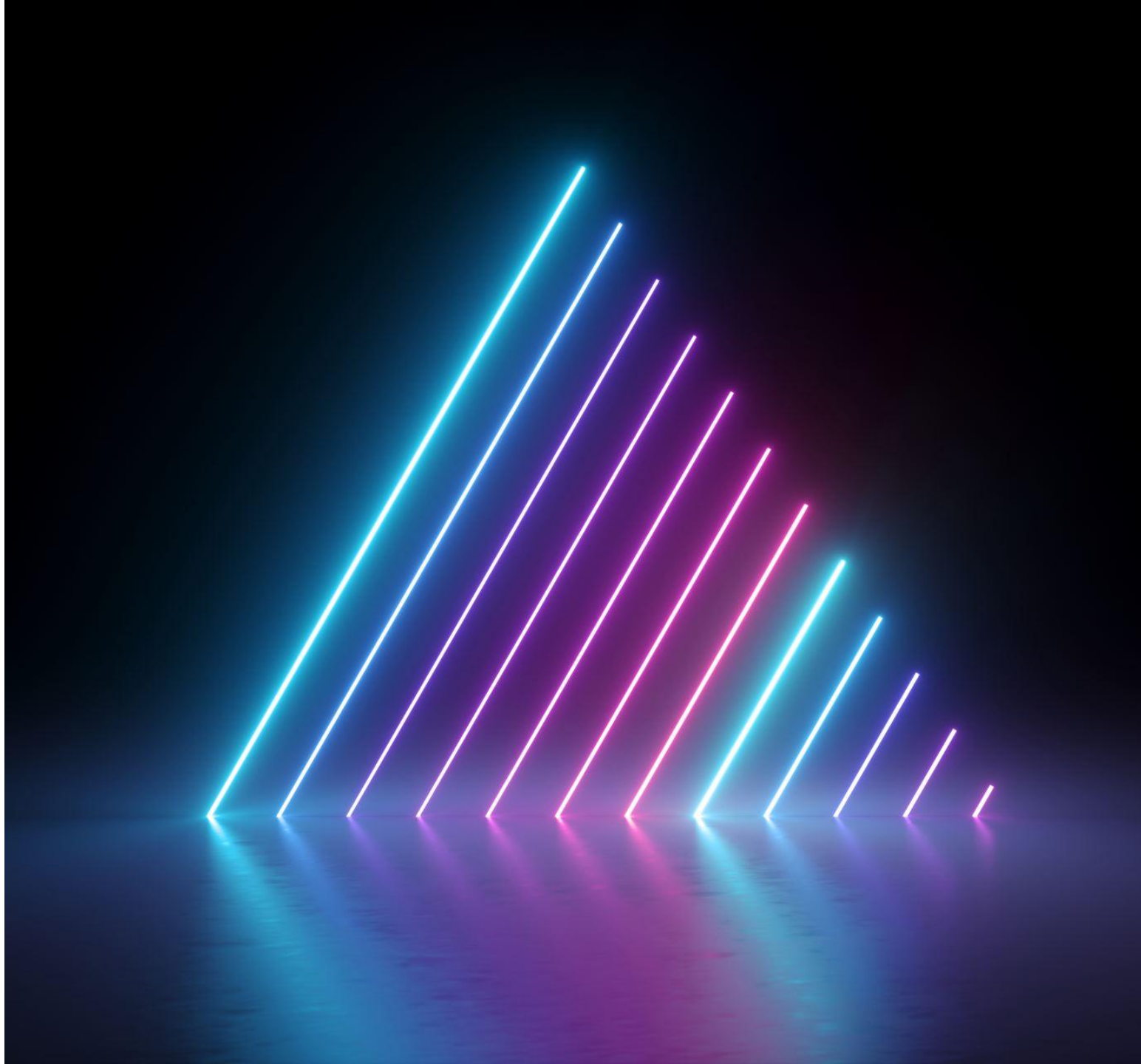
Comparison of Synchronous vs Accumulated Reinforcement for Enhancing On-Task Behavior in Preschoolers

What is known, what isn’t known, and what will be answered.



What is Synchronous Reinforcement?

A behavioral technique where reinforcement is provided immediately and proportionally as the desired behavior occurs, ensuring direct and real-time feedback.

Duration of the behavior directly controls the reinforcement on a moment-to-moment basis.

The Practical Implementation of Synchronous Reinforcement in Preschool Setting

Use for new or difficult behaviors that need immediate correction and reinforcement.

A teacher gives a child verbal praise or a small reward (like a sticker or token) continuously as long as the child remains on-task

What is Accumulated Reinforcement?

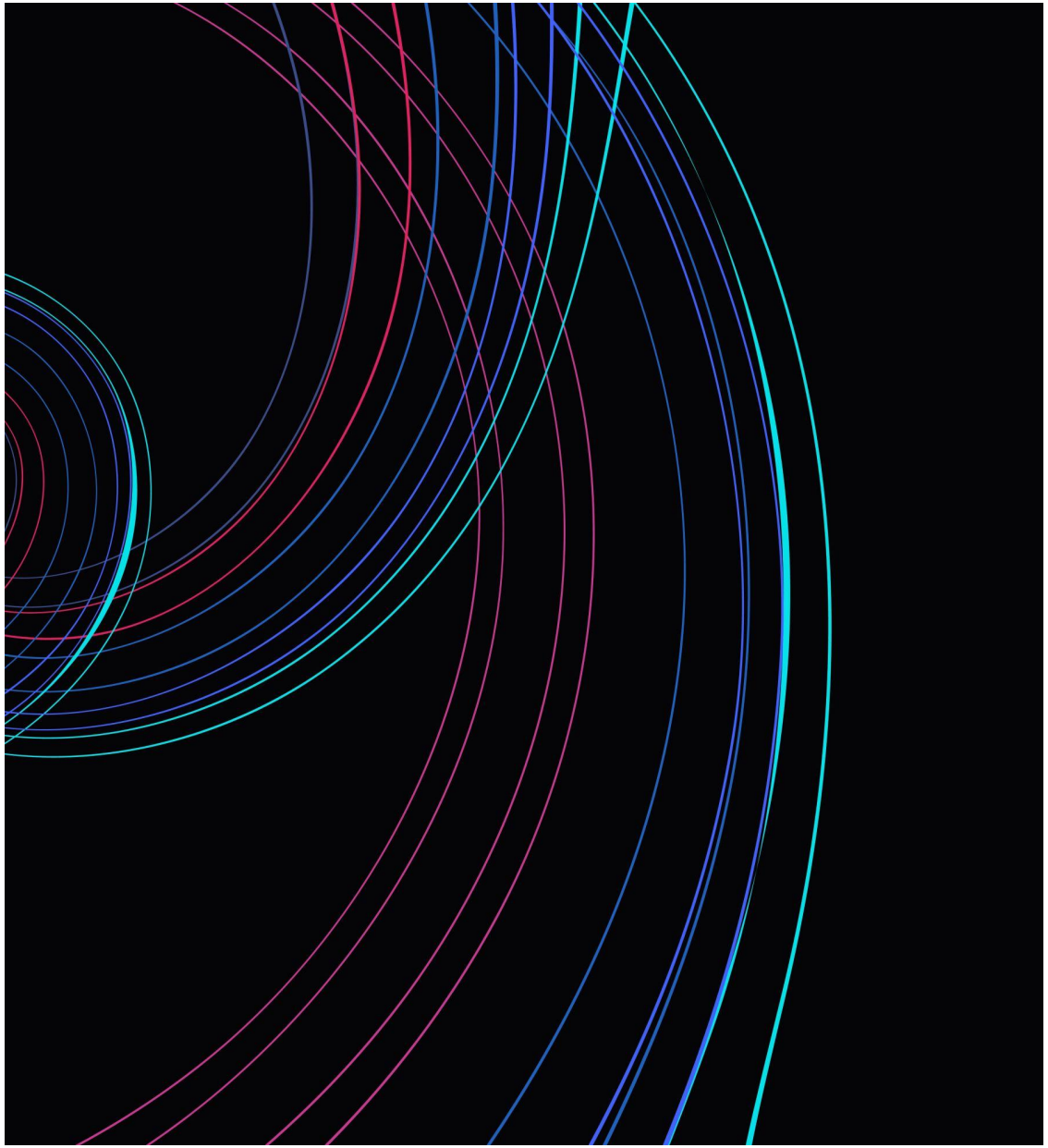
Reinforcement is provided after a predetermined number of on-task behaviors or at set intervals.

EARNING A REWARD AT THE END OF THE DAY FOR CONSISTENT ON-TASK BEHAVIOR; OR COLLECTING TOKENS THROUGHOUT THE WEEK TO EXCHANGE FOR A LARGER REWARD.

ENCOURAGES SUSTAINED BEHAVIOR OVER TIME.

ENCOURAGES DELAY GRATIFICATION AND PATIENCE.

EASIER TO MANAGE IN LARGER GROUP OR LESS STRUCTURED SETTINGS.



Methodology

Authors replicated and extended Diaz de Villegas et al. (2020) study by comparing synchronous reinforcement with two accumulated-reinforcement schedules to increase on-task behavior in seven preschoolers.

Synchronous Reinforcement:

- Reinforcement is provided immediately and proportionally to the duration of the on-task behavior.

Accumulated Reinforcement Schedules:

- Without Tokens – Same as Diaz de Villegas et al. (2020) study.
- With Tokens – Inclusion of tokens within session.

Assessment of Preference:

Authors evaluated the preference of the preschoolers for the three reinforcement schedules

Synchronous vs Accumulated Reinforcement
RESULTS

Comparison:

Effectiveness

a) Both types of schedules increased on-task behavior compared to baseline levels for three out of eight preschoolers.

b) Synchronous reinforcement resulted in higher levels of on-task behavior for seven out of the eight preschoolers compared to the accumulated reinforcement schedule.

c) Seven out of the eight preschoolers preferred the synchronous schedule over the accumulated schedule. The eighth participant did not show a clear preference.

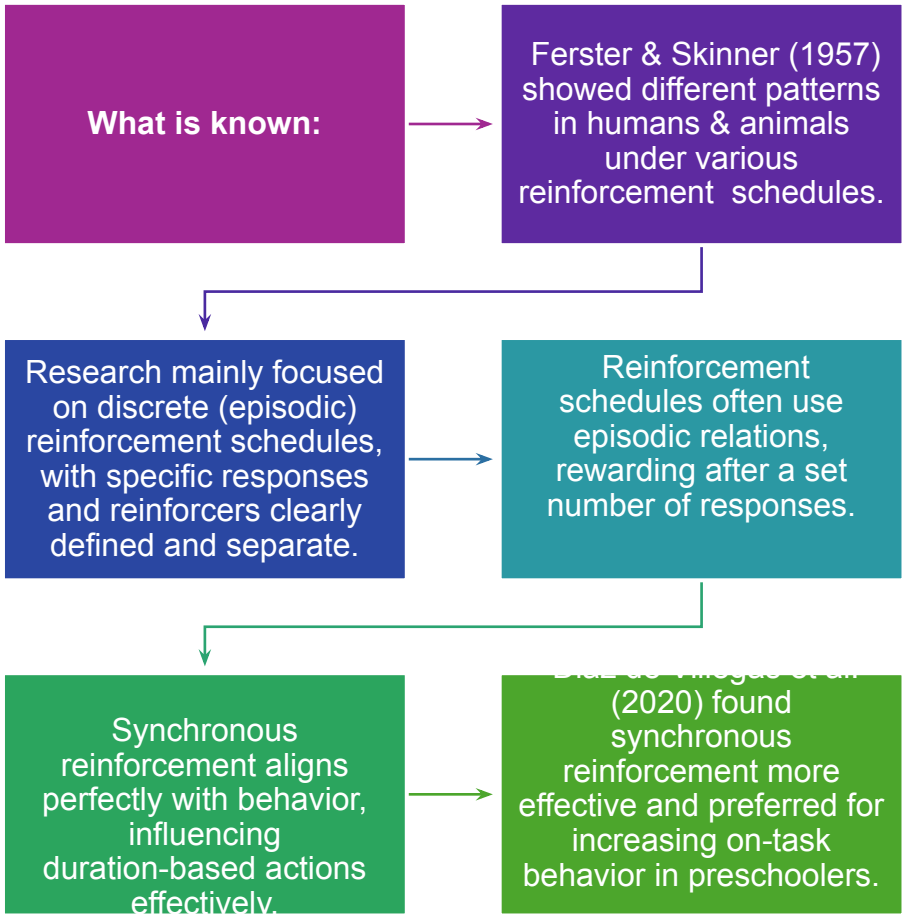
Overall Preference

Synchronous reinforcement was preferred by all participants.

Discussion

- The study explores the practical applications of these findings in educational and behavioral settings, emphasizing the benefits and potential uses of synchronous and accumulated reinforcement schedules in various contexts.

Introduction



What isn't known:

Efficacy of Synchronous vs. Typical Accumulated Schedules: The previous study by Diaz de Villegas used an accumulated schedule without tokens, which differs from typical accumulated schedules involving token delivery.

Comparative Effectiveness: It is not fully understood how synchronous reinforcement compares to more commonly used accumulated schedules that include token delivery.

Participant Preference: While Diaz de Villegas assessed preference for the two schedules used, it is unclear how preferences would shift with the inclusion of tokens in the accumulated schedule.

What will be the answered:

Effectiveness Comparison: This study will compare the effectiveness of synchronous reinforcement with two types of accumulated reinforcement schedules (one without tokens and one with tokens) for increasing on-task behavior in preschoolers.

Preference Assessment: The study will determine participant preferences among the three reinforcement schedules (synchronous, accumulated without tokens, and accumulated with tokens).

Implications for Practice: The findings will provide insights into the practical applications and relative benefits of synchronous and accumulated reinforcement schedules in educational and behavioral settings.

What is Answered

What was the effectiveness of accumulated reinforcement in the study?

Accumulated reinforcement increased on-task behavior in three out of eight preschoolers but was generally less effective than synchronous reinforcement.

How did synchronous reinforcement compare to accumulated reinforcement?

Synchronous reinforcement was more effective, increasing on-task behavior in seven out of eight preschoolers

What was the preference of the preschoolers between the two schedules?

Seven out of eight preschoolers preferred the synchronous schedule; one had no clear preference

What is answered (continued) Implications for Practice

Enhance on-task behavior:	• Synchronous reinforcement schedules lead to higher on-task behavior, making them effective for keeping preschoolers engaged.
Educational Applications:	• Synchronous reinforcement boosts immediate learning and behavior, while accumulated reinforcement aids tasks needing delayed gratification.
Behavioral Interventions:	• Synchronous reinforcement offers immediate consequences, improving behavior management. Most children prefer this method, boosting motivation and engagement

Program and Policy Development:

- Effective reinforcement schedules in education can boost sustained attention and engagement.

Future Research and Training:

- More studies are needed to compare reinforcement schedules in various contexts, and professionals should be trained to apply these strategies effectively.

Conclusion

The insights gained from this research underscore the practical benefits of using synchronous reinforcement schedules to enhance on-task behavior in preschoolers. By understanding and leveraging the relative strengths of synchronous and accumulated reinforcement, educators and behavioral practitioners can design more effective and engaging interventions that cater to the needs and preferences of young children.