BUILDING UP THE RELEVANCE IN ECONOMICS EDUCATION AND ASSESSING ITS EFFECT

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ABSTRACT

Even though economics is still mostly being taught in a traditional manner, there seems to be increasing emphasis on the role of concept relevance in better teaching. At the present, numerous teaching methods are being used in order to keep the coursework interesting as well as relevant. Be that as it may, game-based instruction or online teaching is more challenging to be used when teaching certain subjects than others. This paper proposes a novel teaching method which is a mixture of drama-based teaching, field survey, debating and online video discussions, the combination of which would promote the relevance of the subject being taught as it engages the students in the classroom. In this paper, we tailor a curriculum based on concrete and hands-on experience to promote collaborative learning and cultivate critical thinking. Furthermore, another goal of this study is to assess how students' learning styles respond to different teaching methods. We attempt to understand the interaction between teaching pedagogy and students' learning styles in order to improve economics education. The study follows a deductive reasoning approach based on data gathered through distribution of two questionnaires among students at an economics class in Feng Chi University; one before and one after the final test. According to the findings, our teaching design has the potential to increase the students' level of perceived relevance between what they learn in class and what they observe in real life.

KEYWORDS

pedagogy, interactive learning, subject relevance, economics teaching, Standard 8

MOTIVATION AND RESEARCH QUESTIONS

Economics is considered to be more abstract and theoretical among various disciplines of social science. It has been promoted for a long time that economics teaching needs to be adjusted and modified (Becker & Watts, 1996, 2001; Becker, 2003). Regrettably, traditional lecture format, popularly known as "*chalk and talk*" still dominates economics instruction. Majority of economics teaching still uses traditional lecture style, and consequently, widens the gap between teaching and learning types. As addressed by Hoyt & McGoldrick (2019) in their conclusion,

"*And lest we be accused of ignoring the elephant in the room, we leave you with the following: we must acknowledge that lecture is still the dominant pedagogic practice in economics, but is this in the best interest of our students and if so, how might we develop even more effective lecture methods?*"

To make the coursework relevant and interesting, various teaching approaches have been

utilized in today's classrooms. However, courses like labor economics or economic law may face some challenges to be taught using popular game-based instructions or online learning. Therefore, how to design an economics curriculum with the aim of promoting the relevance of the subjects and engaging students for actively learning is a much-needed goal. In this study, we propose to combine multiple teaching methods including drama-based teaching, field survey, debates and popular media discussions, to engage the students by showing real world relevance of the subjects and making them more interesting.

We plan to conduct our teaching practice research in the course of "Human Resources Economics", which is an elective course at the Department of Economics, Feng Chia University. Feng Chia University adopts the CDIO initiative at the university level, regardless of the discipline. This course is on the application of economic principles in analyzing the labor market and allocation of human resources. The course covers a variety of subjects, including but not limited to labor force supply and demand, wage determination, labor market diversification and equality, and human capital. Moreover, the course also includes subject matters such as labor policies and labor law. The curriculum will build a bridge between the theories and real-world issues which would motivate students to engage more actively in the learning process.

As pointed out by Liang, Deng & Tao (2011), CDIO-based teaching method is a pedagogy which organically integrates teacher's research-based teaching and student's research-based studying together. This paper is a report of how we have adopted this method in an economics class. We expect our curriculum design to be capable of enhancing students' interest and improve their learning effectiveness. In particular, drama-based teaching or psychodrama is an innovative attempt in economics education. Drama-based pedagogy, which helps create an environment for focused inquiry and learning opportunities, is integrated into special topics. Role play provides an effective way to develop empathy in students and should help them learn through dramatic plays. Through said process, we believe that problem-solving and creative thinking abilities can be cultivated, which will enable students to deal with potential labor issues in the real world. As addressed in CDIO syllabus 3.0 (Malmqvist et al., 2019), living in an "accelerating" world, we intend to lead our students to reach the mission:

"*It must empower them to be leaders of innovation, to not only be able to adapt to a changing world, but also to change it*."

To access the skills acquired by teamwork-based projects, multiple evaluation methods were customized including the peer assessment and the logbook assessment techniques. Peer assessment helps students pay more attention to peer performance and give feedback constructively (Huet et al. 2008). This study also attempts to assess how students' learning styles respond to different teaching methods. Charkins, O'Toolem & Wetzel (1985), point out that the discrepancy between teaching styles and students' learning styles leads to a poor learning performance. Moreover, with said discrepancies, students tend to hold negative opinion toward economics. Borg & Shapiro (1996) also encourage instructors to apply a more diverse teaching and assessment strategy in response to various learning styles. Ziegert (2000) and Lage et al. (2000) also share the same view in their later research. Jensen & Owen (2001) analyze the larger scale sample and find that instructors' learning skills excise a significant impact on their choice of economics as a major in the future. Other studies also find a clear connection between students learning styles and their academic achievement, arguing that certain learning styles are more effective. More recently, Zhang (2016) concludes that diverse teaching pedagogy would bridge the learning gap among students with different learning types.

The goal of this project is to bridge the gap between students and professional knowledge by making the coursework relevant and interesting. Cooperative learning and team work are emphasized inside and outside the classroom. In line with our diverse teaching models, multiple assessment methods are applied to explore student learning outcomes. Together with a traditional written test, students' performance on drama plays and debates as well as course-

embedded assignments and reflections, assist in interpreting students' learning achievements. We collect the data based on pre-test and post-test surveys to address our first research question.

RQ1: Will our curriculum design and practice enhance students' learning motivation and interests?

Our second research question is:

RQ2: will students with heterogeneous learning styles respond differently to our diverse teaching methods.

One shoe doesn't fit everyone's feet and it can be similar inside the classroom. We plan to explore the disparity among different learning styles in terms of preferences and learning outcomes. In the face of changing student body and their learning styles, how to evolve and adapt teaching strategies to accommodate students' learning styles is crucial. Through our curriculum design, we intent to evaluate how students respond to various teaching methods. With our results, we hope to find a clearer guidance for connecting students' learning styles and different teaching practices.

COURSE DESIGN AND ASSESSMENT METHOD

Using human resources economics as the subject matter, the experiment endeavors to close the gap between the theories covered in class and the realities of the outside world. We do so by employing group discussions and increasing the interactive aspect of the coursework. The class commences with gathering personal information on the students' and their families' employment status and conditions as well as their demographics. Consequently, the corresponding teaching method will be devised and employed. It includes group discussions on policy debates and current affairs.

Drama-based teaching, AKA psychodrama is a novel approach to teaching, rarely used when teaching economics. It adopts social drama combined with some psychodrama techniques. As a result, students will become more involved in the subject-matter. Consequently, they are expected to suggest solutions for the problems under discussion. The main design of the method is depicted in Figure 1:

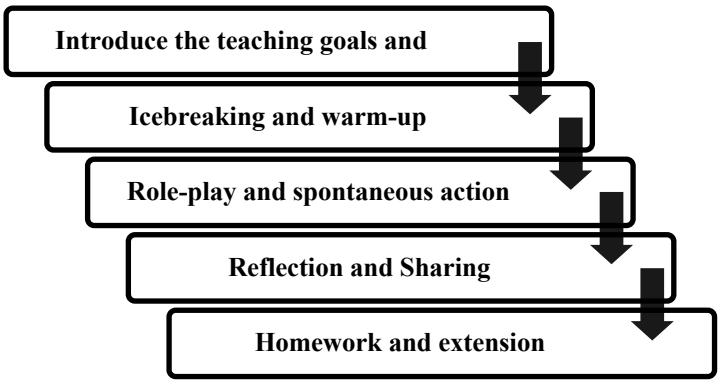

Figure 1. Framework of drama-based teaching

As it is shown in the Figure 1, drama-based teaching consists of five stages. First, the goals and objectives of the session will be explained to the students. Second, the instructor will work with the students to develop the goals and set the stage for the main act. Third, the students will act out the designed situation. Fourth, students will share their feedback on the drama in

a group discussion. Fifth, the students may be assigned some exercises to deepen their understanding of the subject.

During and after the drama, the instructor (director) may ask the actor to change roles, adopt the character of another person, or pause to reflect on another character's behavior. These exercises may help a participant better understand the role of others, as well as alternative ways to face the same issue.

The third stage is in fact the main stage of the process. It may involve the use of characters and sculptures. The instructor will act as the director and set the roles. The plot shall continue in a three-act set. First, the characters and their roles are introduced. Second, the conflicts and issues are shown. Third, solutions to said issues are presented. This process allows the students to creatively and carefully account for different trade-offs and constraints when faced with economic decision-making. Moreover, the tools commonly used in psychodrama are also used in this type of teaching. This in turn will allow the students to take on different roles and take turns during discussions. Said tools include colored and patterned cushions, cloth strips, and cloth pieces. Finally, the students get to share their thoughts on the course through group discussions. Moreover, they shall complement their learning process via after class exercises.

We employed a drama-based teaching method with two plays. As the semester commenced some labor market indicators were introduced to the students. The data (based on the dynamics of the Taiwanese economy) were complemented with a rigorous fact check conducted by the students. Class discussion was a common practice in this course. This rescues the students from gruesome nonstop lectures. The discussions were followed by an Oregon style debate with five people on each side. Moreover, in another unit the students were asked to prepare a 12-15 minute performance with the objective of answering the following questions.

1. Why are there different payment methods in different industries and occupations?
2. What are the advantages and disadvantages of the salary system being portrayed in the performance?
3. How can employers increase employees' work incentives?

Not only the instructor, but also the students were involved in the grading of the performances. This peer-evaluation form is effective in ensuring the students' focus and attention to the performances' key aspects. Through follow-up analyses, one can observe the teaching effectiveness and find the best corresponding strategy suitable for the students' learning style of the students.

DATA AND OBSERVATIONS

For the purposes of this study, an undergraduate class, human resources economics, at Feng Chia University, has been put under observation. Said class has been managed differently, applying a drama-based teaching method. Moreover, the students' performance was recorded. In addition to that, students' perception of the method has been observed via distribution of a questionnaire in two rounds, one before their final test and one after. In this way, their performance could be observed relative to their perception of the new teaching method. Finally, the students were divided based on their learning method as well. The classroom consisted of 36 students.

The purpose of this study is to evaluate the effect of drama-based and subject relevance teaching on the students' learning outcome. We do so by assessing their performance before and after the tests divided by the students' learning styles. The learning styles are categorized based on the work of Kolb (1985). David Kolb in his influential work, experiential learning,

suggests four learning styles; accommodating, diverging, converging, and assimilating. The accommodating learning style consists of concrete experience. Moreover, the diverging style includes reflective observations. Furthermore, the assimilating style consists of the students' abstract conceptualization. Finally, there is the assimilating learning style which includes students' active experimentation. In other words, Kolb's four learning styles comprise the acts of feeling, watching, thinking, and doing. His categorization is depicted in the following figure.

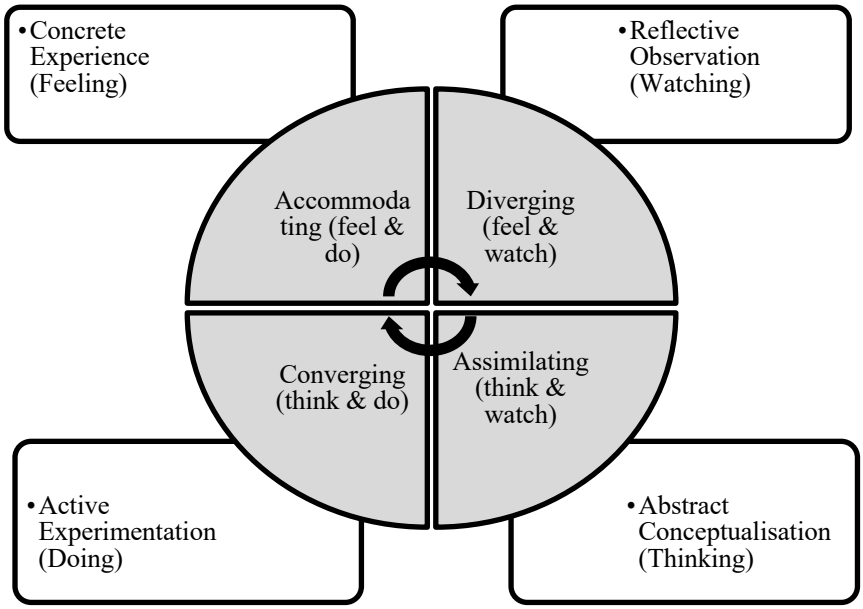

Figure 2. Kolb's learning styles (1985)

Table 1 reports the distribution of the participants categorized by their method preference as well as their learning style. The students were to provide their preferences among seven teaching method; drama-based, field survey, in-class discussion, debates, traditional lectures, and in-class assignment. As the numbers indicate, among the students, highest preference was for in-class discussions (20.31%). After that, lectures (18.75%), drama-based teaching (14.06%), and field surveys and debates (12.5%) had the highest preferences. The least preferred method was for in-class assignments. In terms of their learning style, the highest portion of the students was diverging (41.03%). Afterwards, there was the accommodating students (30.77%), followed by assimilating (17.95%) and converging (10.26%).

Among the students with a diverging style, most (24.44%) preferred lecture method and the lowest portion (8.89%) preferred debates and field surveys. In case of the students with an accommodating learning style, the highest share had a preference for in class discussions (20.45%) while the lowest share belonged to online videos (9.09%). Moreover, among the students with an assimilating learning style, the highest preference was for in class discussions and the lowest share was for debates, lectures, and in-class assignments. Finally, in case of students with a converging learning style, the highest share belonged to the discussions and debates (22.22%) while the other five methods had the same share (11.11%).

Table 1. Students' learning style and teaching method preference

Method preference / Learning style	Drama-based teaching	Field survey	In-class discussion	Debate	Lecture in class	Online video	In-class Assignment	**Total**
Diverging	11.11%	8.89%	20.00%	8.89%	24.44%	15.56%	11.11%	41.03%
Accommodating	13.64%	15.91%	20.45%	11.36%	18.18%	9.09%	11.36%	30.77%
Converging	11.11%	11.11%	22.22%	22.22%	11.11%	11.11%	11.11%	10.26%
Assimilating	18.18%	18.18%	22.73%	9.09%	9.09%	13.64%	9.09%	17.95%
Total	14.06%	12.50%	20.31%	12.50%	18.75%	11.72%	10.16%	100.00 %

RESULTS

Table 2 reports the students' average performance grouped by their learning style. It includes their coursework average, their midterm report average, as well as their final exam average. The performances of coursework were evaluated in a more encouraging way, so the grades obtained from coursework are higher than those from more classical-style evaluations (midterm and finals). According to the findings, the worst performance for coursework, midterms and the finals all belonged to those with a converging learning style. Interestingly, the best performance in all three categories belonged to the students with an accommodating learning style. In all four styles, the student's midterm performance was worse than their coursework and their performance in the finals was worse than their midterms and coursework.

Table 2. Students' learning styles and their performance (out of 100)

Learning style	**Total (%)**	**Coursework**	**Midterm report**	**Final exam**
Diverging	41.03%	88.06	81.38	70.60
Accommodating	30.77%	88.92	86.08	74.67
Converging	10.26%	69.75	69.00	66.67
Assimilating	17.95%	87.86	83.57	68.57

Before the semester commenced, the students were asked to fill in a 10-question questionnaire. After the semester ended, they were asked to fill in the same questionnaire once more. It was designed to examine their perception with regards to economics as subject, its relevance to the real world, as well as their attitude towards learning in general. The ten questions are as follows.

Table 3. Survey questions for pre and post test

1. I like to think about economic issues
2. Learning economics brings me a lot of sense of accomplishment
3. I think economics is an interesting course
4. I can relate economic concept to situations that might apply in daily life
5. I think economics is very theoretical and difficult to understand
6. Economics is less practical compared to other business subjects
7. I often discuss class content or homework with my classmates
8. I like to work independently
9. If I have questions, I will ask my classmates for help
10. I think that the opinions expressed by my classmates in class are very valuable to me

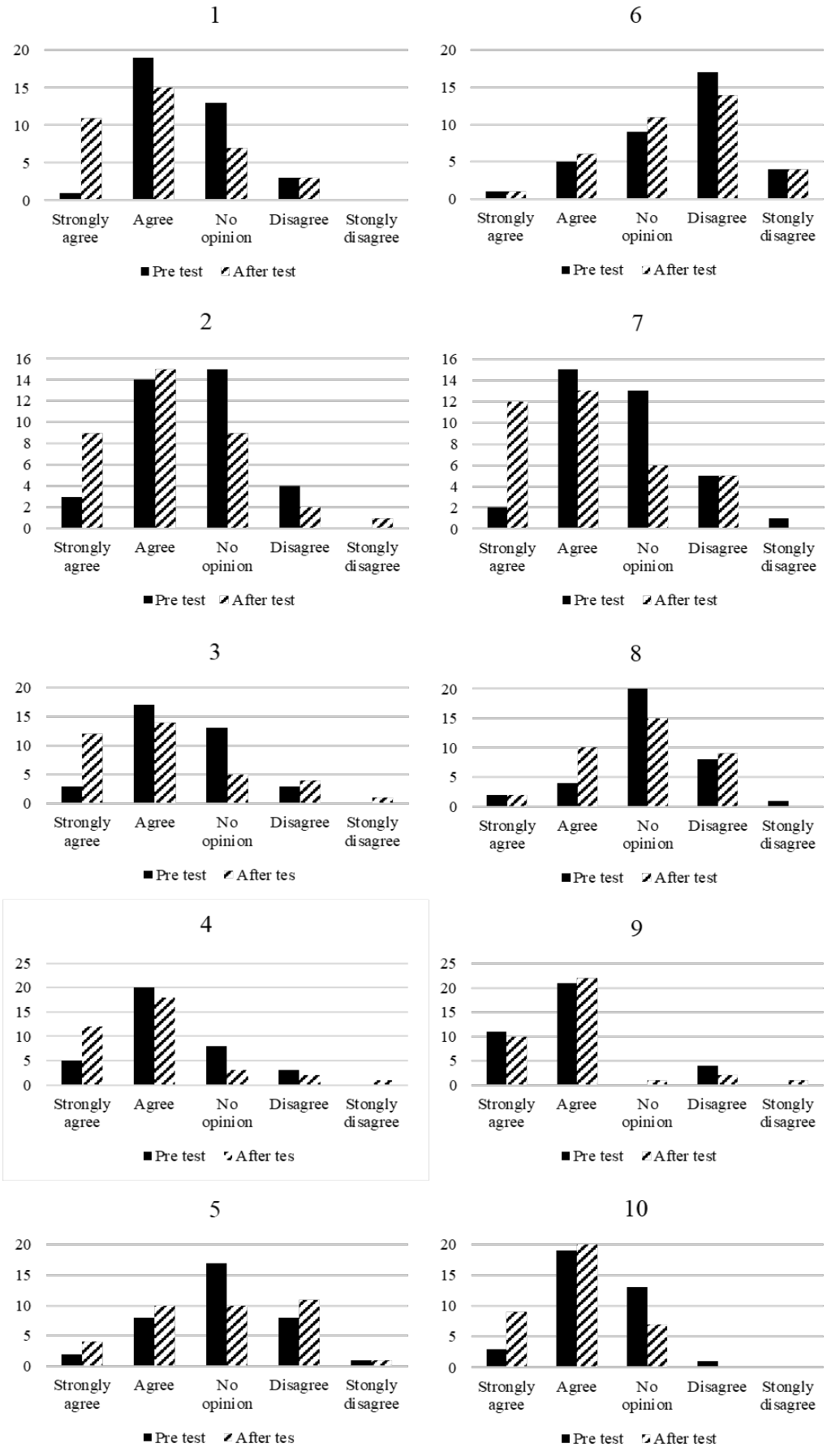

Figure 3. Students' perception of education and economics before and after tests

Figure 3 depicts the distribution of the students' responses to each question before and after their finals. According to the findings, the number of those who strongly liked to think about economic issues increased substantially after test relative to pre-test. Moreover, the findings indicate a decrease in the number of those not having an opinion about the second question in favor of agreeing and strongly agreeing with it. As for those thinking economics to be an interesting subject, the number of those who strongly agree with the matter was much higher after test relative to pre-test. Furthermore, the findings suggest that more students strongly agreed with the argument that economic concepts are relatable to daily life matters after test than pre-test. However, the findings also suggest an increase in the number of students who strongly think economics to be very theoretical after test than pre-test.

Both before and after the test, more students disagreed with the claim that economics is less practical than other business subjects. Moreover, the figures suggest a slight increase in the number of students who agree and those who do not have an opinion on the matter after test than pre-test. As for the last four questions which cover the students' perception on overall education, the numbers indicate that substantially more students strongly agree that they discuss the class content with their classmates after test than pre-test. Moreover, most of students both pre-test and after test showed no opinion about their independent learning behavior. However, the number of those who agreed increased substantially after test while the number of those with no opinion decreased after test. Furthermore, almost all the students claimed that they would seek their classmates' help in answering their questions. Finally, the findings indicate that most of the students agreed that their classmates' opinions had meaningful value. Moreover, the number of those who strongly agree to said statement was substantially higher after test than pre-test.

DISCUSSION

Among the social science disciplines, economics has always been considered more abstract and too theoretical, making it distant from reality. while novel teaching styles are increasingly gaining popularity, the majority of economics classes are still being taught in the traditional way. This study was an examination of how subject relevance teaching can be applied when teaching a class on labor economics. It was done so with the hope of closing the gap between theories taught in class and the realities of the outside world. In particular, drama-based teaching is among the recent innovations in pedagogy. In short, it consists of several short plays that are designed and performed by the students and are based on the subject matter being taught, in this case labor economics and human resources. Moreover, the students were given a short questionnaire to record their perceptions with regards to economics as a subject as well as their view on more general aspects of the learning process. Same questionnaire was distributed once in the beginning of the semester and once in the end. It also recorded the students' teaching method preferences and their learning style.

Overall, the study proves these new methods of teaching to be a success in closing the gap between theories taught in class and the real life issues the students observe outside the classroom. Moreover, students showed to be more active, and got more involved in the learning process. They turned from passive listeners of one-sided lectures to active participants of group discussions. Furthermore, the study suggests that the classrooms are heterogenous entities, comprising of students with different learning styles. Getting them to work together in groups could certainly improve their learning curve. Be that as it may, the findings indicate that there is no single shoe that fits all feet. The best course of action would be to combine different methods so the class becomes more accommodating to different learning styles and responding to the needs of different students.

Finally, there are several aspects of the topic that were outside the boundaries of this paper and could be further studied by interested scholars in the future. First, the drama-based

teaching method could be applied to other subjects than labor economics and then the results can be compared with the present study. Second, besides data on the labor market, in a future study more practical issues about human resources management can be included in the curriculum. Finally, we do not assess whether students' performance can be enhanced if we apply different teaching model on students with different learning styles in this paper, and this link can be studied in the future.

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