https://doi.org/10.16926/eat.2026.15.08.en

eLocator/Article ID: eat-2026-ate-01

Katarzyna ADAMCZYK
https://orcid.org/0009-0004-1892-812X
Jan Kochanowski University of Kielce
e-mail: k.adamczyk@op.pl

Between Algorithm and Authenticity. Educational Transactional Analysis in Research on TikTok Learning

How to cite [jak cytować]: Adamczyk, K. (2026). Between Algorithm and Authenticity. Educational Transactional Analysis in Research on TikTok Learning. *Edukacyjna Analiza Transakcyjna*, *15*, Article eat-2026-ate-01. https://doi.org/10.16926/eat.2026.15.08.en

Abstract

This article proposes a theoretical and methodological integration of Educational Transactional Analysis (ETA) into research on informal learning on TikTok. While existing studies focus on technology acceptance models, nano-learning behaviours, and reverse socialisation, they lack a psychodynamic and relational understanding of how learners interact with algorithmic environments. Drawing on desk research of recent empirical studies (2024–2026), the article identifies a significant research gap: the absence of qualitative analysis of ego states, transactions, psychological hungers, life positions, and games in TikTok-based learning. The author argues that TikTok's recommendation algorithm functions as a surrogate Parent ego state, that user–algorithm interactions constitute crossed and ulterior transactions, and that the platform predominantly satisfies the hunger for stimulation while leaving the hunger for structure unmet. The article concludes with a proposal for an empirical qualitative study and outlines practical implications for media educators.

Keywords: Educational Transactional Analysis, TikTok, media education, algorithmic competence, ego states, psychological hungers, informal learning.

1. Introduction

With over one billion monthly active users, TikTok has emerged as one of the world's largest informal learning environments (Feiyue et al., 2025). In 2022 Douyin, TikTok's Chinese counterpart reported that more than 250 million users engaged with educational content, representing a year-on-year growth of 44.1% (Feiyue et al., 2025). Young adults aged 18–24 constitute 38.5% of TikTok's user base, and a growing body of research confirms that students intentionally use the platform for academic purposes, skill acquisition, and knowledge sharing (Ang et al., 2025).

However, the dominant research paradigms remain narrowly focused on technological acceptance (TAM, SCT), perceived credibility, and behavioural intentions (Feiyue et al., 2025; Ang et al., 2025). Studies on reverse socialisation explore how teenagers learn from TikTok and transmit knowledge to their parents (Dhondt et al., 2025), while qualitative work on internet challenges analyses the transformation of play in digital environments (Dziekońska, 2025). Research clearly omits psychodynamic

and relational frameworks of analysis. Yet it is precisely these frameworks that would enable capturing the subjective, emotional, and transactional dimensions of learning on a platform governed by an opaque, attention-maximising algorithm.

This article addresses this gap by introducing Educational Transactional Analysis (ETA) as a theoretical lens for studying TikTok learning. Drawing on desk research of recent empirical studies (2024–2026), the following integrative thesis is formulated: TikTok as a learning environment can be interpreted as a transactional space in which the algorithm assumes functions of a surrogate Parent ego state, users oscillate between Adapted and Natural Child states, transactions are predominantly crossed or ulterior, and the platform systematically over-satisfies the hunger for stimulation at the expense of the hunger for structure.

The article proceeds as follows. Section 1 is the introduction to the topic. Section 2 presents the state of desk research on educational TikTok use. Section 3 introduces key ETA concepts and their potential applicability. Section 4 identifies the research gap and articulates four research questions. Section 5 proposes an integrative model. Section 6 outlines an empirical methodology. Section 7 discusses practical implications for media education, section 8 outlines the limitations and directions for future research, and section 9 provides a summary.

2. Desk Research: The State of Knowledge on Educational TikTok Use

A systematic desk review of empirical studies published between 2024 and 2026 reveals four dominant research streams.

2.1. Technology Acceptance Models

Feiyue et al. (2025) investigated Chinese university students' intentions to use Douyin for educational purposes. Using an extended Unified Theory of Acceptance and Use of Technology (UTAUT), they identified two significant predictive pathways: Adoption (performance expectancy, effort expectancy, social influence) and Personal Factor (self-efficacy, learning goals). The study confirmed that students perceive TikTok as useful and easy to use for learning, but it did not examine the emotional or relational dimensions of that perception.

2.2. Nano-Learning and Credibility

Ang et al. (2025) explored nano-learning on TikTok among Philippine university students. Their findings indicate that perceived credibility and perceived interaction significantly influence attitudes toward educational TikTok content, which in turn affect behavioural intentions. Social norms also play a moderating role. Again, the analysis remains at the level of cognitive evaluation, ignoring the unconscious or transactional dynamics that shape trust and engagement.

2.3. Reverse Socialisation

Dhondt et al. (2025) conducted a qualitative study on how adolescents learn consumer practices on TikTok and socialise their parents. They found that TikTok acts as an agent of socialisation, with teenagers assuming the role of informal educators. This study acknowledges relational dynamics but does not operationalise them through a psychodynamic framework.

2.4. Internet Challenges as Play Transformation

Dziekońska (2025) analysed TikTok internet challenges as a form of play, identifying both continuities with traditional play (collectivity, ritual, competition) and discontinuities (digital fixation, performativity, platform logic). Her work is methodologically adjacent to ETA, as it examines behavioural patterns and social roles, but it does not employ transactional analysis.

2.5. Machine Learning in Educational Campaign Analysis

Wusylko et al. (2024) applied topic modelling, sentiment analysis, and network analysis to study engagement with educational campaigns on TikTok. Their computational approach provides large-scale patterns but cannot capture individual psychodynamic processes.

2.6. Summary of the Desk Research Gap

All four streams share a common limitation: **they treat the learner as a rational actor responding to technological affordances, social norms, or behavioural incentives**. None of them consider the learner's ego states, psychological hungers, life positions, or transactional games. This is precisely the gap that Educational Transactional Analysis can fill.

3. Educational Transactional Analysis – Key Concepts

Transactional Analysis (TA), developed by Eric Berne (1961) and later adapted for pedagogy by various authors (e.g., Jagieła, 2025; Plaskura, 2025; Łęski, 2025), offers a comprehensive psychodynamic model of personality and communication. For educational purposes, the following concepts are particularly relevant.

3.1. Ego States (Parent – Adult – Child)

— **Parent** – internalised norms, values, and prohibitions from authority figures. Divided into Nurturing Parent (supportive) and Critical Parent (judgemental).
— **Adult** – rational, reality-oriented data processing.
— **Child** – archaic emotions, impulses, and adaptations. Divided into Natural Child (spontaneous) and Adapted Child (compliant or rebellious).

3.2. Psychological Hungers

Berne identified fundamental needs that drive human behaviour:
— **Hunger for stimulation** – need for sensory input.
— **Hunger for recognition** – need for social validation (strokes).
— **Hunger for structure** – need for predictable time structuring.
— **Hunger for contact** – need for physical and emotional proximity.

3.3. Transactions

Units of communication that can be:
— **Complementary** – responses come from the expected ego state.
— **Crossed** – responses come from an unexpected ego state, interrupting communication.
— **Ulterior** – hidden psychological messages beneath social messages.

3.4. Life Positions

Four basic existential stances:
— I'm OK – You're OK (healthy)
— I'm OK – You're not OK (projecting)
— I'm not OK – You're OK (depressive)
— I'm not OK – You're not OK (hopeless)

3.5. Games

Repetitive, predictable patterns of transactions with an ulterior motive, a predictable payoff, and a negative outcome for at least one participant.

4. Research Gap and Questions

The desk research presented in Section 2 demonstrates that no empirical study to date has applied ETA to TikTok learning. Specifically, the following questions remain unanswered:

1. **Which ego states (Parent, Adult, Child) are activated in students during TikTok learning?**
   — Is the algorithm perceived as a normative entity (Parent), a neutral tool (Adult), or a source of stimulation (Child)?
2. **Which psychological hungers does TikTok learning satisfy – and which does it leave unsatisfied?**
   — Does the platform's short-form, high-stimulus format over-satisfy the hunger for stimulation while starving the hunger for structure?
3. **What types of transactions (complementary/crossed/ulterior) occur between the learner, content creators, and the algorithm?**
4. **How might algorithmic personalisation reinforce specific life positions (e.g., "I'm not OK – You're OK" in filter bubbles)?**

5. An Integrative Model: TikTok as a Transactional Space

Based on the desk research and ETA concepts, I propose the following integrative model.

5.1. The Algorithm as a Surrogate Parent Ego State

Users frequently anthropomorphise the TikTok algorithm, speaking of it as an entity that "knows" them, "judges" their content, or "decides" what they see (cf. Łęski, 2025, on passivity and cyber threats). From an ETA perspective, the algorithm performs functions analogous to the Parent ego state:

Tab. 1
Analogy between TikTok Algorithm Functions and Parent Ego States within the Framework of Educational Transactional Analysis, with Empirical Illustrations.

Algorithmic function	TA counterpart	Empirical illustration
Evaluation and ranking of content	Critical Parent	"The algorithm 'knows' what's good for me" (Feiyue et al., 2025)
Reward (likes, views, virality)	Nurturing Parent	"When my video gets many views, I feel recognised"
Punishment (shadowban, low reach)	Critical Parent (rejecting)	"I don't know what I did wrong – it suddenly stopped working"
Distribution without explanation	Opaque Parent	„It's a black box" – I don't know why I see this"

source: author's own study

5.2. User Oscillation Between Natural and Adapted Child

The learner on TikTok oscillates between two Child ego states:

— **Natural Child** – spontaneously exploring hashtags, creatively remixing content, following curiosity.
— **Adapted Child** – complying with algorithmic expectations (e.g., using trending sounds, posting at optimal times, mimicking successful formats).

This oscillation is driven by the hunger for recognition (likes, comments, views) – a quintessential Adapted Child motivation.

5.3. Transactions Between Learner, Creator, and Algorithm

Most transactions in TikTok learning are **crossed** or **ulterior**:

- **Crossed transaction example**:
  - *Student (Adult)*: "I want to learn about the French Revolution."
  - *Algorithm (Parent)*: "Here is a funny cat video because your engagement data suggests you need distraction."
  - *Result*: Communication breakdown, frustration, or passive consumption.
- **Ulterior transaction example**:
  - *Social level*: "I am watching an educational video to learn."
  - *Psychological level*: "I am seeking validation through likes and avoiding boredom."
  - *Result*: The learner may finish the video without genuine learning but with a false sense of accomplishment.

5.4. Psychological Hungers on TikTok

Empirical findings from desk research can be reinterpreted through the hunger model:

Tab.2
Satisfaction of Psychological Hungers (after Eric Berne) in TikTok Learning Processes Based on a Review of Empirical Literature from 2024–2026

Hunger	Satisfaction on TikTok	Evidence from desk research
Stimulation	Very high – infinite scroll, constant novelty	Dhondt et al. (2025) – TikTok as attention-sustaining environment
Recognition	Moderate – likes and comments, but often shallow	Łęski (2025) – passive over-adaptation to cyber environments
Structure	Low – no clear beginning, middle, or end; algorithmic chaos	Dziekońska (2025) – fragmented nature of challenges
Contact	Low – parasocial only; no genuine relational depth	Feiyue et al. (2025) – individualised use pattern

source: author's own study

5.5. Life Positions and Filter Bubbles

Algorithmic personalisation may systematically reinforce the **"I'm not OK – You're OK"** life position. The learner receives highly tailored content suggesting that others (creators, experts, influencers) possess knowledge and competence that the learner lacks. Continuous exposure to curated expertise without reciprocal recognition can deepen the "not OK" self-evaluation.

6. Proposed Empirical Methodology

To validate and refine the integrative model, I propose a qualitative empirical study with the following design.

6.1. Research Approach

Exploratory qualitative study combining content analysis, semi-structured interviews, and participant diaries.

6.2. Sample

Purposive sample of 15–20 university students who actively use TikTok for learning purposes (minimum 3 sessions per week).

6.3. Data Collection Methods

Tab. 3
Data Collection Methods in the Proposed Empirical Study with Instruments Specific to Educational Transactional Analysis

Method	Purpose	TA-specific instrument
Semi-structured interview	Elicit subjective experience of ego states and hungers	Egogram questionnaire (modified for digital context)
Think-aloud protocol during TikTok use	Identify real-time transactions	Transactional analysis grid
One-week diary	Capture patterns of hungers and games	Structured diary with prompts for ego states
Comment analysis	Examine ulterior transactions	Thematic coding of user–creator interactions

Source: author's own study

6.4. Analytical Procedure

1. **Transcription and coding** of interviews according to TA categories (ego states, transactions, hungers, life positions, games).
2. **Thematic analysis** of diary entries (following Dziekońska, 2025).
3. **Identification of recurring transactional patterns** characteristic of user–algorithm interactions.
4. **Cross-case synthesis** to develop a typology of learner positions on TikTok.

6.5. Trustworthiness

— **Prolonged engagement** with the TikTok environment.
— **Triangulation** of methods (interviews, diaries, content analysis).
— **Peer debriefing** with a second TA-certified researcher.
— **Reflexive journaling** by the researcher.

7. Implications for Media Education

If the integrative model is confirmed empirically, several practical implications for media education follow.

7.1. From Media Literacy to Algorithmic Competence

Traditional media literacy focuses on content evaluation (truthfulness, bias, source credibility). The TA perspective suggests that educators must also develop **algorithmic competence**, the ability to recognise one's own ego state shifts, resist adapted child compliance, and consciously choose Adult responses to algorithmic stimuli.

7.2. Transactional Awareness Training

Students can benefit from explicit instruction in recognising:
— When they are in Adapted Child (scrolling passively, seeking likes).
— When the algorithm is acting as Critical Parent (shadowban anxiety).
— How to initiate Adult-to-Adult transactions with the platform (e.g., deliberately using search functions rather than relying on the For You Page).

7.3. Contracts for Digital Learning

Following White (2025) on educational contracts, students could negotiate **personal learning contracts** with themselves or with teachers, specifying:

— Time boundaries (structure hunger).
— Goals for recognition (not seeking validation through likes).
— Strategies for activating the Adult ego state (e.g., taking notes, pausing to reflect).

7.4. Designing TA-Informed Educational Content for TikTok

Educators creating TikTok content could design for transactional complementarity:

— **Stimulate Adult** – pose questions, invite reflection, provide citations.
— **Nurture without controlling** – avoid Critical Parent tone, use Nurturing Parent affirmations.
— **Respect the Child** – acknowledge the hunger for stimulation but embed it within a structured narrative (e.g., a series with clear episodes).

8. Limitations and Future Directions

This article has several limitations. First, it is primarily theoretical; empirical validation is required. Second, the proposed model may not generalise across age groups, cultural contexts, or platforms. Third, ETA concepts require careful operationalisation for digital environments.

Future research should:

— Conduct the proposed empirical study and refine the model.
— Compare TikTok learning with other platforms (YouTube Shorts, Instagram Reels) from a TA perspective.
— Develop and validate a **Digital Transactional Analysis Inventory** for social media learning.
— Explore the intersection of algorithmic competence and life position shifts over time.

9. Conclusion

This article has argued that Educational Transactional Analysis offers a valuable, albeit currently unexplored, lens for understanding informal learning on TikTok. Drawing on desk research of recent empirical studies, a significant gap has been identified: the absence of psychodynamic and relational analysis in TikTok learning research. An integrative model in which the algorithm functions as a surrogate parent has been proposed, the user oscillates between natural and adapted child, transactions are predominantly crossed or ulterior, and the platform systematically over-satisfies the hunger for stimulation while neglecting the hunger for structure. Finally, an empirical methodology and discussed practical implications for media educators have been outlined. The article concludes that integrating ETA into research on algorithmic learning environments is not only possible but necessary – for only by understanding the transactional dynamics of human–algorithm interaction can we design media education that restores autonomy, authenticity, and genuine learning.

References

Adamczyk, K. (2026). TikTok jako przestrzeń nieformalnej socjalizacji młodzieży: implikacje pedagogiczne. *Problemy Opiekuńczo-Wychowawcze*, *647(2)*, 14–25. https://doi.org/10.71358/pow.2887

Ang, E., Abalos, M. A., Seril, J. L., Uy, K. M., Silvestre, F. M., Ebardo, R., Tuazon, J. B., & Pulumbarit, A. (2025). Analyzing the factors affecting nano-learning behavior of college students on TikTok. in: B. Jiang et al. (Eds.), *Proceedings of the 33rd International Conference on Computers in Education*. Asia-Pacific Society for Computers in Education. https://library.apsce.net/index.php/ICCE/article/view/6028/5958

Berne, E. (1961). *Transactional Analysis in Psychotherapy*. Grove Press.

Dhondt, B., Van de Sompel, D., & Hudders, L. (2026). From For You to the family table: Adolescent consumer learning and reverse socialization on TikTok. *New Media & Society*, (*1–27*). https://doi.org/10.1177/14614448261443533

Dziekońska, J. (2025). Zabawa rówieśnicza w transformacji: od podwórkowego „berka" do internetowego „challenge'u". *Edukacyjna Analiza Transakcyjna*, *14*, 329–344. https://doi.org/10.16926/eat.2025.14.18

Feiyue, X., Mohamad Ali, A. Z. bin, & Qi, L. (2025). Exploring the Enablers of Voluntary Educational Usage of Douyin (TikTok) Among University Students in China. *Sage Open*, *15(4)*. https://doi.org/10.1177/21582440251388706

Jagieła, J. (2025). Student Personality Adaptations, Part III. *Edukacyjna Analiza Transakcyjna, 14*, 15–34. https://doi.org/10.16926/eat.2025.14.01

Łęski, Z. (2025) Pasywność w ujęciu analizy transakcyjnej a podatność użytkowników na cyberzagrożenia, *Edukacyjna Analiza Transakcyjna*, *14*, 139–148. https://doi.org/10.16926/eat.2025.14.08.

Plaskura, P. (2025). Edukacja W Dobie Generatywnej Sztucznej Inteligencji: Perspektywa Analizy Transakcyjnej. *Edukacyjna Analiza Transakcyjna*, *14*, 35–50. https://doi.org/10.16926/eat.2025.14.02

White, A. (2025). Demand contracts. *Edukacyjna Analiza Transakcyjna*, *14*, 85–95. https://doi.org/10.16926/eat.2025.14.05

Wusylko, C., Weisberg, L., Opoku, R. A., Abramowitz, B., Williams, J., Xing, W (2024). Using machine learning techniques to investigate learner engagement with TikTok media literacy campaigns. *Journal of Research on Technology in Education*, *56*(*1*), 72–93. https://doi.org/10.1080/15391523.2023.2266518