# Enhancing Learning Achievement on E-Cigarettes among Grade 10 Students through Social Media Tools and Tangible E-Cigarette Model, Satthasamut School, Thailand


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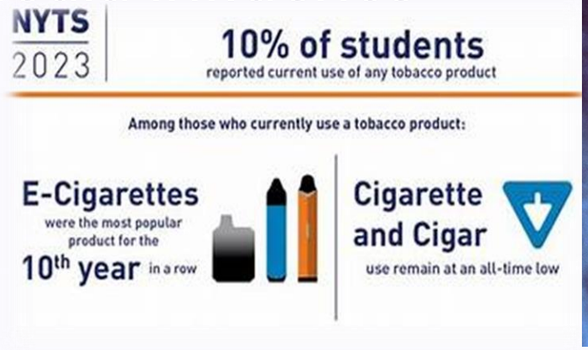
# E-Cigarette Challenge in Thailand

- E-cigarette use among Thai adolescents represents a critical public health concern that:

  - Adversely impacts physical and mental health
  - Disrupts school environments
  - Hinders academic performance

- Despite government measures through the Ministry of Education and OBEC, access to e-cigarettes remains prevalent among youth due to social media influence and lack of awareness.

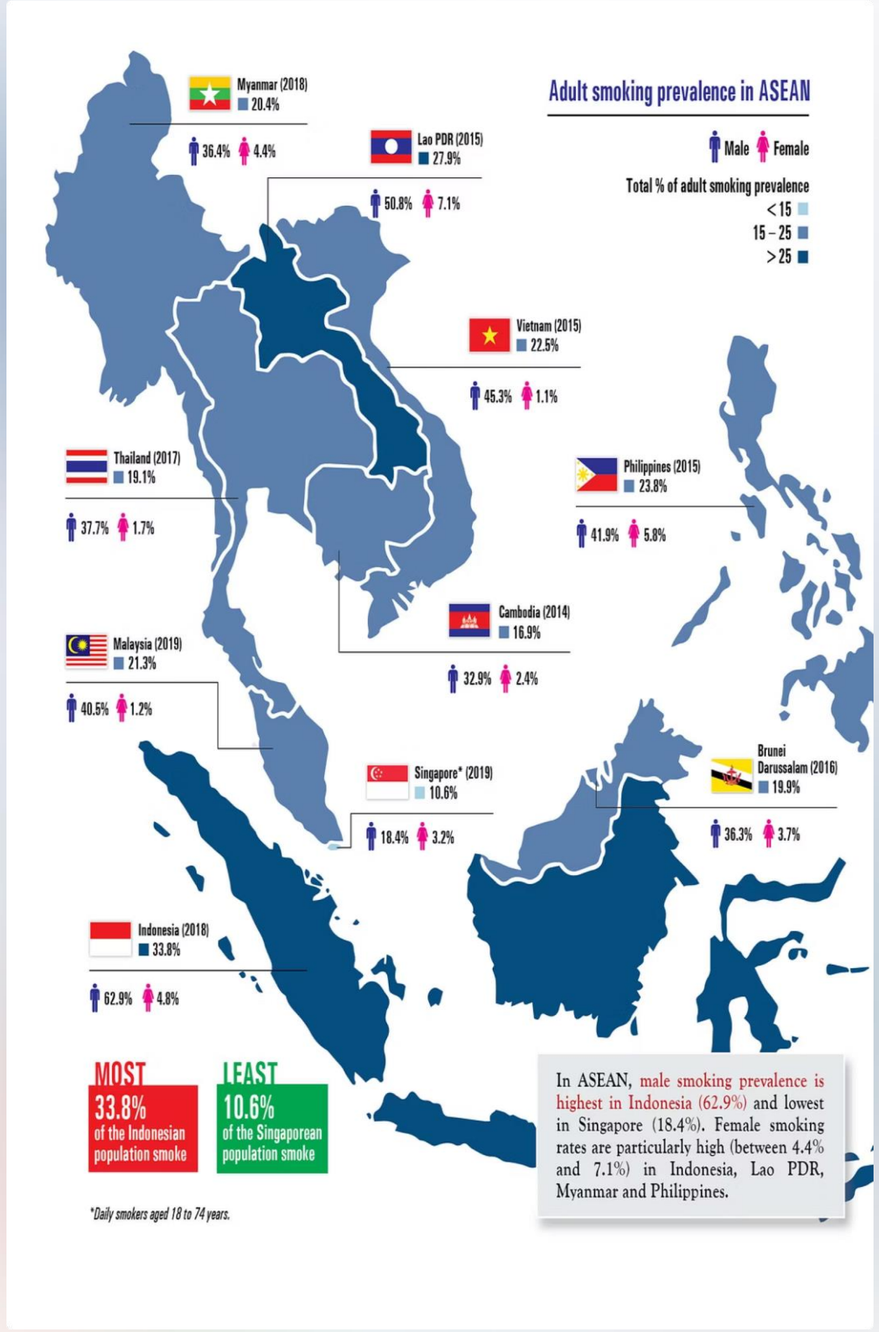



# Learning Theory

“A tangible educational model of the e-cigarette, dissected version of a real vaping device, served as a powerful visual and hands-on tool."

This approach aligns with Kolb's (1984) experiential learning theory, which emphasizes the role of active participation in shaping cognitive and emotional learning.

The integration of digital tools supports findings from Smith & Jones (2022) and WHO (2023) on the effectiveness of real-world tools and digital platforms in enhancing health-related learning outcomes among adolescents.




# Research Objectives

## (1) Develop Innovations

Create instructional innovations integrating social media tools and tangible e-cigarette model

## (2) Compare Learning Achievement

encompassing knowledge, attitudes and support the cessation of e-cigarette use among Grade 10 students before and after implementation of the program

## (3) Assess Satisfaction

Examine students' satisfaction toward the e-cigarette learning program

# Research Methodology

## Research Design

Pre-experimental one-group pretest-posttest design with 40 Grade 10/2 students at Satthasamut School

## Instruments

Health safety lesson plan, social media tools such as Kahoot, Quizizz, PowerPoint, Canva, TikTok, and **tangible e-cigarette model**

## Assessment

15-item multiple-choice test on Quizizz platform and satisfaction questionna
Google Forms

## Implementation

4-hour learning program (one lesson per week over 4 weeks)

# Innovative Educational Tools

## Gamified Learning

Kahoot and Quizizz platforms engaged students through interactive quizzes and competitions.

## Social Media Campaigns

TikTok campaigns empowered students to create and share anti-e-cigarette messages.

## Tangible E-Cigarette Model

Dissected version of a real vaping device served as a powerful visual and hands-on learning tool.

# Learning Achievement Results

| | N | $\overline{X}$ | S.D. | t | P |
|---|---|---|---|---|---|
| **Pretest** | 40 | 12.78 | 1.94 | 5.73 | **0.00*** |
| **Posttest** | 40 | 13.85 | 1.44 | | |

** P < .05*

Table showed that post-test scores were significantly higher than pre-test scores, demonstrating the effectiveness of the integrated approach.

# Student Satisfaction Results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4.85/5

## Learning Content

Students rated content as highly beneficial

4.83/5

## E-Cigarette Model

Tangible model rated as highly effective educational tool

4.74/5

## Overall Satisfaction

Highest level of satisfaction with the entire program

Students particularly appreciated the usefulness of content, creative class activities, TikTok campaign effectiveness, and the tangible e-cigarette model.

# Key Findings

## Enhanced Learning

Significant improvement in knowledge, understanding, & attitudes toward e-cigarette prevention

## High Engagement

Social media tools and tangible models fostered active participation and creativity

## Behavioral Change

Encouraged students”s intention to quit vaping through practical content


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# Conclusion & Implications

## Effective Approach

Instructional innovations integrating digital platforms and tangible models significantly enhanced students' learning outcomes related to e-cigarette risks

## Student Satisfaction

Highest level of satisfaction reported, particularly with content relevance, active learning opportunities, and TikTok campaigns

## Educational Implications

Educators should consider integrating digital media & tangible tools in health education to foster greater student engagement, critical thinking, and long-term behavioral change


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# Thank You

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