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## Improving Senior Secondary School Students' Academic Performance @ Culture Unit in Hong Kong (C.U.H.K)

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### Abstract

Education centers on the transmission of knowledge, development of skills, and the resolution of Puzzled. Difference culture unit (Senior Secondary School Students) may have different perception in viewing the same information. This article explores how knowledge information transmission and absorption can be enhanced by examining systems and mechanisms that strengthen five senses organs, with brain cognitive function to promote academic growth. This research emphasizes that thought processes shape behavior, which in turn influences learning and performance. If we can extent the same logic to the life science perspective, the eyes serve as gateways to the mind. By considering light, shadow, and color as mediums of cognitive transmission, educators can leverage these elements to support learning and information absorption. For example, students study economics may better grasp complex data when charts employ thoughtful use of color and contrast. Similarly, techniques such as ocular information categories, informed by variations in light and shadow, can improve information transfer by efficiently classifying and conveying information. Ultimately, this study seeks to extend implications beyond education to broader fields with the same logic extent to such as the life and health sciences, therefore contributing to both academic research and human well-being.

**Keywords:** Secondary School Students, Educational Psychology, Academic Performance, Information Transmission, Shadow and Color Effects, Brain Function

### Introduction:

Education focuses on delivering comprehensive knowledge, developing essential skills, and clarifying uncertainties through detailed explanations and professional terminology. Difference culture unit (Senior Secondary School Students) may have different perspective in viewing the same information. This research paper

aims to improve the transmission of knowledge, emphasizing the transmission system and mechanisms to enhance brain function and promote academic progress. It's important to understand that thinking changes behavior. Changes in behavioral patterns contribute to changes in learning, thereby improving academic

performance. If we can extend the same logic to the life science perspective, the eyes are the windows to the soul. Furthermore, considering the effects of light, shadow, and color as part of transmission and the imparting of knowledge, how can we use light and shadow, and color effects, as effective information transmission to aid learning and absorption? For example, senior school students studying economics often encounter various complex charts and graphs that confuse them, and they don't know how to solve the complex graph. Therefore, by using effective color effects and light and shadow to connect and apply the points, lines, and connections on the charts, they can quickly understand and learn. At the same time, to apply what they've learned to other situations, that is, understand one principle, and comprehend many others. Similarly, if we can transfer the same logic to the perspective of life health sciences, we can use the eyes as the entry point for transmitting information. By leveraging light, shadow, and color transmission to the nerve (fundus) of the eye, we can distinguish and communicate information efficiently to enhance knowledge transmission, killing two birds with one stone.

### Research Methodology:

This research focused on how to improve the academic performance of students, particularly high school students. This action research piloted from 2005 to 2025. Particularly from 2020 to 2025 experience. The summarized experiences are based on my secondary school teaching experience and CUHK graduate background, with relevant experience, literature review, and professional experiences.

This study examined strategies to enhance the academic performance of secondary school students through a longitudinal action research approach. The research spanned from 2005 to 2025, with particular emphasis on the period between 2020 and 2025, during which extensive tutoring experiences provided valuable qualitative and practical insights.

The investigation integrated both teaching and learning components (experience), in teaching experience, student feedback were analyzed to identify correlations between learning strategies and academic performance. Qualitatively, teaching experience, reflective learning and personal case studies from secondary school, tertiary school teaching, private tutoring sessions were used to explore the contextual and motivational factors influencing learning achievement.

This research design was grounded in my (the researcher's) professional background as a secondary school teacher and my personal education expertise background in CUHK (a graduate of the Department of Education at the Chinese University of Hong Kong). This foundation, combined with substantial experience in my secondary teaching experience and private tutoring integration, facilitated a comprehensive and practice-informed perspective. This action research study sought not only to identify effective pedagogical practices but also to bridge the gap between theory, innovation, and classroom practice.

### Literature Review:

Hong Kong's New Senior Secondary (NSS) curriculum, implemented in 2009, aims to reduce exam pressure and promote whole-person development through flexible structures like Liberal Studies and Other Learning Experiences (OLE). Students generally perceive benefits in noncognitive development, such as self-understanding and positive values, but report lower fondness for senior secondary compared to junior secondary schooling, with high

performers showing more positive views. (Dou, D., & Shek, D. T. L., 2022). Self-regulated learning (SRL) strategies, including control strategies and self-efficacy, positively predict achievement in reading, mathematics, and science among Hong Kong secondary students, while rote memorization shows negative associations. Ho (2010) analyzed PISA data, finding that Hong Kong students underuse SRL compared to international peers, suggesting a need for enhanced training to boost performance. (Ho, D. 2010). Ecological Predictors and Satisfaction, academic satisfaction, linked to performance, is influenced by school support, mediated by academic confidence in longitudinal data from senior secondary students. Dou and Shek (2022) used structural equation modeling on 2,023 students, showing PYD and support predict satisfaction via confidence, emphasizing holistic interventions. School Practices and Parental Priorities, Performance indicators guide schools in evidence-based self-evaluation to target improvements, while parents value both academic results and whole-person development in school choices. Ho et al. (2024) analyzed 327 schools, finding high whole-person orientation boosts intake in academically strong aided schools, aligning with NSS goals. Emerging Factors like enough sleep, optimal sleep duration shows a curvilinear relationship with standardized academic scores, with 9.5 hours for younger grades and 8.5 for senior secondary yielding peak performance Chan et al. (2023). Zhong et al. (2023) studied more than 7,500 students, advocating enough sleep to enhance outcomes. Key Implications, literature highlights integrating SRL training, PYD programs, and enough sleep with NSS reforms to improve performance, particularly for low achievers. Prioritizing academic confidence and school support can mediate stress effects, fostering sustained gains.

### Discussion:

On the level of knowledge transfer and learning, we can further construct knowledge points and lines and connect them. We can also use our hands and mouths to promote learning and build the effectiveness of knowledge. For example, we can read articles aloud. Through reading aloud, knowledge can be more easily absorbed. We can start from the visual aspect of the eyes and then absorb it through the auditory aspect to achieve a better learning reinforcement effect, promote absorption, and improve Culture Unit Senior Secondary School students' performance. However, in terms of reading aloud, teeth have a far-reaching impact on pronunciation. Therefore, the underlying mechanisms connecting brain, eye, teeth, pronunciation, and reading aloud are indispensable. The combined use of eyes, mouth, and mind with brain cognitive function to promote academic growth is crucial. This research article explores the information transmission mechanism, application of teeth and eyes, and brain cognitive transmission recognition, treating them as a connection between points, lines, and surface as an mechanism to promote academic growth. As by our experience, these methods have significant result in improving the senior secondary school students' academic Performance in Culture Unit in Hong Kong. If we extend and transfer the same logic of idea, from a life science perspective, we will discover a close relationship between teeth and the optic nerve, further revealing a connection between the nerves of the teeth, tongue, optic nerve and brain connection. Therefore, this research paper believes that the optic nerve's absorption of light, shadow, and color as well as the coordination between the dental and lingual nerves, with eye are inextricably linked and deserve further exploration. Moreover, in terms of knowledge absorption and construction, this research paper believes that absorbing knowledge through the eyes first and then introducing it through the mouth

(reading aloud) is more effective. This is based on my own learning experience, where my successful accomplishment (improvement in grades through reading aloud, and other academically successful experiences) further reflects the importance of teaching and transmitting knowledge for information transmission and knowledge absorption.

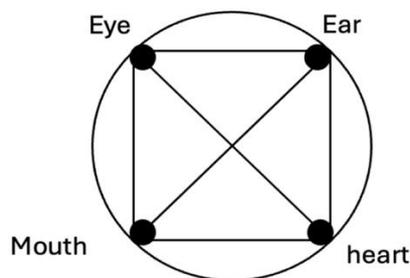
In applying my experience to students, especially high school students, it would help them learn and absorb information. By using both sight and speech, it would improve learning efficiency, promote the absorption of information and knowledge, and thus improve the academic performance of high school students.

My own successful insight in replicating successful experiences has helped many high school students, and even students above the high school level, improve their academic performance. Therefore, replicating successful models is crucial for improving learning efficiency and academic performance, especially when successful experiences are widely disseminated, leading to mutual learning enhancement between teachers, students and community.

Therefore, if this concept idea can be further extended to the life sciences, where new ideas can be developed at the DNA & RDNA level to help damaged cells learn from healthy cells, thereby improving the entire microecological structure, reducing costs at the source, and promoting healthy tissue regeneration. This creates a virtuous cycle and optimizes cell and tissue regeneration, improving the entire cell and tissue system, creating a vigorous cycle, and promoting healthy cell regeneration.

In addition, as mentioned earlier, mindset determines behavior, so a positive change in mindset is crucial. In educational psychology, there is the theory of mental learning. Therefore, in a quiet space, engaging in contemplative and static learning, setting aside 15 to 30 minutes daily for quiet contemplation and focused learning can clear the mind, making thinking clearer. From my own experience this effectively improves learning outcomes, enhances learning efficiency, promotes thinking improvement, and helps improve academic performance, producing remarkable results. Therefore, from the perspective of educational psychology, this may hold profound significance in contributing to the restorative process that bridges the soul and the body within the context of life sciences (Resurrection). If the same logic is further extended and transferred to a physical perspective, it may help to the restoration of the physical state through the replacement of electron particles. Therefore, our innovative idea in restoration (spirit and energy) suggestion should be further explored and researched.

### Insight Overview:



Due to the overview, we establish our innovative learning model:

Eye-mouth-ear-heart conformal interactive learning model

Figure 1: Eye-mouth-ear-heart conformal interactive learning model

This paper summarizes literature review, my experiences and reflections, drawing upon my personal background, observations, teaching practice, and learning history. Having received rigorous training in the Department of Education at The Chinese University of Hong Kong, I have grown as an educator dedicated to enhancing student learning. This article insight overview that:

1. Multimodal learning strategies particularly the combined use of visual input (light, shadow, color, and diagrams) and oral reading can enhance knowledge transmission and absorption. Especially in the senior secondary school students' academic performance in culture unit in Hong Kong. These concepts may be extent to other subject like life science, to explore the eye, teeth and brain information cognitive transmission and coordination process.
2. The coordinated use of the eyes, mouth, and mind may play an important role in supporting academic performance. These concept of idea may extend implications beyond education to broader fields with the same logic, which can be extent to such as the life and health sciences, to explore the eye, teeth and brain information transmission and connection process.
3. Replicating successful learning models and sharing them widely can promote mutual learning between teachers and students. improving academic performance. If same logic can be transfer and transformation to the replication of life science in exploring the DNA and RDNA it may improve and promote human health.
4. Mindset, mental practice, and quiet contemplation are important factors in improving learning efficiency and academic outcomes. Same logic may be transfer and apply to the of life science in exploring the human restoration and transformation mechanism that can promote human life. Our 15 mins rest in peace mindset restoration (spirit and energy) suggestion, is logical consistent and welly support with the idea of enough sleep advocate which is suggested by Chan et al. (2023) Zhong et al. (2023).
5. The above educational ideas in this research paper may have conceptual parallels in the life and health sciences, suggesting possible directions for future interdisciplinary research. That may benefit the learning and performance of the Difference Culture Unit (Senior Secondary School Students).

### In conclusion:

Difference culture unit may have different perception in viewing the same information. In order to tackle the situation, this paper innovatively purposed a new learning model (figure 1), call "Eye-mouth-ear-heart conformal interactive learning model" with this new model we hope to solve the learning difficulties especially in difference culture unit (Senior Secondary School Students) and enhance their learning and academic performance.

This research paper summarizes literature review, my experiences, drawing upon my teaching experience, personal education background, relevant observations, and learning experiences. Having received rigorous training at the Department of Education, Chinese University of Hong Kong, I hope to become a distinct academic contributor. Hope this research will contribute to improving the academic performance of students, particularly in

difference culture unit (Senior Secondary School Students). Hope this research paper can contribute to the world and the mankind.

Acknowledgement: I graduated from the Department of Education at the Chinese University of Hong Kong, where, my personal research (published article) focused on enhancing the academic performance of students, particularly at the secondary school level. This research study (action research) was conducted over a twenty-year period, from 2005 to 2025, and the insights presented are drawn from my teaching experience, personal education background, relevant observations, learning experiences and my outstanding academic accomplishment\*.

\*(My outstanding academic accomplishments, evidenced by the publication of over 117 research papers, most of which appear in international peer-reviewed journals, stand as a testament to my scholarly excellence.)

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