among students' feedback on this course, "plan, group, project, this time, homework, process, analysis, report, team, and complete " are the top ten high-frequency words, which shows students also seems to pay more attention to the planning, reporting and other content in the learning process rather than focusing on a specific knowledge point.

Table 1 Top 100 high-frequency words

No.	High-frequency word	Frequency	No.	High-frequency word	Frequency
1	planning	200	51	ability	14
2	group	116	52	Learn from	14
3	project	75	53	form	14
4	This	62	54	communicate	13
5	homework	50	55	place	13
6	process	46	56	manage	13
7	analyze	45	57	unite	13
8	report	38	58	colony	13
9	team	38	59	and	12
10	complete	35	60	backdrop	12
11	study	34	61	Put forward	12
12	Teacher	33	62	One another	11
13	problem	32	63	Make sure	11
14	knowledge	32	64	explicit	11
15	course	29	65	hold	11
16	task	27	66	goal	11
17	This time	33	67	The	11
18	Be able to	26	68	Suggestion	11
19	Divide the work	24	69	earnest	11
20	Member	24	70	profound	11
21	proposal	24	71	actual	10
22	Risk	23	72	atmosphere	10
23	whole	22	73	comprehend	10
24	FINANCE	21	74	somewhat	10
25	compose	20	75	practice	10
26	communication	20	76	innovate	10
27	discuss	20	77	A lot of	10
28	classroom	20	78	finally	10
29	Insufficient	19	79	flow	10
30	classmate	19	80	plate	10
31	feasibility	19	81	Apply	9
32	stage	19	82	EXP	9
33	Participate in	19	83	make	9
34	show	19	84	arrange	9
35	positive	19	85	Thank	9
36	budget	18	86	manufacture	9
37	culture	18	87	Children	9

38	time	17	88	direction	9
39	Select	17	89	expression	9
40	harvest	17	90	understand	9
41	each	17	91	Modify	9
42	perfect	17	92	achievement	9
43	idea	16	93	experience	9
44	think	15	94	design	9
45	cooperation	15	95	each	9
46	know	15	96	gain	9
47	feel	14	97	Take exercise	8
48	Intangible cultural heritage	14	98	Old people	8
49	LEADS	14	99	Try hard	8
50	market	14	100	logic	8

4.2 Semantic network analysis

As can be seen from Fig. 1, the "planning" was the central words of the semantic network, among which process, group, project and analyze were closely related words, indicating that students' deep impression of this course is mainly concentrated on the process of learning, especially in project operation. Obviously, the implementation and completion of the planning of each group's festival activities has become a key point for students to learn this course.
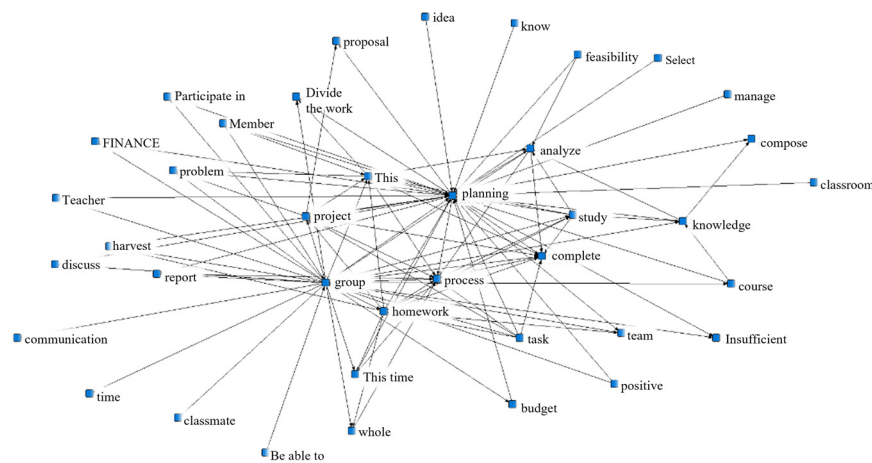

Fig. 1 Semantic network

4.3 Sentiment analysis

Table 2 Results of Sentiment analysis

Positive emotions:	N=75	79.79%
Neutral emotions:	N=16	17.02%
Negative emotions:	N=3	3.19%
Among them, the statistical results of positive emotions are as follows:		
general(0—10):	N=17	18.08%
moderate(10—20):	N=7	7.45%

highly(＞20)：	N=51	54.26%

Among them, the statistical results of negative emotions are as follows:		
general(-10—0)：	N=2	2.13%
moderate(-20—-10)：	N=1	1.06%
highly(＜-20)：	N=0	0.00%

As can be seen from Table 2, students' emotional expression toward the course tends to be positive, and there are some neutral emotions, while negative emotions are not prominent. Of these, 75 were positive.

5 Conclusion

For Gen Z in particular, the use of digital technology has become an important part of their daily lives.As a result, Generation Z exhibits unique learning characteristics that differ from previous generations[10]. It can be seen from the research data that students' emotional expression toward the course tends to be positive, with only a small part of which shows negative.

According to the specific text content, it can be found that students' positive emotions mainly come from the following aspects: (1) some class-related videos which make them feel and experience festival activities directly; (2) group projects through which they exercised teamwork ability and learned advantages from other groups; (3) project planning work through which they learned knowledge needed for planning festival, and felt the process of how the knowledge was applied.

Students' negative emotions mainly come from the following aspects: (1) they hope to introduce some punishment mechanism while rewarding the answers in class, so as to evaluate the results of students' interaction more fairly; (2) It is hoped to reduce the overlap in the division of labor in project execution, so as to ensure that team members can be more efficient in learning.

Based on the above conclusions, we put forward the following suggestions for the innovation and management of education for Generation Z：

(1)Activate knowledge and display vividly

Whether it is to show the festival activities vividly through video, or to allow everyone to use the knowledge in the course when planning a festival themselves, knowledge can be better activated rather than just implanted into the hearts of students in the form of words. In the future, VR technology can also be innovatively used to show students some of the festival's pageants.

(2)Fair and efficient

From the perspective of students' negative emotions, they not only hope that good performance will be rewarded, but also hope that bad performance will be punished appropriately. Therefore, the mechanism of classroom evaluation should pay more attention to fairness. And, we can also see their demands for efficient learning, so we can give them more autonomy in future teaching, especially in the implementation of group projects, and urge them to make a good work allocation before doing specific work, so as to promote the efficient of learning.

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