Research Problem:

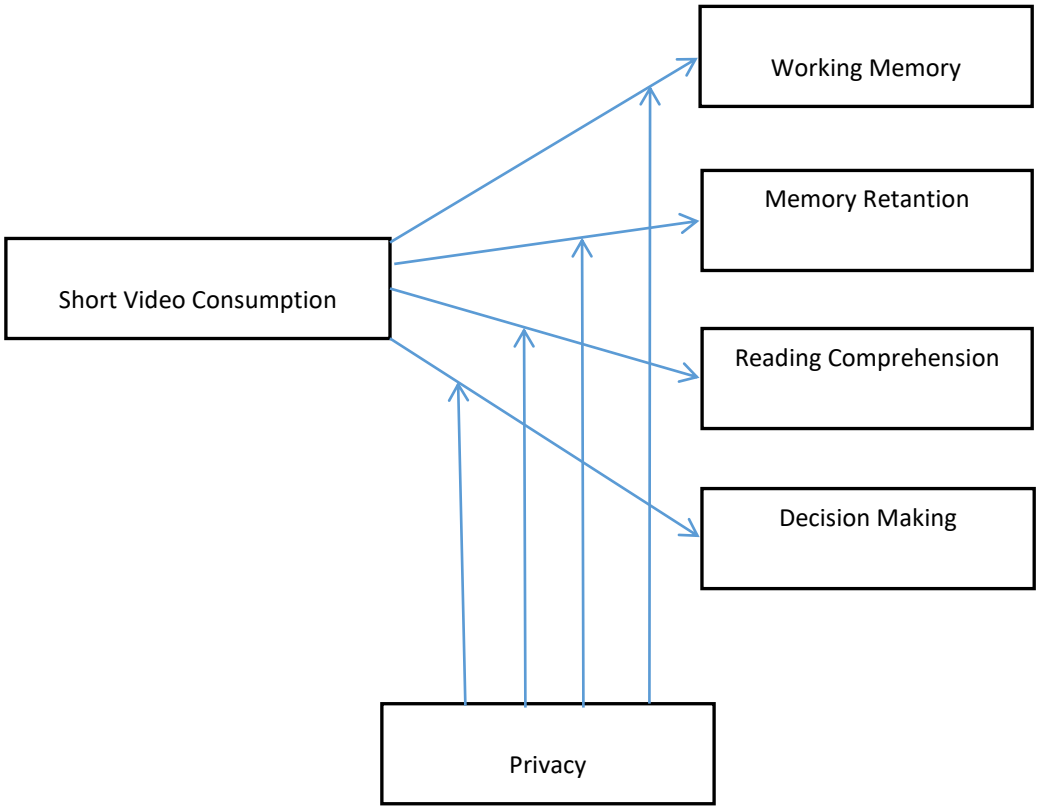
There is limited understanding of how short video consumption influences the cognitive psychology of state university students in Sri Lanka, particularly regarding its impact on working memory, memory retention, reading comprehension, and decision making, and how privacy awareness may moderate these effects.

Resrach Gap:

Although global studies have explored the effects of general social media use on attention span, learning, and academic performance, there is a **lack of empirical research focusing specifically on short-form video consumption** and its influence on **cognitive psychology**. In the Sri Lankan context, previous research has primarily examined **social media-driven mind wandering** and its impact on student behavior, but **no studies have investigated how short video platforms such as TikTok, Instagram Reels, or YouTube Shorts affect specific cognitive functions** such as **working memory, memory retention, reading comprehension, and decision making**. Furthermore, the **role of privacy awareness** — a factor that may shape users' digital behavior and potentially moderate the cognitive effects of short video use — **remains unexplored** in existing literature.

Hence, there is a clear research gap in understanding **the cognitive impact of short video consumption among Sri Lankan state university students and the moderating influence of privacy awareness.**

Conceptual Frame Work:



Hypothesis:

Main (Direct Effect) Hypotheses.

H1: There is a significant negative relationship between short video consumption and working memory among state university students in Sri Lanka.

H2: There is a significant negative relationship between short video consumption and memory retention among state university students in Sri Lanka.

H3: There is a significant negative relationship between short video consumption and reading comprehension among state university students in Sri Lanka.

H4: There is a significant negative relationship between short video consumption and decision-making ability among state university students in Sri Lanka.

Moderating Effect Hypothesis.

> **H5:** Privacy awareness significantly moderates the relationship between short video consumption and cognitive functions (working memory, memory retention, reading comprehension, and decision making), such that higher levels of privacy awareness weaken the negative effects of short video consumption.

Theoretical Framework

The present study is grounded in several psychological and media-related theories that explain how short-form video consumption influences cognitive processes and how privacy awareness may moderate this relationship. The framework integrates **Cognitive Load Theory (Sweller, 1988)**, the **Limited Capacity Model of Motivated Mediated Message Processing (Lang, 2000)**, and the **Theory of Planned Behavior (Ajzen, 1991)** to provide a comprehensive explanation of the cognitive and behavioral mechanisms involved.

1. Cognitive Load Theory (Sweller, 1988).

Cognitive Load Theory (CLT) posits that human working memory has a limited capacity for processing information. When individuals are exposed to excessive or rapidly changing stimuli, cognitive resources become overloaded, reducing the efficiency of learning, retention, and comprehension. Short-form video platforms such as TikTok, Instagram Reels, and YouTube Shorts present a continuous stream of high-speed, visually stimulating content designed to capture attention within seconds. This constant switching between diverse short clips can overload students' working memory, resulting in reduced capacity for deep processing and long-term information storage.

In the context of this study, CLT explains how the **frequency and intensity of short video consumption** may impair **working memory**, **memory retention**, and **reading comprehension**, as students' cognitive resources are divided between rapid media input and academic cognitive demands.

2. Limited Capacity Model of Motivated Mediated Message Processing (Lang, 2000).

The Limited Capacity Model (LCM) further supports the cognitive mechanisms proposed by CLT. According to Lang, humans possess a finite amount of cognitive resources that are distributed among the processes of encoding, storage, and retrieval of media messages. Media stimuli compete for these limited resources, and when attentional resources are repeatedly allocated to short, high-arousal media messages, cognitive efficiency declines.

Applied to this study, the LCM explains how **short video consumption**—characterized by fast-paced transitions, novelty, and algorithmic recommendations—can fragment attention and reduce the ability to retain and recall information. The model also accounts for **decision-making impairments**, as divided attention and continuous stimulation can weaken cognitive control and reflective judgment among students.

3. Theory of Planned Behavior (Ajzen, 1991).

The Theory of Planned Behavior (TPB) provides a behavioral and attitudinal perspective that supports the **moderating role of privacy awareness**. TPB suggests that individuals' behaviors are guided by three components: attitudes toward the behavior, subjective norms, and perceived behavioral control. In the context of digital media usage, privacy awareness reflects users' attitudes and control over how they engage with online platforms.

Students with **high privacy awareness** are more likely to regulate their exposure to short video platforms, avoid excessive use, and maintain healthier cognitive engagement. Conversely, those with **low privacy awareness** may engage impulsively or unconsciously with short videos, heightening the risk of cognitive overload and attention fragmentation. Thus, TPB justifies **privacy awareness** as a **moderating variable** that can influence the strength and direction of the relationship between short video consumption and cognitive outcomes.

4. Supporting Theories

In addition to these main frameworks, several supporting theories enrich the theoretical foundation of this research. The **Dual-Coding Theory (Paivio, 1986)** suggests that information is processed through visual and verbal channels; overreliance on visually dominant media such as short videos may reduce the development of verbal comprehension skills. Similarly, **Information Overload Theory (Toffler, 1970; Eppler & Mengis, 2004)** explains how excessive information exposure diminishes decision-making quality and memory performance. These theories collectively strengthen the argument that high levels of short video exposure can have measurable cognitive consequences among university students.

5. Summary of Theoretical Integration

Theory	Focus	Contribution to This Study
Cognitive Load Theory	Cognitive processing capacity	Explains how rapid short videos overload working memory and reduce comprehension
Limited Capacity Model	Media attention and memory resources	Explains how competing media stimuli fragment attention and affect retention and decision making
Theory of Planned Behavior	Behavioral regulation and awareness	Justifies privacy awareness as a moderator influencing the impact of short video use
Dual-Coding Theory	Visual vs. verbal information processing	Supports reading comprehension and learning impact
Information Overload Theory	Excess information and decision fatigue	Explains decreased decision-making performance under media saturation