

# *An Empirical Study on the Learning Incentive Mechanism of College English Course*

Huayu Lin\*

Chengdu Jincheng College, Chengdu, Sichuan, China

395629204@qq.com

\*Corresponding author

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**Abstract:** This paper designs and incorporates a sound incentive mechanism in the College English course, and verifies the effectiveness of the mechanism through data analysis. The detailed incentive scheme and research are now summarized in the hope of providing some indicative suggestions for colleagues.

## 1. Introduction

Motivation is a complex component of human psychology and behaviour that influences how individuals choose to invest their time, how much effort they put into any given task, how they think and feel about the task, and how long they persist in the task (Bakar, 2014). With the new era of increasing importance in the field of education, motivation to learn has received widespread attention from various scholars. For instance, it is worth noting that access to high levels of motivation in the classroom can lead to higher levels of understanding (Vansteenkiste et al., 2005), creativity (Koestner et al., in Gibbens, 2019), productivity (Das Carlo, Swadi & Mpofu, 2003), and achievement (Moulaert et al., 2004; Sobral, 2004). Hadre (2007) argued that motivation is one of the most important factors in determining a student's academic success or failure. Therefore, this paper proposes to construct a comprehensive and student-friendly incentive mechanism for College English course, in an attempt to motivate students to learn and promote their academic performance. The paper has screened and organized student performance and related data before and after the incentive mechanism is added, and had validated the effectiveness of the learning incentive mechanism through data analysis.

## 2. Theories

### 2.1. Educational Incentives

The theoretical basis used in this paper is Incentive Theory. It is a generalization of methods on how to satisfy various human needs and motivate people, and is derived from management, which is the core content of management. However, in the context of college student motivation, it is preferable to incorporate the educational aspect of the theory, which is to motivate students to acquire knowledge. It is a way of motivating students to replace external stimuli with internal needs

and behavioral motivation to produce a change in behavioral patterns [1,2].

## 2.2. Hierarchy of Needs Theory

In the 1950s, American psychologist Abraham Maslow put forward the Hierarchy of Needs Theory, which mentioned that human needs can be ordered from low to high into five levels: physical needs, safety needs, social needs, respect needs and self-actualization needs. On this basis, educational motivation can be divided into material, emotional and spiritual motivation. As long as the school can meet the physical needs and safety needs of students, the university curriculum should pay attention to emotional and spiritual motivation [3,4].

## 3. Construction of the Learning Incentive Mechanism

This paper has summarized three specific needs of the target group of students by means of questionnaires and interviews:

- (1) College students have a strong need for respect and self-fulfilment;
- (2) College students are strongly motivated by achievement and approval;
- (3) College students have a strong need for emotion and friendship.

Accordingly, students' achievement and teachers' approval are identified as the mental excitation factor and the emotional excitation factor respectively-factors that influence individual behaviour, or more specifically, induce individuals to work hard. To sum up, this paper uses a mixture of emotional and spiritual motivation in combination with relevant theories, and selects suitable excitation factors to build a complete and closed motivation mechanism, as shown in Figure 1 and 2.

Source: Yu X. et al., (2005)

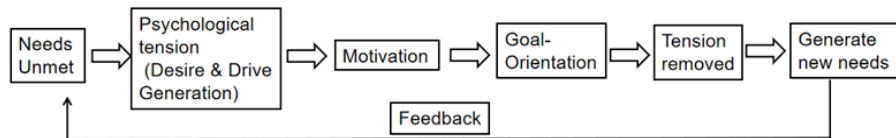


Figure 1: Incentive model diagram

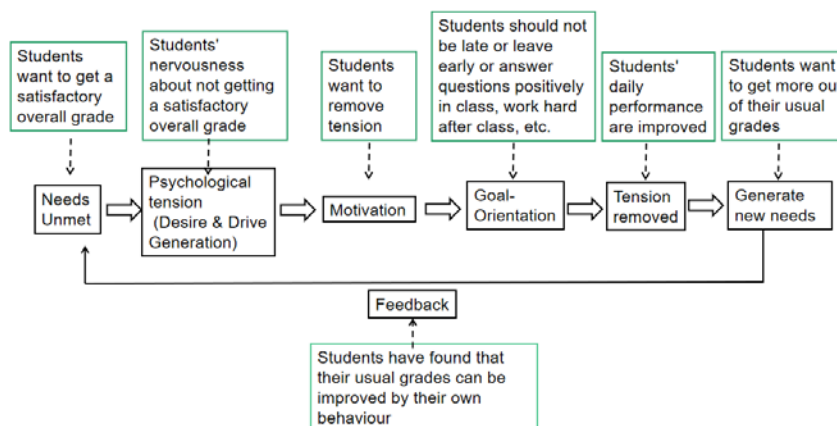


Figure 2: Simulation of Expected Psychological thoughts of Students in the learning incentive mechanism

As College English lecturer with four years' experience in teaching this course. Author has chosen the students of the School of Literature and Media, Class of 2020 and Class of 2019, as

subjects. The students in Class of 2020 selected as the experimental group and the students in Class of 2019 were selected as the control group to study the changes in learning initiatives of the two classes over the 16 weeks of a semester. The Class of 2020, the experimental group, completed the course with well-established learning incentive mechanism (Figure 3, right column), while the control group, Class of 2019, (Figure 3, left column) completed their studies under a regular teaching process.

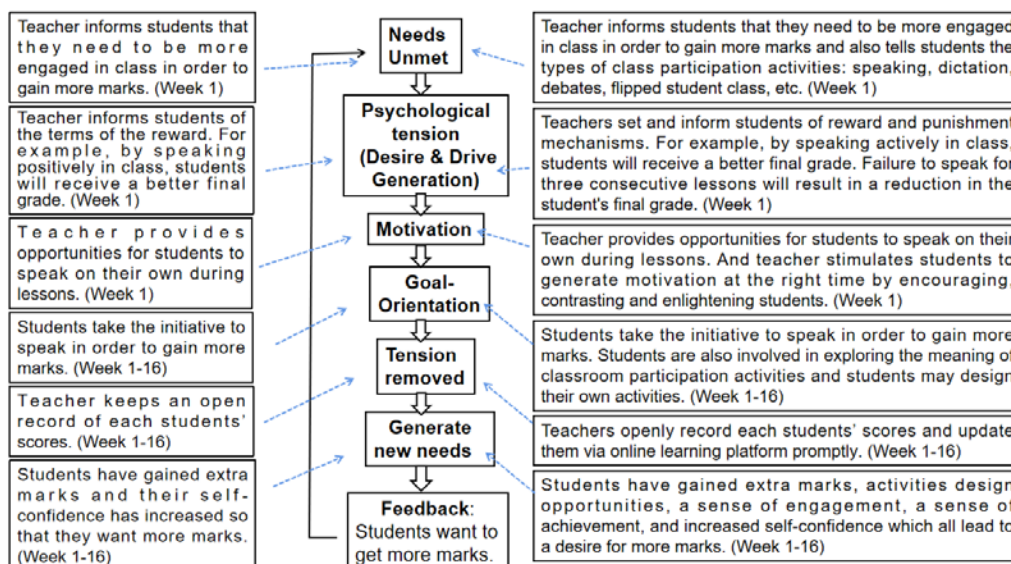


Figure 3: the detailed learning incentive mechanism (right) and the control group's regular teaching process (left)

## 4. Analysis of Results

In order to quantify the result of the mechanism, the paper has taken student participation scores, number of changes in student participation, teacher's impression score and the final exam paper scores from the College English Course Teaching Documentation Form as the main data [5].

### 4.1. Date Analysis

Class of 2020		Class1	Class 2	Class 3	Class 4	Total
(1)	Number of students:	31	30	29	29	119
(2)	Class average for student participation scores in last semester: (times)	78.14	80.92	80.03	81.29	80.10
(3)	Class average for student participation scores in this semester: times	86.18	85.69	85.50	85.41	85.4
(4)	Total change in Class average for student participation scores: (points) $(4) = ((3) - (2)) * (1)$	249.30	143.02	129.63	119.67	641.62
(5)	Change in Class average for student participation scores per student: (points) $(5) = (4) / (1)$	8.04	4.77	4.70	4.13	5.39
(6)	Total number of changes in student participation: (times)	113	90.5	18.5	-24.5	197.5
(7)	Change in student participation per student: (times) $(7) = (6) / (1)$	3.65	3.02	0.64	-0.84	1.66
(8)	Total change in impression score: (points)	51	133	-6	-128	50
(9)	Total change in impression score per student: (points) $(9) = (8) / (1)$	1.76	4.43	-0.21	-4.41	0.42
(10)	Total change in exam score: (points)	15	198	159	175	547
(11)	Change in exam score per students: (points) $(11) = (10) / (1)$	0.48	6.6	5.48	6.03	4.60

Figure 4: Class of 2020 student data

The change in data over one semester is reflected in Figure 4 for Class 2020 students, numbering 119. Over the course of the semester, all students of Class 2020 increased their student participation scores (4) by approximately 641.62 points, an average increase of 5.39 points per student (3). The increase of 197.5 in the total changes in student participation (6) and the increase of 1.66 per student (7) indicate a more activated learning class. Moreover, the change in teachers' overall impression scores at grade level (8), 50 points, and an increase of 0.42 points per student, demonstrate a significant increase in students' cooperation in class. The exam paper score change (11) also shows a positive value with an increase of 4.6 points per person, reflecting a positive increase in student performance under the learning incentive mechanism.

Class of 2019	Class1	Class 2	Class 3	Class 4	Total
(1) Number of students:	31	32	31	32	126
(2) Class average for student participation scores in last semester: (times)	85.52	85.15	89.29	84.35	86.08
(3) Class average for student participation scores in this semester: times	86.07	88.125	85.23	83.97	85.85
(4) Total change in Class average for student participation scores: (points) $(4) = ((3) - (2)) * (1)$	17.15	95.25	-125.92	-12.05	-25.57
(5) Change in Class average for student participation scores per student: (points) $(5) = (4) / (1)$	0.55	2.78	-3.93	-0.37	-0.20
(6) Total number of changes in student participation: (times)	-55	-40.5	-79	-50	-228.5
(7) Change in student participation per student: (times) $(7) = (6) / (1)$	-1.9	-1.27	-2.49	-1.56	-1.88
(8) Total change in impression score: (points)	-27	26	-157	48	-110
(9) Total change in impression score per student: (points) $(9) = (8) / (1)$	-0.87	0.87	-4.91	1.5	-0.87
(10) Total change in exam score: (points)	278	406	576	600	1860
(11) Change in exam score per students: (points) $(11) = (10) / (1)$	8.97	12.69	18	18.75	14.76

Figure 5: Class of 2019 student data

The change in data over one semester is reflected in Figure 5 for Class 2019 students, numbering. In comparison, all students of Class 2019 have their student participation scores (4) decreased by approximately 0.2 points per person. The decline (of 228.5 times) in student participation (6) is significant in regular class. The mean of participation (7) was -1.81 times, indicating that each student participated in class nearly twice less during the following semester. In terms of the overall change in teachers' impression scores of students, the amount of change at grade level (8) was -110 points, with an average decrease of 0.87 points per person (9). The exam score for the first and second semesters showed a positive increase of 14.76 points per person (11).

## 4.2. Discussion

### 4.2.1. Horizontal Analysis

In a horizontal comparison, by comparing the data from the class of 2020's own first and second semesters, we have found that after the inclusion of the learning incentive mechanism, the number of student participation and the final paper score showed a positive increase of 1.66 and 4.60 respectively, indicating that with the same level of teacher instruction and course difficulty, the incentive mechanism had a positive motivational effect. However, there were also individual classes, such as classes 3 and 4, where the teacher's impression score and class 4's participation showed a downward trend. Accordingly, teachers should take into account the class learning atmosphere and class personality when delivering lessons so that the motivational mechanism can achieve optimal results [6,7].

After comparing the data from the Class of 2019's own first and second semesters, we have found that in a regular class teaching, the change in either average student participation or teacher impression score at the grade level was negative, -1.81 times and -0.87 points respectively, indicating that the regular classroom was not very effective in motivating students' participation and final paper grades. It is possible to conclude that students' autonomy in learning decreases in the first and second semesters, therefore indicating the need to include effective motivational mechanism in class [8,9].

#### 4.2.2. Vertical Analysis

Because the students in the two grades were different and the teachers' questions and teaching styles changed over the course of the year, a direct vertical analysis of the data from the first and second semesters of Class 2019 and 2020 did not allow for an objective representation of the differences. The analysis of the data revealed that the change in participation and the change in teachers' impressions in both grades showed positive values at the level of Class 2020 and negative values at the level of Class 2019, demonstrating the effectiveness of the new mechanism [10,11].

### 5. Conclusion

Based on scientific data analysis, theoretical foundations of the literature, and the construction and implementation of the learning incentive mechanism, the author has verified its positive motivational effect on students' learning autonomy through the data. Of course, there are limitations to the paper, and issues that need to be addressed in subsequent research include the small sample of data, the small time span, the impact of the epidemic and statistical errors, etc. At the same time, the author notes that Figure 5 reflects a positive increase in the change of the final paper marks in Class 2019. This decrease in student autonomy provides a new direction for the author or other teaching researchers, indicating that it is also very meaningful to explore the relationship between student motivation in the classroom and student learning efficiency. In summary, this paper provides a detailed incentive mechanism, and presents the results of the mechanism in the form of data, in the hope that it can provide some reference suggestions for colleagues and also provide valuable ideas for future teaching research [12].

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