



## Blended of Learning Styles through creative and critical thinking

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### Abstract

Learning style through creative and critical thinking is one of the soft skill attributes expected of learning style in science education. The learning style of the concept of learning style is formed from birth. Some concepts are formed at pre-school age as prejudice. Simple experiments implemented into games and games have an important role in the formation of science concepts. This study presents the results of research into the development of educational methods that are appropriate to the age development of children. Design-based research that has been used. Student learning styles in terms of the learning environment show that the majority prefers to study in a quiet environment; bright rooms; with cold temperatures; sit on a chair or soft pillow. Despite the fact that in terms of psychological preferences, the majority are investigative to learn sequentially and reflectively.

**Keywords:** *Blended Learning; Students; Design*

### Introduction

Nowadays, the learning styles of students in Asia. Almost everything is different now compared to a few years ago; the types of music students hear, dances, instruments and technology that bring music, media shows that they patronize, the games they play, the language they use, their learning styles and even their values. In Asia is now truly driven by technology, where instead of being a mere tool for civilization, it is ready to become its master. Every student is unique and has potential genius. Teachers know this but they ignore or ignore it especially those who are raised with traditional teaching methods and conventional learning theories, (Anh, et.all., 2019). The teacher must learn to recognize, acknowledge, and respect aspects of the learning style of the innate tendencies of students. Learning styles are the way in which each student begins to concentrate, process, absorb, and store new information,

(Alindra, et.all, 2019). Personal style is a set of biological and developmental characteristics that make identical teaching environments, methods and resources effective for some students and ineffective for others, (Aşık,et.all., 2019). Recent studies reveal that when teachers develop and expand their teaching methods and techniques according to their students' individual learning styles, there is a noticeable increase in performance and achievement and a decrease in the number of disciplinary problems, (Cheong, K. W., 2019). Therefore, this study was conducted to determine the learning styles of teacher education students that function as a basis in improving the learning process, (Chamot, 2004).

The research study is anchored in Howard Gardner's Multiple Intelligence, (Theoryordahl, H., Hjemdal, O., Hagen, R., Nordahl, H. M., & Wells, A., 2019). Humans have nine kinds of intelligence that reflect

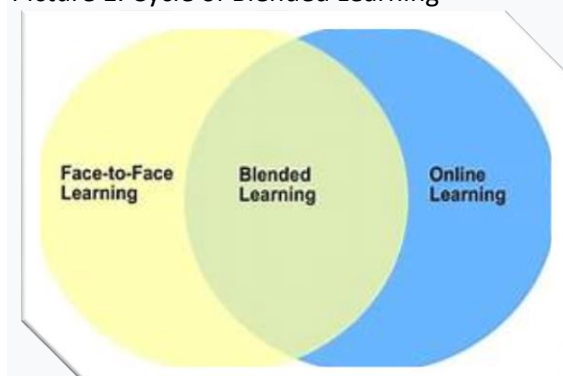
different ways of interacting with Asia. Everyone has a unique combination or profile. Although people have nine intelligences, no two individuals have the exact same configuration - similar to fingerprints, (Alibali, et.all., 2019). This forms a classic model where teachers understand and teach many aspects of human intelligence, learning styles, personalities and behavior, both in education and industry, (Duman, et.all, 2019). The research proposal is provided indication of the learning styles people like, their behavior and work styles, and their natural strengths. The types of intelligence a person has show not only one's abilities, but also the ways or methods they like to learn and increase their strengths and weaknesses. Increasing one's strengths will improve their response to learning experiences, which helps them develop their weaknesses as well. In this study, researchers conceptualized that student learning styles have implications for the teaching-learning process which can serve as a basis in proposing strategies to improve the teaching-learning process.

### Discussion

There is an increasing interest in enhancing science education to increase the diversity of individuals in choosing a science career and expanding the pool of scientific literate citizens throughout Asia, (Feldhaus, C., Buckwalter, J., & Wager, E., 2019). The approach in understanding books and journals for teaching science, although successful for a group of individuals, groups and the general public, is the most effective way to motivate learning in various groups. An alternative pedagogy has been carried out that replaces textbooks with active assignments and lectures, student-centered problem solving (Catherine, et.all., 2019). One of the trial results was that students who received assignments were more likely to attend class and rated their assignments as giving a higher level of satisfaction, compared to students who received textbook assignments, (Ehrich, J. F., & Henderson, D. B, 2019). Therefore, in this study, the task is more effective in stimulating students' interest and involvement with the subject matter, (Guliot & Guraldo, 2019).

Therefore, providing additional videos for science courses, either as a substitute, or in addition to, textbook assignments, can increase student involvement and motivation. The second finding is that students who listen to traditional lectures that focus on low-achieving instructors who actively solve problems during class periods. This is despite the fact that students in these two groups rated their classes equally satisfying, (Nurkaeti, N., Turmudi, T., & Karso, K., 2019). So, while students enjoy passively listening to lectures as much as they are asked to solve problems during class, they learn material better when they are actively working on problems, rather than just being given problems and answers as part of the lecture, (Nordahl, H., & Wells, A., 2019). Therefore, instructors may want to provide frequent opportunities during class for students to apply the content presented to a particular problem, (Coymak,et.all., 2019). It provides ongoing formative assessment for students to test their learning and refocus student attention during extended study periods, (Choy, et.all., 2019). In addition, asking a student to apply knowledge to a new context can help them learn the material in a more effective way that allows them to predict knowledge for new situations in the future; Case-based pedagogy has been used successfully in business, medical, and law schools.

Picture 1. Cycle of Blended Learning



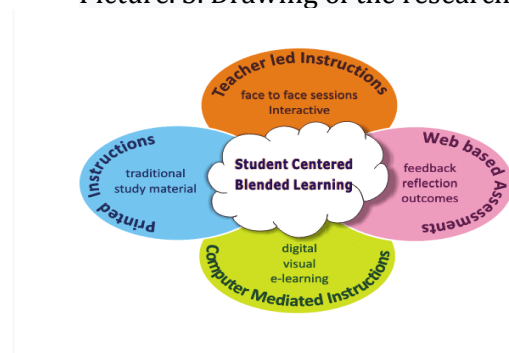
One of the difficulties faced when trying to assess the effectiveness of teaching and learning strategies is the challenge of providing identical content through the same instructor and the same set of students so that it is the teaching method being assessed and not other factors, (Daumiller, et.all., 2019). Various strategies have been tried with limited success to face this challenge,

such as historical comparisons among students who take certain classes who have changed their methodology, comparisons between instructors who use different teaching methodologies, or comparisons between the same instructors using various teaching methodologies in one course but for different topics and at different time points in the semester, (Chen, et.all., 2019). We suggest that it is most effective to use the accuracy and methodology of randomized controlled trials, which can measure the impact of patient interventions on health and biomedicine, to test the impact of teaching approaches on student learning, (Elihami, 2016). By using the same content, the same instructor, the same time points, and the same set of students randomly for different conditions, we can minimize the impact of variables beyond what we are trying to

## Method

The research study applied a mixed method design to examine research questions. Mixed methods research design is a procedure for gathering, analyzing, and "mixing" quantitative and qualitative methods in one study or series of studies to be understood. The basic assumption is that the use of quantitative and qualitative methods, in combination, provides a better understanding of the research problem and questions than the use of the method itself. The type of mixed method is the design of the triangulation mixture method.

Picture. 3. Drawing of the research

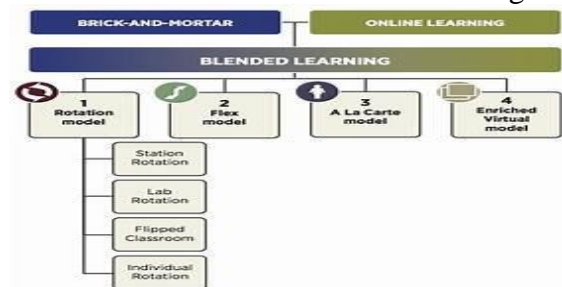


## Result

Unfortunately, we were only able to examine the effects of teaching style in one class, (Dökme, et. all. 2019). Additionally, we did not examine the long-term effects of these interventions on learning; it would be valuable to have students take another exam several

months or even years after participating in the study to examine how well they retain the information, (Liu, 2019). We propose that such longitudinal assessments of learning gains could be organized at the institutional level by regularly administering follow-up exams to students in specific majors who have completed the same required courses early in their programs, (Mahdavi, 2019). Perhaps by coupling such programs with a compensation system for participation, the long-term impact of course structures and pedagogical methods could be assessed. Overall, the results from this trial suggest that a blended teaching approach, which uses video assignments in advance of each class to stimulate interest in the topic and provide foundational knowledge, coupled with lectures having in-class problem solving, is a more effective strategy for science education compared with traditional approaches.

Picture 2. Chart of Blended Learning



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## Conclusion

Blended learning is worth noting that the video assignments did not improve student exam performance on their own but did increase attendance and satisfaction. By providing foundational pre-class information, video assignments can also create time in classes for active learning, such as student problem solving. Thus, the video pre-class assignments can serve a critical role in the blended learning paradigm for education. These results also illustrate the feasibility of using the clinical trial

methodology in educational intervention evaluations.

Blended learning approaches may help students learn information in a way that they can then translate to novel situations they will encounter in their academic and professional careers, which is the hallmark of

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