Flow in the FYP: A Thematic Analysis of TikTok users' flow experiences and algorithmic influence.

Amy O'Sullivan

N00220458

Research Supervisor:

Robert Griffin

Dissertation submitted as a requirement for the degree of BSc (Hons) in Applied Psychology,

Dun Laoghaire Institute of Art, Design & Technology, 2026

Word count: 6,913

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Acknowledgements

Thank you to my supervisor, Robert Griffin for your patience, feedback and support during this journey. It is very much appreciated.

Thank you to the incredible staff, lecturers and peers I have had the privilege to meet during my time at IADT, but especially to the amazing Billie and Catelynn. I am so glad I got to experience this season of life with you guys. Thank you for being my rock, not just during the last few months, but these last few years. You have made more of an impact on my life than you will ever know. Thank you for believing in me even when I did not believe in myself.

To mam, words cannot express the gratitude I have for you. You have always been more than a mam; you are my best friend and a pillar of strength, always there, you hold me up when I cannot stand strong myself. Thank you for celebrating the mini milestones and for your unconditional support and love throughout my life.

To Katie, thank you for your encouragement, advice, and FaceTime calls. You have been a constant support when I just need a chat, and I can always count on the fact that you will put a smile on my face. Thank you for being a best friend and sister all in one.

To Harry, thank you for your kindness and encouragement, for being such a great brother and most importantly, for all the cups of tea that got me through it.

To Alfie, my emotional support always.

Finally, to me, you did it!

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Abstract

Social media platforms, particularly TikTok, play a significant role in influencing user engagement due to their highly personalised algorithms. This study aims to evaluate whether users have experiences of flow on TikTok and how the algorithm shapes these experiences. A questionnaire-based approach was used to collect data from 40 TikTok users aged 18-34. Braun and Clarke's 6-step reflexive thematic analysis was used to develop themes in the data. Findings suggest that perceived algorithmic personalisation and design contribute significantly to users' experience of flow-like states in the form of effortless absorption, focused attention, temporal and attentional distortion. Findings also suggest that users experience tensions and limits of flow due to awareness of immersion, loss of control, emotional and cognitive consequences and algorithm limitations. These results highlight the need to reconsider traditional models of flow and adapt a concept to algorithm-driven environments and raise ethical concerns for users' well-being after prolonged immersive use.

Introduction

TikTok is a social media platform for creating, sharing and discovering short-form videos worldwide. Since the application's popularisation in 2018, TikTok has gained an estimated 1.9 billion users, with an approximate value of 75.67 billion United States Dollars (Slotta, 2026). TikTok's 'For You' page provides users algorithmically personalised content, and with approximately 16,000 videos uploaded every minute (Slotta, 2026), users have a constant stream of new content to engage with. TikTok users aged between 18 and 34 years make up 68.8% of the app's users, with an average of 58.4 minutes spent on TikTok daily (Schroeder, 2025). TikTok has become deeply embedded within everyday life and has displayed a significant influence on society.

TikTok's highly developed algorithm keeps users continuously deeply engaged through personalised, algorithmically curated content (Zhou, 2024), which raises the question, Is this deep absorption and loss of not only minutes, but hours of "TikTok Time" a flow state? To date, only a limited number of studies have explored TikTok users' experience of flow, with few evaluating the extent to which the TikTok algorithm contributes to flow experiences.

This study aimed to explore Flow states on TikTok, Algorithmic design and personalisation and their interaction to answer the research questions: Do users experience flow states on TikTok? and how does the algorithm influence these flow experiences?

1.1 Theoretical Foundations of Flow

In 'Flow: The Psychology of Optimal Experience', Csikszentmihalyi (1990) defined flow as a "psychological state of complete absorption" and described it as the "optimal experience"

characterised by loss of self-consciousness, time distortion, deep enjoyment and intrinsic reward with the combination of action, awareness and heightened sense of control.

Building on this, Waterman (2025) distinguishes between intrinsically motivated active engagements that produce classic flow experiences and passive activities that result in absorption. Both involve deep immersion and distortion of time, but this distinction is particularly relevant to social media contexts, where users may experience flow-like states through passive consumption of content. However, this framework remains largely conceptual and lacks practical validation in digital environments. Similarly, Zhang & Wang (2024) demonstrate that flow research has expanded significantly over the past 4 decades and increasingly intersects with technology, through their methods; however, their work does not address how digital environments shape flow-like experiences, emphasising the need for further research on the role of algorithms in fostering immersion on social media platforms.

1.2 Flow in Passive Digital Media

While Csikszentmihalyi (1990) provides a clear and widely validated foundation of flow, it has primarily been applied to active tasks such as sports, music and surgery. This creates a gap in understanding how flow may operate within passive digital media consumption. Passive media consumption is considered habitual and requiring low cognitive effort, where individuals do not play an active role in engagement. Platforms such as TikTok are an example of this, as users are presented with algorithmically curated content rather than actively searching for it (Morias et al, 2025). Given the increase in digital media over the past two decades, particularly short-form media in recent times, there remains little analysis on how the theory of flow applies to passive activities such as TikTok scrolling.

Although traditional flow theory emphasises challenge-skill balance, alternative perspectives suggest other mechanisms may be in effect. Harris et al. (2017), in their study on attentional control in flow, suggest that focused attention, measured via eye tracking during basketball and netball tasks, was a stronger predictor of flow than challenge-skill balance. These findings indicate that strong attentional control alone may induce flow, even when challenge or reward is minimal. While this study was conducted in an active task context, it raises an important question: can flow be induced in passive digital tasks such as scrolling on TikTok, where challenge-skill alignment is absent?

Further extending this idea, Baumann, Lurig, and Engeser (2016) explored the role of game pacing curves and personality in flow experiences. They presented an argument that game pacing curves and personality play an important role in experiencing flow, they investigated how fluctuating of difficulty over time influences flow and enjoyment, this helps us adapt how the challenge-skill aspect within the original flow theory may be applied to short-form video use and can be conceptualized to how the TikTok algorithm adapts and does not only show users content they typically enjoy and implement a 'pacing curve' to increase scrolling in order to create a novelty when they are matched with content they like and escalate user engagement.

Supporting this, Findings suggest that short-form video use can distort users' perception of time (Yang et al., 2024; Jiang et al.,2025). This indicates that highly immersive, algorithm-driven content may alter temporal awareness for users, which is a core component of flow. Interestingly, time was found to be overestimated in this context, suggesting that the present study should further examine whether temporal distortion during TikTok use is experienced as compression or expansion.

1.3 Motivational Processes

In line with these perspectives, Abuhamdeh (2020) highlights key conceptual issues in flow research, arguing that challenge-skill balance alone does not sufficiently explain flow and emphasises the importance of intrinsic motivation and enjoyment. This emphasis on intrinsic motivation and enjoyment aligns with TikTok use, where users engage because content is entertaining and rewarding, rather than challenging.

TikTok engagement was suggested to be motivated by boredom, fear of missing out, entertainment and escapism (Seidman et al., 2025; Gu et al., 2022). The platform's continuous stream of personalised content helps alleviate boredom while fostering a sense of connection not only to personas online but to peers who also consume TikTok content. Similarly, Rahayu et al. (2025) examined hedonic motivations such as joy, curiosity and control and how they influence immersion and behavioural intention among Generation Z TikTok users. Results indicated that behavioural intention was significantly influenced by curiosity and joy, however control showed no significant result. Together, these findings suggest that the TikTok algorithm caters to these motivations by users wanting to continue scrolling due to curiosity and tailored content to satisfy enjoyment, which contributes to user immersion. Due to control showing non-significant influence. The lack of significance for control may indicate that users can become immersed even in the absence of agency, which may link back to algorithmic design features such as pacing and novelty. In this sense, immersion may be driven more by content delivery than by user intention. However, while Rahayu et al. (2025) provide valuable insights into immersion and motivations, the study does not account for other flow conditions, such as time distortion, lack of self-consciousness, nor does it directly evaluate algorithmic influence.

1.4 Algorithm Design and Personalisation

A growing field of research highlights algorithmic personalisation in shaping user engagement. Dekker, Baumgartner and Sumter (2025) provide an experimental perspective, showing that when algorithmic personalisation was reduced, participants' TikTok usage decreased significantly in both duration and frequency. This demonstrates the importance of algorithmic personalisation in sustaining user engagement.

Zheng (2023) further explores this through the application of flow theory and incorporates social norms and perceived critical mass as variables to further understand how social media contexts moderate flow effect on sharing behaviours and participative behaviours (e.g., liking and commenting). Findings indicated that experiencing flow positively predicted participative and sharing behaviour, and that social norms and perceived critical mass were found to mediate. It suggests that it is a bidirectional process, where user interaction informs algorithmic personalisation, which in turn enhances immersion. The deep personalisation from participative and sharing behaviours communicates to the algorithm what content users enjoy while scrolling past with little engagement, teaches it what is disinteresting to the user. TikTok algorithms' feedback loops quickly assess what the user wants to view at a certain time.

Similarly, Roberts & David (2023) found that TikTok users experienced higher overall flow compared to Instagram users, and in particular, higher enjoyment and time-distortion were experienced by TikTok users. For their analysis, they implemented 5 flow subdimensions: focused attention, enjoyment, curiosity, telepresence and time distortion. This provides a useful framework for assessing flow within social-media contexts. However, their study did not

measure the influence the algorithm has on shaping experiences of flow. The current study aims to bridge that gap while implementing core aspects of this study, such as the flow subdimensions.

Focusing more directly on algorithmic affordances, Zhao and Wagner (2022) indicated that perceived effortlessness, perceived recommendation accuracy and perceived recommendation serendipity affordances positively promoted TikTok users' flow experiences and found that user experience level and video duration had a moderating effect. These findings strengthen the argument that algorithmic content can significantly predict flow experiences using TikTok. The element of perceived affordances (effortlessness, recommendation accuracy and serendipity) also informs us that it is not just important that there is an algorithm, but users' perception of how their feed corresponds to their interests. These findings are reinforced by more recent research showing that recommendation serendipity and recommendation accuracy significantly enhance TikTok users' flow experiences (Hadinata et al., 2026). At a more comprehensive level, Metzler and Garcia (2024) argue that algorithms do not operate independently but operate within feedback loops with human social motivations such as need for status and connection, this suggests that rather than causing effects algorithms reinforce existing social tendencies, this may affect users experience of flow on TikTok as underlying motivations for connection may result in longer scrolling and if that motivation is not present engagement could be less immersive.

Algorithms such as TikTok's prioritise attention-grabbing and potentially diverse content to maximise interaction, often with little regard for whether it improves user well-being. This highlights that immersion may be sustained by intensifying emotional and cognitive stimulation, but not necessarily in ways that improve user satisfaction (Milli et al., 2025). This suggests for the present study that users may feel negative after use due to high, prolonged engagement with

little satisfaction post-use. TikTok's recommendation algorithm enhances engagement, sustains attention and contributes to flow-like immersion; these mechanisms may also limit content diversity and create echo chambers of previously consumed content. A lack of transparency and user control was noted by users, suggesting ethical issues around deep engagement with TikTok (Zhou, 2024).

1.5 Problematic Engagement Issues

Although TikTok can be useful to alleviate boredom, create enjoyment and foster feelings of connection, the features of becoming easily absorbed and immersed in a digital environment can lead to neglect of responsibilities and goals in the real world. Vaterlaus and Winter (2025) reported that users felt reduced agency and negative experiences, suggesting that immersive engagement results in perceived loss of control. Pham & Duff (2022) highlight that flow through the lens of media can also be negative and is a factor to consider, as this study aims to investigate flow and short-form media. While algorithmic feeds enable flow-like states, the cost should be considered as it may lead to reduced satisfaction, as algorithm-driven flow may cause disruption of other goals such as study, sleep and in-person social interaction. Qin et al. (2023) similarly investigated how flow experience on TikTok fosters problematic engagement and found that elements of flow (concentration and time distortion) were positively linked with problematic TikTok use. The results of their models showed a pattern in which enjoyment increased concentration, which led to enhanced time distortion and, in turn, estimated problematic use of TikTok. Through their findings, Qin et al. (2023) support the argument that algorithm affordances increase the likelihood of experiencing a flow-like state, which may result in problematic use of TikTok. Findings indicate that TikTok's algorithm-driven passive scrolling

can result in lower self-concept clarity and an increase in anxiety. (Liu et al.,2025) This suggests that algorithmic content shapes not just attention but emotional states, which is relevant for understanding flow experiences on TikTok. Many negative outcomes can arise from TikTok use, Langlais et al. (2025) reported mood deterioration, sleep disruption, social comparison, exposure to negative content and additive use patterns in adolescents and Nguyen et al. (2025) reported reduced attention and self-regulation, alongside increased anxiety and stress, this indicates that algorithm driven content may undermine psychological wellbeing, which is important to note when understanding how sustained immersion or flow experiences on TikTok as users may report harmful effects from engagement.

1.6 Conclusion and research aim

Overall, the current literature demonstrates clear links can be made between TikTok, its algorithm and experiences of flow-like states, particularly in terms of absorption, time distortion and enjoyment. It also highlights the reduced importance of challenge-skill balance and the potential negative implications of prolonged immersion.

However, there remains a lack of research directly exploring the TikTok algorithms influence on users perceived experience of flow. Additionally, much of the existing research employs a quantitative analysis of self-report measures. Therefore, this study aims to address the gap through a qualitative approach, investigating whether users experience flow states on TikTok and how the algorithm shapes these flow experiences.

Method

2.1 Design

This study implemented a qualitative research design which utilised reflexive thematic analysis to identify patterns within the data on TikTok users' perspectives of flow experiences and the influence of the TikTok algorithm. The use of Braun & Clarke's (2006, 2019) six-step reflexive thematic analysis was employed to identify the main themes within the data. A qualitative research design using Braun & Clarke (2006, 2019) allowed for identifying themes that are consistent with prior research but also produced flexibility for unexplored themes to emerge. Reflexive thematic analysis allows for exploring relationships and patterns in the data and underlying meanings in participants' responses, which is important for the analysis of the current study.

In this study, the researcher recognised their own position as a TikTok user who has experienced deep immersion and perceives the platform's algorithm as contributing to their continued use, with the potential to influence interpretation and theme generation. Given this, efforts were made to remain attentive to contrasting perspectives.

2.2 Participants

42 participants were gathered, with 2 exclusions due to an insufficient data set and the potential to skew results. Therefore, the final sample size was n= 40. Data collection was stopped once data saturation was reached, and allowed for a thorough qualitative analysis, given the time constraints. Only participants aged 18 and above were eligible to participate, with the target demographic being 18-35 years of age due to findings that 87% of short-form video users are 35

years or younger (Liu, K. X. 2022). This study's sample consisted of 13 males and 27 females, with 36 of the participants in the age group 18-24 and 4 in the age group 25-34.

The researcher implemented a convenience sampling strategy. Although participants were made aware that the researcher was looking for regular to high TikTok users with an ideal daily usage average of 30 minutes or above, individuals reporting shorter durations were retained to capture a broader range of engagement behaviours.

Participants were gathered on the premises of IADT by approaching in student common areas and through social media platforms. The researcher designed a recruitment poster (Appendix D) that was shown to participants with a QR code for in-person gathering and a link to the questionnaire for online recruitment.

An amber route application was submitted to the Psychology Ethics Committee at the Institute of Art, Design and Technology (Appendix A). As the study is considered low risk to participants, approval was granted (Appendix B). Through the process of developing the study's questionnaire, the Psychological Society of Ireland (PSI) code of psychological ethics was adhered to, ensuring that aspects including confidentiality, informed consent, data protection and freedom of consent were met. As the study uses an online data collection method, GDPR compliance was adhered to. Microsoft Excel stores the data, with only the researcher and supervisor having access to the data. The researcher will retain the data for at least one year and may retain it for up to 7 years if the results of the study are published in a journal article. The researcher provided participants with 3 consent forms: a consent to take part, consent for use of quotes prior to participation and confirmation of consent after participation.

2.3 Materials

This current study utilised Microsoft Forms to create an anonymous online questionnaire for participants to respond to open-ended questions regarding their TikTok use, accounts of flow experiences and the TikTok algorithms' influence. An online questionnaire was applied as it allowed for efficient data collection under time constraints. This method allowed participants to express their experience in their own words, which reduces the potential for the researchers' influence on responses. Using an online questionnaire also provides participants with anonymity, which can elicit more candid accounts of problematic use patterns. A full copy of the questionnaire is provided in Appendix C.

The questionnaire consisted of self-constructed questions designed to address the research aims. This allowed the researcher to tailor questions to explore participants' experiences of TikTok use, including flow-like engagement and algorithmic influence, which existing standardised measures may not fully capture.

A pilot test of the online questionnaire was conducted to assess clarity, length, and effectiveness. Based on feedback, minor revisions were made, including rewording for clarity and additional prompts to encourage more detailed answers, which enhanced the quality of the data collected.

2.4 Procedure

The study was constructed using Microsoft Forms, the contents included an information sheet, consent form and use of quotes consent, anonymised code, demographic questions and 12 open-ended questions and concluded with a confirmation of consent.

The contents of the questions asked included TikTok use (average time spent and type of content consumed), views on algorithm personalisation, elements of flow regarding TikTok (absorption, time distortion, awareness of surroundings), views on the algorithm's influence in flow experiences and feelings after times of absorption. (Appendix C)

The researcher imported data to Microsoft Excel version 16.102.3 under private access. Preliminary to familiarisation, the data were reviewed for participant responses with the potential to skew analysis or a high proportion of incomplete responses, which provides cause for omitting the participant to ensure data quality.

Once all data were reviewed and the anonymisation process was complete, data analysis began, using Braun & Clarke's (2006, 2019) six-step reflexive thematic analysis. The first step was familiarisation with the data; the researcher printed a hard copy to aid familiarisation and provide security of data. This hard copy was shredded once the analysis was complete. Using the printed copy, assisted in the second step, notation and highlighting allowed the researcher to extract quotes that were judged as pertinent in the coding process. A coding sheet was created on Microsoft Excel to generate codes and develop themes, and additional sheets to analyse demographics and participant usage data, including content consumed, time intended vs time spent, motivations for use and presence of temporal and attentional distortion.

Initial codes were generated inductively from participants' responses with a focus on their TikTok use, experiences of immersion and perception of the algorithm. Semantic codes, which capture explicit, surface-level meanings of participants' accounts and latent codes, which explore underlying ideas or interpretations which may not be directly stated, were derived from the data (Braun & Clarke, 2012). Throughout the process, the researcher embraced a reflexive

perspective, recognising their role in the interpretation and construction of the codes as mentioned in the design.

Developing codes was an iterative process which involved frequent refinement, merging and discarding of codes to ensure the data reflected participants' views and the implicit subtext.

Once codes were established, step three took place: the codes were examined for patterns and grouped into potential themes, and the data were then transferred to Microsoft Word.

The fourth step allowed for review of these themes. Through this process, themes were refined through the merging of overlapping themes and splitting of themes to ensure they supported participants' views and the data set as a whole and provided a clear understanding of the findings. Step five involved further refinement in defining and naming the selected themes and subthemes, ensuring they were clear. A thematic map was created using Canva to display themes, also demographic charts, and descriptive tables, and a word cloud were produced to display additional data. Finally, the themes found were reported, and conclusions were supported by evidence in the data.

Braun and Clarke's reflexive thematic analysis is considered a trustworthy and widely validated method in qualitative research (Braun & Clarke, 2019). Prior to analysis, the researcher also considered common mistakes identified in previous studies, such as overlooking contrasting perspectives and took steps to avoid these errors in their own analysis to enhance validity. (Braun & Clarke, 2024).

Results

3.1 Participant demographics

The study included 40 participants, 90% of whom were between the ages of 18 and 24 and 10% between 25 and 34. Exact ages of participants were not collected, as it was not pertinent information to this study's research aim. Participants were 67% female and 33% male.

Figure 1 below displays participant age distribution, and Figure 2 displays participant gender distribution.

Figure 1: Participant age distribution

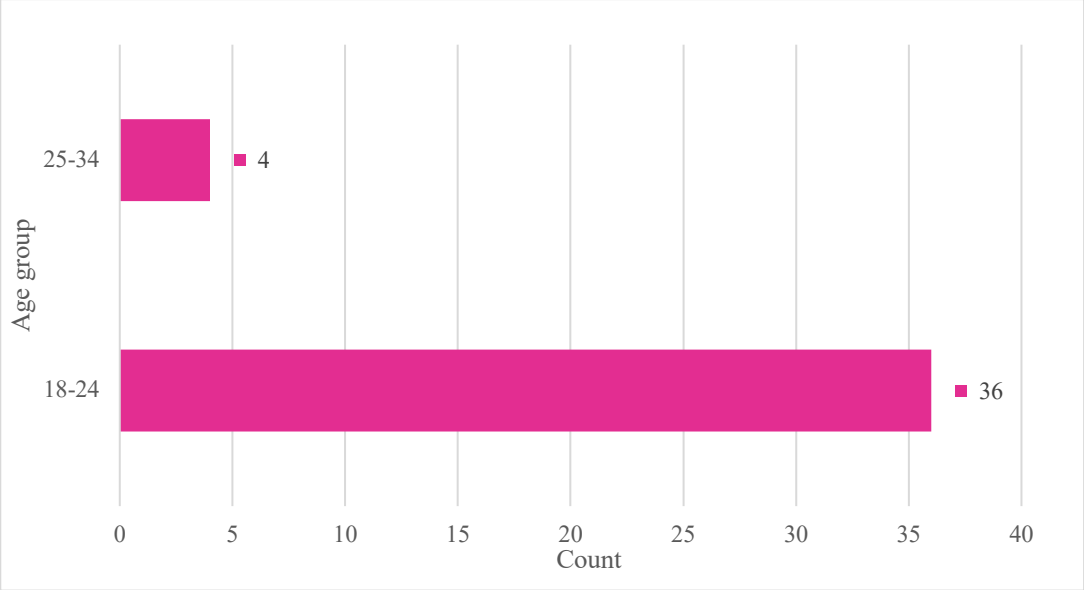
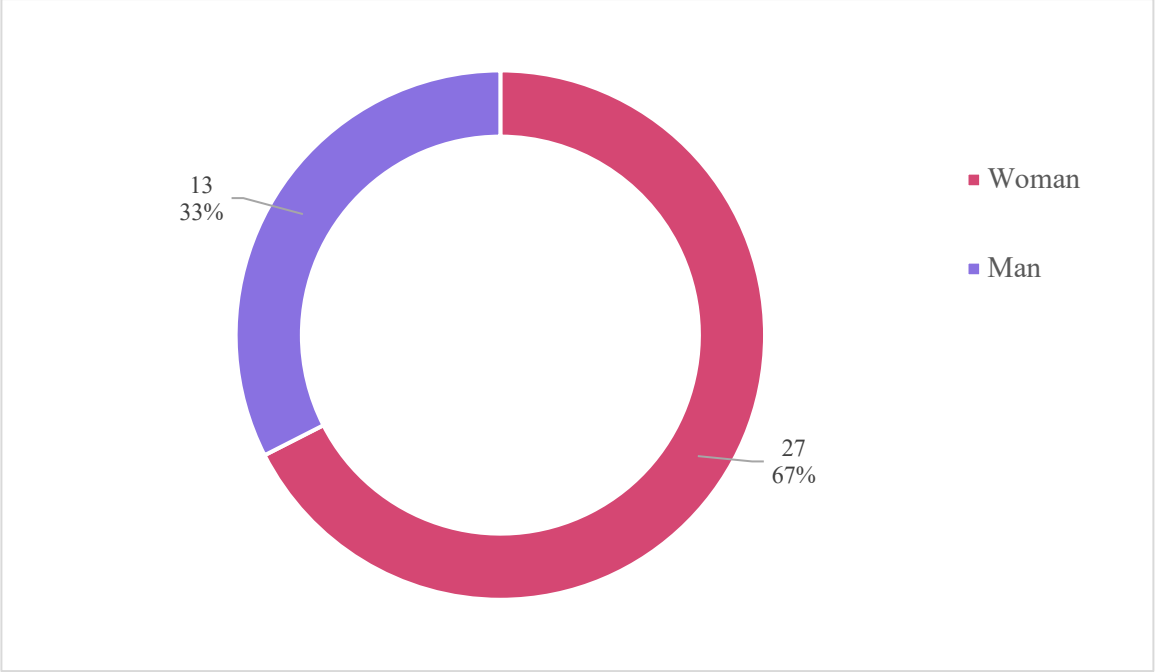


Figure 2: Participant gender distribution



3.2 Engagement metrics and categories

Table 1 below provides a breakdown of average time intend to spend vs daily average spent.

Figure 3 provides an overview of the type of content consumed by participants.

Table 1: Difference in average time intended vs actual time spent

Measure	Average time (minutes)	% of difference
Time intended	26	
Actual time spent	97	+273%

This shows a 273% increase in actual time spent using TikTok compared to intended scroll time, with 93% of participants reporting temporal distortion during TikTok use.

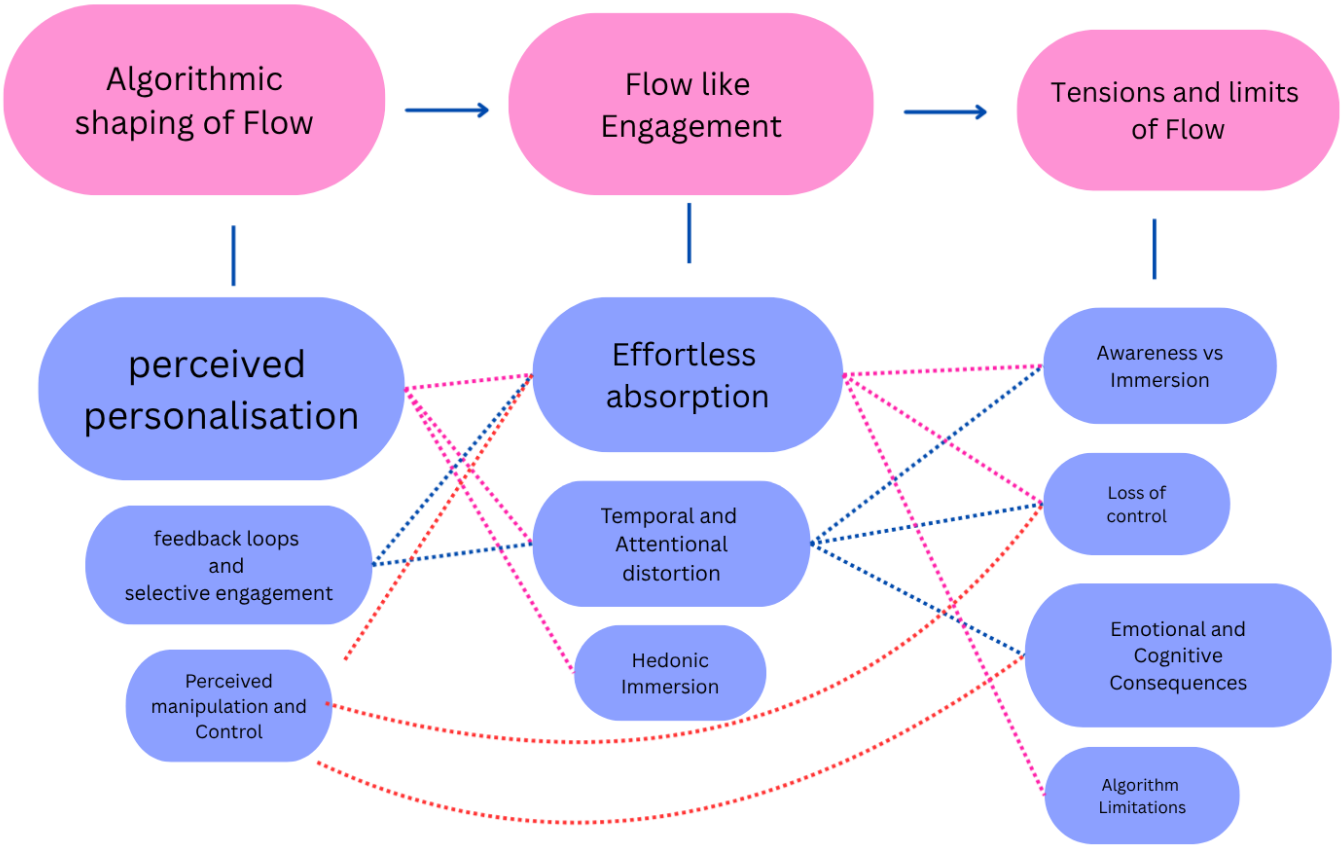
Figure 3: Word cloud of content type consumed by users

Larger words represent more frequently reported content by participants.

3.3 Overview of Results

The analysis aimed to investigate users' perception of flow experiences and the influence of the TikTok algorithm. In answer to this research question 3 main themes emerged from the data. Figure 1 below presents the thematic map, and Table 1 below presents the themes and the codes that were used to construct them.

Figure 4: Thematic Map of themes and subthemes



The size of subthemes aims to illustrate more significant findings.

Table 2: Themes and examples of codes

Theme	Definition	Example codes
Flow like engagement	A state of immersive and effortless attention in which users are absorbed in content.	
Subthemes: Effortless absorption	Being fully engaged with little conscious effort	Passive consumption Focused attention
Temporal and Attentional Distortion	The experience of losing track of time and being so absorbed that external distractions are largely ignored.	Time distortion Reduced awareness of surroundings
Hedonic Immersion	Deep engagement driven by pleasure and enjoyment.	Escapism Gratifications Social uses

Algorithmic Shaping of Flow		The perceived application of the TikTok algorithm to influence Flow experiences.	
	Sub themes: Perceived personalisation	Users sense that content is tailored to their interests	Content relevance Sense of algorithm 'knowing'
	Feedback loops and selective engagement	Describe how users' interactions guide influence algorithmic content delivery which keeps user focus on videos they prefer	Infinite scroll Reinforcement cycles Habitual engagement Rapid filtering
	Perceived Manipulation and Control	When users feel that the platform is influencing their actions or experiences in a way that may limit their control.	Engagement driven design Algorithm influencing behaviour
Tensions and Limits of Flow		The conflicting aspects of user engagement and negative outcomes.	
	Subthemes: Awareness vs Immersion	The tension between being conscious of one's actions while being fully absorbed in the experience	Awareness without action Awareness of tracking Awareness of cognitive limits
	Loss of control	When users feel unable to stop scrolling or disengage from content, despite intentions to stop.	Reduced self-control Compulsive use Prolonged use
	Emotional and cognitive consequences	The mental and affective impacts of TikTok use, including how it shapes thinking, attention and emotional responses	Short term gratification vs post scroll regret Perceived negative cognitive effect
	Algorithm limitations	the algorithms failure to predict or meet user preferences, resulting in the delivery of irrelevant, or less engaging content.	Irrelevant content Disruptions

3.4 Theme 1: Flow like engagement

The first main theme, Flow Like Engagement, describes a state of immersive and effortless attention in which users are absorbed in content. It is pertinent to answer the research question of how TikTok users experience flow, as it demonstrates participants' experiences and motivations.

Subtheme 1: Effortless absorption

Participant 40 explained, “scrolling becomes automatic, unaware I am even scrolling” This reflects a flow-like state in which participants are so absorbed in the content that they do not realise their action, and it becomes a natural reflex, which often leads to an altered sense of time. Participant 22 reported, “It makes you block out your responsibilities and ongoing tasks”, which illustrates the focused attention of users while using the app. These accounts highlight core aspects of flow experienced on TikTok.

Subtheme 2: Temporal and attentional distortion

Participant 15 explained, “I do not realise time has gone by, 20 minutes feels like 5”. This pattern aligns strongly with flow theory, suggesting that flow can be experienced while using TikTok. Many participants also explained a lack of awareness of what was happening around them while using TikTok. Participant 23 reported “it feels like it is only me and the people on my screen”. This indicates users’ diminished attentional awareness and can be linked to loss of self-consciousness. These combined examples reflect how users’ deep absorption in their feed reveals the experience of a flow state through temporal and attentional distortion. Table 3 below displays participants’ level of temporal and attentional awareness.

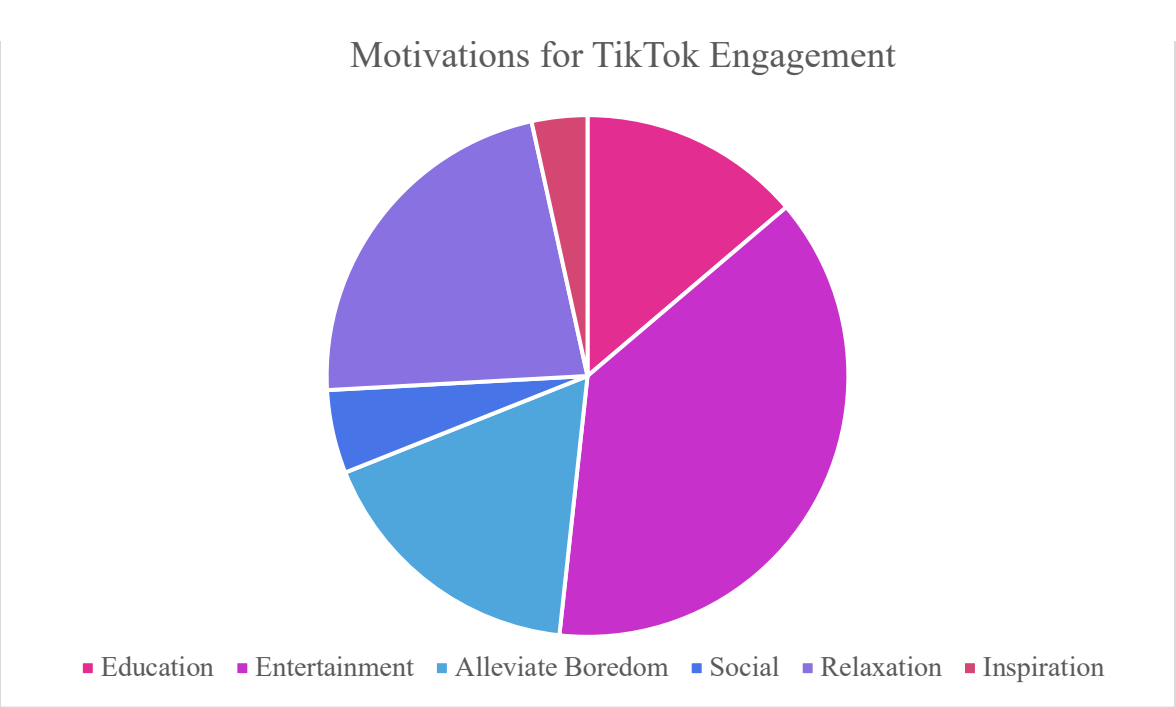
Table 3: Levels of participants' awareness of temporal and attentional distortion

Level of awareness	Temporal	Attentional
Unaware	93%	55%
Mild awareness	0%	30%
Maintained awareness	3%	15%
Provided no answer	5%	0%

Subtheme 3: Hedonic Immersion

Many participants described their use of TikTok for entertainment and enjoyment, but also as a source of escapism from daily responsibilities or boredom. For example, participant 8 revealed their use of TikTok "when I feel bored or as a distraction from nerves or anxieties". Participant 5 described it as "daily as a source of entertainment, a way to communicate with friends, and to stay informed about global events" These accounts exemplify participants' use of TikTok to fulfil psychological needs, which can suggest an intrinsic component that is highly linked to flow. Figure 5 illustrates participants' motivations for engaging with TikTok.

Figure 5: Pie Chart of participants' primary motivations for use



3.5 Theme 2: Algorithmic shaping of flow

The second main theme, algorithmic shaping of flow, describes the perceived application of the TikTok algorithm to allow for users' flow experiences. Users conveyed that they place importance on the algorithm's influence to shape their experience of flow while using TikTok. This theme aims to highlight how the algorithm facilitates the opportunity for users' flow experiences.

Subtheme 1: Perceived personalisation

Participant 5 stated, "If videos were not so personally tailored to my interests, I would not spend as much time on the app". This illustrates how algorithmically personalised content prolongs user engagement, allowing for a more immersive experience for the user. Participant 24 explained, "It makes it difficult not to become immersed when the algorithm shows me videos

that engage me and align with my interests". These accounts indicate how users feel the algorithm has a sense of knowing them, and this perceived personalisation can promote an autotelic experience and intense concentration, elements that are highly linked to flow states.

Subtheme 2: Feedback loops and selective engagement

Participant 1 noted, "The algorithm maintains my interest by adapting content based on my previous engagement". Participant 30 stated, "I find my fyp to be accurate at immersing me with my interests, and any that don't I just skip after a few seconds of watching". This reflects how algorithmic learning behaviour immerses individuals by catering to their interests. These accounts capture that engagement is prolonged and sustained from algorithmic design, which is influenced by user behaviour, suggesting immersive engagement and loss of temporal awareness, indicators of flow state.

Subtheme 3: Perceived manipulation and control

Participant 39 stated, "Due to the effortlessness of scrolling, you do not even realise how long you have been scrolling". Participant 26 stated, "It is especially easy to lose time when you are consuming a movie/TV show broken up into multiple clips on TikTok". Multiple participants expressed a similar experience, which illustrates how the algorithm uses techniques such as infinite scroll and sequential videos that manipulate user attention by drawing them in, often resulting in loss of temporal awareness, demonstrating how the algorithm is significant in shaping flow experiences.

3.6 Theme 3: Tensions and limits of flow

The third and final theme that emerged during analysis was tensions and limits of the algorithm. This theme refers to the conflicting aspects of user engagement and perceived negative outcomes.

Subtheme 1: Awareness vs Immersion

Many participants provided insight into their awareness across a multitude of aspects; a core finding included the disconnect between awareness and action. Participant 16 stated, “It creates this sense that I am both aware that I am mindlessly consuming content, but do not fight it as it is entertaining me”. Participant 21 revealed, “I use it as a way to relax even though I know it will not provide relaxation”. These reports reveal that participants recognise their excessive or harmful engagement but remain absorbed. This highlights the strength of the algorithm in sustaining immersion even in the presence of conscious resistance, displaying tensions that users may feel toward the algorithm.

Subtheme 2: Loss of control

Multiple users expressed feeling that they did not have control over their actions, for example, participants 1 and 20 described it as “feels as though I cannot switch it off”, indicating perceived loss of control over use. Participant 8 described “It is like my mind is blank, and I am in a repetitive cycle whereby getting to the end of a video is a reward and you get to scroll to start it all over again”. This quote illustrates a compulsive and automatic use of TikTok. Together, these accounts suggest that diminished control is not always consciously experienced as the algorithm draws them in and creates a reward loop that only becomes apparent retrospectively.

This perceived diminished control over actions may cause tensions with flow experience, as users can feel negative subsequently.

Subtheme 3: Emotional and cognitive consequences

A large majority of participants reported commonly experiencing either negative feelings or effects, or both, post-use. For example, participant 18 expressed, "it feels really pleasant to be absorbed by the content and disconnect from what is going on, but after it feels as though I have been wasteful with my time", and participant 28 reported, "I cannot even remember the videos I consumed". These perceptions indicate a tension between the short-term gratification of use vs negative effects once disengaged, which conflicts with the positive experience flow intended and instead creates negative self-reflection after scrolling. Table 4 below outlines negative outcomes experienced by participants.

Table 4: Negative outcomes of prolonged TikTok use identified by participants.

Negative outcome	Description	Participant Quote
Time loss	Extended time spent beyond intention	"feel like I let myself down for spending so much time on it." (p12)
Cognitive effects	Decrease in cognitive functions	"I believe TikTok use is negatively impacting my attention span." (p9)
Regret	Negative feelings post use	"I usually feel guilty of what I could've gotten done in that time, since I usually end up scrolling longer than I wanted to." (p39)

Reduced productivity	Procrastination due to use	"If I have neglected other tasks, it makes me feel guilty." (p30)
Mental fatigue	Feeling of tired or Drained post use	"makes me feel groggy and lethargic, causes feelings of frustration also." (p28)

93% of participants reported experiencing some form of negative feeling after prolonged use

Subtheme 4: Algorithm limitations

Many participants noted disruption to flow-like experiences due to algorithm irrelevance. Participant 18 stated, "Content containing irritating audio or any form of hate speech disrupts my sense of peace and makes me stop engaging with the video." Participant 15 noted, "I get very bored with the app if I see too many advertisements". These accounts suggest immersion is determined by the quality and relevance of content to the user, which highlights both the algorithms' strengths and shortcomings, as the algorithm does have limitations to immersing users, but this also highlights how the algorithm is integral to users experiencing flow states on TikTok.

Discussion

The findings of this study indicate that TikTok users frequently experience flow-like states, represented through deep absorption, effortless engagement and a loss of awareness of time and surroundings. These aspects were expected based on previous research into social media immersion. The platform's algorithm was identified as significant in shaping these experiences by tailoring content to users' interests, maintaining curiosity and reinforcing repetitive engagement, supporting the expected outcome that algorithmic personalisation and design contribute directly to immersive flow-like states. Through analysis, tensions and limitations of flow experiences on TikTok emerged, highlighting tension between consciousness and absorption, loss of control, negative outcomes and limitations of the algorithm. While anticipated, the prominence of this finding exceeded expectations.

4.1 Theoretical Implications

Flow Like Engagement

Flow-like engagement reflects immersive experiences while using TikTok, where users sustain deep focused attention on the continuous feed of content with diminished awareness of environment and time, with a large majority of participants reporting temporal distortion (93%) as outlined in Table 1. This suggests that TikTok facilitates a form of low effort engagement where cognitive demands are reduced, and users are absorbed in the app with no active effort. However, these experiences of passive consumption differ from the conventional conceptualisation of flow, as active skill-based engagement is considered a core aspect in achieving flow (Csikszentmihalyi, 1990). Flow remains mostly unchanged since its

establishment (Abuhamdeh, 2020), and with the developments in digital media, particularly short-form media, eliciting flow-like experiences for users, it calls for a reconceptualisation of flow and the ways in which it can be experienced. Participants reported deep engagement from low effort, “Provides short videos that do not require a lot of reaction and feeds me personalised videos I would enjoy” (p. 10). The findings of this study bolster the suggestion of Harris et al. (2017), whereby focused attention may be a stronger indicator of flow than challenge-skill balance, as flow is usually considered active and skill-based. The findings of this study challenge this conceptualisation by suggesting flow may be experienced during passive, low effort engagement when externally supported by the algorithm. This effortless absorption again challenges traditional conceptions and supports the argument, suggesting that focused attention can drive flow-like states rather than challenge-skill balance.

Flow has also traditionally been conceptualised as solely intrinsically motivated (Walterman, 2025); the present findings suggest that while initial engagement is intrinsically motivated, flow-like engagement may also be supported through algorithmic personalisation of content. Walterman (2025) additionally links deep absorption as key to flow, which was experienced by users in this study, but extends insight to how absorption may be achieved through low cognitive effort and passive engagement rather than active engagement, as outlined in traditional flow. “It makes you block out your responsibilities and ongoing tasks and feels as though you reach a flow state, of mindless scrolling. (p22)”

This study’s findings indicate that flow in short-form digital media does not conform to traditional flow due to the passive nature of engagement but highlights the need for establishing a concept that aligns with the elements of flow within digital media, such as algorithmically curated flow.

Algorithmic Shaping of Flow

Algorithmic shaping of flow demonstrates that the algorithm is a constructor of flow during TikTok use. The findings of this study suggest the algorithm as an active operative that produces flow states for users through perceived accuracy of personalisation, feedback loops and the infinite scroll mechanism with no cues for disengagement which sustains and prolongs use resulting in elements including temporal and attentional distortion and focused attention. “it knows my likes and dislikes and shows me videos that keep me engaged” (p40). This is consistent with the findings of Dekker et al.,(2025) were the substitution of a less personalised algorithm resulted in decreased frequency and duration of TikTok use, this highlights how the algorithm is instrumental to sustaining user engagement and facilitating flow, “it makes it difficult not to become immersed when the algorithm shows me videos that engage me and align with my interests. (p24)” and less personalised feeds result in lower engagement. “my immersion can often be interrupted from disturbing content or news or videos that I find cringe” (p4). The finding of personalisation driving flow experiences is further extended by previous studies, which also found that TikTok’s accurate recommendation system enhances user engagement (Zhou, 2024; Roberts & David, 2025). “I believe the app’s ability to capture my attention is due to the algorithm, as I engage more when I am shown videos I am interested in.” (p. 13).

A closely linked result to personalisation is the feedback loop of the algorithm and selective engagement as a critical mechanism to algorithmic shaping of flow. Boeker & Urman (2022) stated the most influential interactions for algorithm personalisation on TikTok were following, liking and view rate. This suggests users’ selective engagement further drives personalisation through feedback loops, thereby facilitating immersive flow experiences. For example, “I find my fyp to be accurate at immersing me with my interests, and any that don’t I

just skip after a few seconds of watching" (p30) and "TikTok FYP has adapted very strongly to my personality and has the ability to sustain my attention for hours." (p14)

Findings highlighted how the algorithm implements specific engagement strategies to sustain flow like states and reduce disengagement, with the infinite scroll feature "the app design makes it easy to scroll past videos that I don't want to watch." (p41) and multi-part TikTok's. "it's especially easy to lose time when you are consuming a movie/tv shows broken up into multiple clips on TikTok." (p26). Participants expressed feelings of 'being sucked in' by this engagement strategy, prolonging engagement past intended use and reinforcing continuous scrolling, suggesting perceptions of manipulation and control over behaviour due to a compelling curiosity to resolve narrative gaps. These results are consistent with those of Firth & Marinelli (2025), who found that users liked not having to choose the content they want to watch but instead are shown content that interests them, indicating that the algorithm is manipulating user agency and control.

Tensions and Limits of Flow

Tensions and Limits of algorithmically created flow emerged with predominantly negative (93% of participants) reports of conflicts felt towards engagement, with reduced control over actions, negative outcomes in relation to cognition, emotions, and the tension between the coexistence of immersive use and awareness. While participants expressed TikTok use as enjoyable and entertaining, they also commonly reported negative affective states following use. This contradicts the conventional aspect of flow (Csikszentmihalyi, 1990) and indicates that flow experienced through digital media has more nuanced implications. Participants' reports highlighted a pattern of short-term gratification vs post-scroll regret: "it feels really pleasant to

be absorbed by the content and disconnect from what is going on, but after it feels as though I have been wasteful with my time" (p18). This highlights how users feel instant gratification from the algorithm, but feel negative post-use. Jung et al. (2025) support this as findings reported emotions of regret and self-blame emerged post-use due to loss of awareness, passive consumption and diminished memory recall due to rapid consumption.

This emergence of continued engagement despite awareness of excessive use and algorithmic influence suggests that algorithmically curated flow states are limited, as immersion does not eliminate awareness but coexists with it for some users. "It creates this sense that I am both aware that I am mindlessly consuming content but don't fight it as it is entertaining me" (p16). This highlights how users can be aware of prolonged passive engagement but fail to disengage due to gratification. This suggests a disconnect between awareness and action, which may be linked to reduced self-control and problematic use, but raises the question of how to address this disconnect to reduce it. Currently, there is limited research that explores this aspect in digital media.

Several participants' accounts revealed reduced self-control, resulting in engagement beyond intended use, which suggests a pattern of habitual or compulsive use: "It's like my mind is blank, and I am in a repetitive cycle whereby getting to the end of a video is a reward, and you get to scroll to start it all over again"(p8). This quote is especially relevant as it expresses how users may feel controlled by the reward loop design of TikTok's algorithm. This reduced control challenges the autonomy associated with flow, which aligns with the argument of Bennett et al. (2025) that diminished autonomy in online environments can reduce users' self-regulation and impact overall well-being. Additionally, this further indicates the misalignment of traditional flow to flow experienced in short-form digital media.

Collectively, these findings may help us to understand how flow-like engagement is experienced on TikTok, but in a more complex way than the original conceptualisations and how it is actively created and sustained by the algorithm and additionally inform us of how some users continuously engage while understanding and anticipating the ramifications.

4.2 Practical implications

Due to the widespread use of TikTok, it is of great importance to gain an understanding of the platform's algorithm and how users' behaviour is influenced by it, for example, how excessive use can incur negative outcomes for users such as problematic use, mental health problems and cognitive decline, highlighting the importance of balancing engagement with ethical responsibility. The findings of this research suggest that increasing algorithm awareness may not be sufficient to encourage users to reduce prolonged states of algorithmically curated flow, underlining the importance of ethical considerations for the platform design. The introduction of a stopping cue after a prolonged time of engagement, like those on streaming platforms, may help reduce overconsumption and the negative consequences of this prolonged use, which subsequently may allow for more autonomy during use and a more positive retrospective outlook on the experience for users (Bennett et al.,2025)

Another practical implication arising from this study relates to algorithm transparency regarding providing users with clearer documentation of TikTok data reports, as the current data provided is often complex and not easily understandable to non-technical individuals. This may partially account for the limited research examining how algorithmic systems shape experiences on the platform, such as flow, due to issues in accessibility to proprietary algorithms' data.

4.3 Strengths and Limitations

This study addresses a gap in existing literature. While much research has examined flow, TikTok and algorithm influences on social media use, there is a lack of literature that investigates how these combine and overlap. Through this study's method, a further understanding has been suggested of how the TikTok algorithm is an active influence in deep immersive flow-like experiences on TikTok. Due to the widespread use of social media, this study is timely and of significant relevance. The findings of this study build a foundation for future research in the focus area of flow experiences during passive social media use, which can then be applied to reduce problematic use of social media.

Although the relatively small and context-specific sample limits the generalisability of the findings, this study's sample was 40 participants, of which 67% were women and 33% were male. Additionally, 90% of participants were between the ages of 18 and 24, with the remaining 10% between the ages of 25 and 34. According to TikTok user demographics, 54.6% of TikTok users are male, and 40% of users are between the ages of 25-34% (Duarte, 2026). As algorithm personalisation is user-dependent, different demographics produce different feeds, which result in different experiences; the demographics of this study may not provide an accurate representation of the wider population. A further limitation lies in the method of data collection, as data relied on a self-report questionnaire; participants' accounts may not fully reflect actual usage behaviour, with the added possibility that participants may not be fully aware of their behaviours while using the platform and lack knowledge of algorithmic influence, limiting the depth of insight into the underlying mechanisms.

Due to the use of reflexive thematic analysis, the interpretative nature of the analysis means the findings are shaped by the researchers' perspective, with the potential to influence the

construction of themes; however, the study provides rich insights into subjective user experiences, which may not have been captured through a quantitative approach.

4.4 Future Research

Future research could explore whether algorithmically curated flow is experienced across different platforms, such as Instagram Reels and YouTube Shorts, as the algorithmic structures differ. The use of experimental designs could examine the impact of algorithmic personalisation on flow-like engagement by comparing personalised and non-personalised feeds. Longitudinal research may be valuable in examining the long-term effects of sustained flow-like engagement on users' well-being and behaviours. Finally, exploring differences in engagement in demographics may provide insight as to how algorithmic flow is experienced across user groups.

This study aimed to examine whether users experience flow-like states on TikTok and how the algorithm influences these experiences. The findings suggest that algorithm personalisation and design are critical variables in facilitating flow-like states on TikTok, which results in a perceived loss of control and negative post-use outcomes among users. This highlights how algorithmic frameworks can shape user engagement and behaviour. Overall, understanding algorithmically shaped flow experiences on TikTok is valuable for moderating excessive TikTok use.

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Appendices

Appendix A – Ethics submission

Robert Griffin

Signed _____ **Date: 24/11/2025**

_____

Section 1: Project Information

Student Name: Amy O'Sullivan

Student Email Address: n00220458@iadt.ie

Supervisor Name: Robert Griffin

Working Project Title: Understanding Flow in the For You page: Qualitative exploration of TikTok users perceived flow experiences and the influence of the TikTok algorithm.

Main Variables Being Investigated: TikTok usage, perceived algorithm influence, perceived experience of flow.

Section 2: External Agencies

Does your project involve recruitment from any external agency (e.g. a school, sports club, medical centre, voluntary organisation, or any other organisation outside of the IADT)?	Yes*	No ✓
* You must include a letter from a senior manager of each organisation stating that you have approval to collect data within that organisation. Include copies of each of these letters in the Appendices to your application. If the organisation has its own ethical review board (which is very common in some settings, such as hospitals), then you are also required to get ethical approval from that board prior to starting data collection, and to submit notice of this approval to your supervisor so that it can be forwarded on to the ethics committee. Some online forums also require permission to post requests for participants – make sure to check the relevant forum/organisation's code of conduct or terms and conditions. You do not need to include approval letters if you are conducting recruitment using mainstream social media routes (e.g., Twitter, Instagram, Facebook, Snapchat, TikTok) to your own followers, and/or snowball sampling/word of mouth recruitment.		

Section 3: Project Methodology – Please tick which type of project you are seeking approval from the PEC for. If your project involves mixed methods, then tick all which apply.

Route Type	Methodology	Tick here
Green Route (no direct contact with participants required, and no data is collected/recorded which could identify participants)	Theoretical paper / systematic literature review / Rapid Structured Literature Review (RSLR)	
	Novel analysis of an existing dataset gathered by another researcher or group which you are certain has abided by appropriate ethical procedures for the relevant discipline	
	Observation of participants in a public place in which they could reasonably be expected to be observed by strangers or in an online space which does not require users to log in to access.	
	Content analysis of material which is publicly available and does not require users to log in to access content.	
	Other method without direct contact with participants **	
Amber Route (direct contact with participants, but no additional ethical considerations beyond the minimum requirements)	Requirements gathering for and/or user testing of a prototype which is highly unlikely to cause any harm or distress to participants and which does not aim to collect data from a potentially vulnerable group	
	An experiment which is highly unlikely to cause any harm or distress to participants and which does not aim to collect data from a potentially vulnerable group	
	A survey/questionnaire design which is highly unlikely to cause any harm or distress to participants and which does not aim to collect data from a potentially vulnerable group	✓
	An observational study which is highly unlikely to cause any harm or distress to participants and which does not aim to collect data from a potentially vulnerable group	
	Content analysis research which is highly unlikely to cause any harm or distress to participants and which does not aim to collect data from a potentially vulnerable group	
	Interviews and/or focus groups which are highly unlikely to cause any harm or distress to participants and which do not aim to collect data from a potentially vulnerable group	
	Other method which is highly unlikely to cause any harm or distress to participants and which does not aim to collect data from a potentially vulnerable group **	
Red Route (direct contact with participants, including one or more project aspects which require special	Requirements gathering for and/or user testing of a prototype which may cause harm or distress to participants and/or which involves collecting data from any potentially vulnerable group	
	An experiment which may cause harm or distress to participants and/or which involves collecting data from any potentially vulnerable group	
	A survey/questionnaire design which may cause harm or distress to participants and/or which involves collecting data from any potentially vulnerable group	

Appendix B – Ethics approval

Dear Amy,

Thank you for your submission to the Psychology Ethics Committee. **Your Amber route project has been approved.**

Good luck with your research.

Kind regards,
Liam

Dr. Liam Challenor,

Chartered Psychologist, C.Psychol., Ps.S.I
Lecturer - BSc (Hons) in Applied Psychology, MSc in Cyberpsychology
Programme Chair - MSc Cyberpsychology
Chair of the Psychology Ethics Committee (PEC)
PSI: M6789C

Dept Technology and Psychology
IADT

Appendix C – full copy of questionnaire

Understanding Flow in the For-You-Page

Information sheet

Title of project: Exploring TikTok users' perceived Flow experiences and the influence of the TikTok Algorithm.

You are being invited to take part in the research, Investigating Flow experiences among TikTok users and the influence of the TikTok Algorithm. This project is being undertaken by Amy O'Sullivan for her major research project as part of the BSc (Hons) in Applied Psychology, IADT.
Before you decide whether you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with someone you trust. If there is anything that is unclear or if you would like more information please ask, our contact details are at the end of this information sheet. Thank you for reading this.

What is the purpose of the project? TikTok is a widely used social media platform, known for its personalised algorithm and endless scroll which can captivate its users. This research aims to help gain a further understanding of TikTok users' experience of the algorithm and how they believe it influences their engagement with the platform and experiences of flow.

Who is being invited to take part? This study is for regular to high frequency TikTok users over the age of 18. This study requires you to be a user of TikTok and watch the FYP.

What is involved? If you choose to participate, you will be asked demographic questions about

your age and gender, followed by a questionnaire. The questionnaire asks about your experiences using TikTok (including frequency, type of content, and reasons for use) and your perception of TikTok's algorithm and behaviours engaging in it. The study will take approximately 10 minutes.

Do I have to take part? You are free to decide whether you wish to take part or not. If you do decide to take part, you will be asked to sign a consent form that lets us know you have read this information sheet and understand what is involved in the research. You are free to withdraw from this study at any time and without giving reasons.

What are the disadvantages and risks (if any) of taking part? This study is considered low risk, but you may decide not to answer some questions if you do not wish to.

What are the possible benefits of taking part? We cannot promise the study will benefit participants. However, the information we get from the study will help to increase the understanding of the influence TikTok's algorithm has on users' experiences of flow.

How will my information be used? Your responses to the questionnaire will be combined with all other participants' data, and the data will be coded and thematically analysed. No individual's data will be identifiable in the final report. The results of this analysis will be reported in the thesis for the BSc (Hons) in Applied Psychology at the Dun Laoghaire Institute of Art, Design & Technology. This can be requested through the library at IADT, or by emailing the researcher or supervisor at n00220458@iadt.ie and robert.griffin@iadt.ie. This study may also be published in an academic journal article and may be written about for blog posts or media articles, and these can be requested from the researcher.

How will my data be protected? Under the EU General Data Protection Regulation (GDPR), the legal basis for collecting data for scholarly research is that of public interest. The regulations regarding the protection of your data will be followed. Only data which is needed for analysis will be

collected. By giving your consent to take part in the study, you are consenting to the use of your data as detailed in this information sheet. The researcher will retain the data for at least one year and may retain it for up to 7 years if the results of the study are published in certain capacities (e.g. in a journal article). There is also a possibility that the fully anonymised dataset may be submitted to a journal and made available to other researchers and academics worldwide for verification purposes. However, if this occurs, it will be ensured that you are not identifiable from the data.

As the supervisor on this project, I, Robert Griffin, am responsible for ensuring that all datasets will be stored in accordance with GDPR and those which are not submitted to a journal will be fully deleted on or before the date 7 years from data collection (27/1/2033).

The following people will have access to the data: Researcher -Amy O'Sullivan, Supervisor- Robert Griffin, and assistance may be required from lecturer Dr Grainne Kirwan regarding analysis.

Data will be secured on a password-protected computer. In the case of a data breach, the data protection officer in IADT will be informed immediately. Data will be coded and analysed, and participants' responses will be unidentifiable. As outlined under GDPR, data will be retained for one year and may be retained for up to 7 years. You will find contact information for IADT's Data Protection Officer, Mr. Bernard Mullarkey, and more information on your rights concerning your data at https://iadt.ie/about/your-rights-entitlements/gdpr/

Who has reviewed the study? The IADT Psychology Ethics Committee has approved this study.

What if you have any questions or there is a problem? If you have a concern about any aspect of this study, you may wish to speak to the researcher, who will do their best to answer your questions. You should contact Amy O'Sullivan at the email n00220458@iadt.ie or their supervisor Robert.Griffin@iadt.ie

Thank you for taking the time to read this information sheet.

Date – 22/1/2026

Consent Form

Title of Project: Exploring TikTok users' perceived Flow experiences and the influence of the TikTok Algorithm.

Name of Researcher: Amy O'Sullivan

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions. *

- ◯ Yes
- ◯ No

2. I understand that my participation is voluntary and that I am free to withdraw at any time. *

- ◯ Yes
- ◯ No

3. I agree that data collected about me during this study will have identifying information removed before it is submitted for publication. *

- ◯ Yes
- ◯ No

4. I am over 18 years of age. *

- ◯ Yes
- ◯ No

5. I agree to take part in this study. *

- ◯ Yes
- ◯ No

Consent Form (use of quotes)

I understand that extracts from my written responses may be used as direct quotations in this researchers thesis and related academic publications. I understand that these quotations will be anonymised and that no identifying information will be included.

6. Do you consent to the use of quotes *

- ◯ Yes
- ◯ No

Participant code and demographic information form

Please provide us with an anonymised code which we can use to identify your data if you later wish to have it removed from our dataset. Please do so by answering the following two questions:

7. Anonymised code *

2nd and 3rd letter of a parent/guardians name & pets name, for example NAalfie

Enter your answer

8. Gender *

I identify as:

- ◯ Woman
- ◯ Man
- ◯ Non-binary
- ◯ Prefer to describe
- ◯ Prefer not to say

9. please describe your gender identity (optional)

Enter your answer

10. Age *

I am:

- ◯ Under 18 years
- ◯ 18-24 years
- ◯ 25-34 years
- ◯ 35-44 years
- ◯ 45-54 years
- ◯ 55- 64 years
- ◯ 65 years or older
- ◯ I'd prefer not to say

TikTok and Algorithm Questionnaire

Detailed responses help us better understand experiences and perspectives, but you should only share what you feel comfortable with.

11. Can you briefly describe when and why you typically use TikTok?

Enter your answer

12. How long do you typically intend to spend on a TikTok scroll when you open the app?

Enter your answer

13. If you feel comfortable to share, please provide your average daily TikTok usage

Enter your answer

14. How would you describe the content on your FYP?

Enter your answer

15. To what extent does the content feel personally relevant to you?

please expand in your answer

Enter your answer

16. If you ever become deeply absorbed while scrolling on TikTok, how would you describe that experience?

Enter your answer

17. What happens to your awareness of time during these moments of absorption?

Enter your answer

18. How aware are you of your surroundings or other tasks while using TikTok in this way?

Enter your answer

19. How do you perceive the role of TikTok's algorithm in shaping your attention or behaviour using the app? (how does it contribute to a sense of immersion?)

Enter your answer

20. Are there certain types of videos that tend to increase or disturb this sense of immersion?

Enter your answer

21. How do you typically feel immediately after a longer TikTok scroll?

Enter your answer

22. Is there anything else about your experience of TikTok use that you would like to share?

Enter your answer

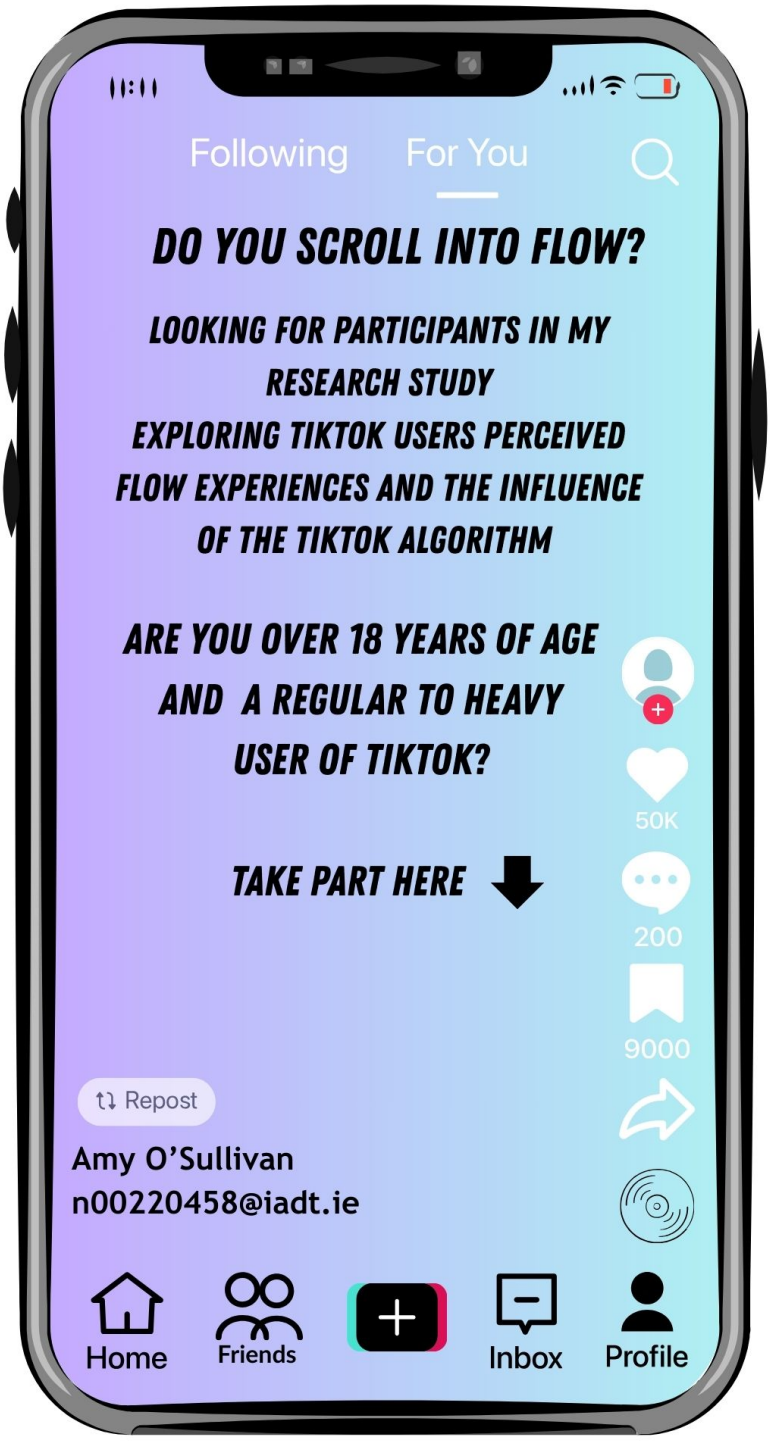
Confirmation of consent for data use

23. Having completed this questionnaire: *

- ◯ I consent to the researcher using my answers for their research
- ◯ I wish to have my answers removed from the research

Appendix D – Poster for in-person recruitment

Appendix E – Poster for online recruitment



Appendix F – List of extracted quotes

The algorithm maintains my interest by adapting content based on my previous engagement. (P1)

feels as though I cannot switch it off (P1) -

It feels like I am not in my own body when I am absorbed on TikTok (P3)

the algorithm shows me brain rotting content. (P2)

time goes by really fast (P4)

It often picks up my interest on a specific topic and will feed me content on it which leads to me spending more than I initially intended to. (P4)

use almost daily as a source of entertainment, a way to communicate with friends, and to stay informed about global events (P5)

I often intend to only spend a short amount of time on the app and then find myself having been on it for much longer than I realised or meant to. (P5)

I find I am moderately aware of my environment, I often multi-task while consuming TikTok, and set it down and play videos while completing another task. (P5)

The algorithm definitely shapes my experience as if videos weren't so personally tailored to my interests I would not spend as much time on the app. (p5)

it knows my upcoming travel plans and provides me with relevant content (p6)

when I feel bored or as a distraction from nerves or anxieties. (p8)

due to tracking I think the algorithm shapes my attention and use easily, each video keeps me entertained and effortless scroll keeps me wanting more. (p7)

It's like my mind is blank, and I am in a repetitive cycle whereby getting to the end of a video is a reward and you get to scroll to start it all over again. (p8)

I find myself looking for something else to keep my mind occupied after a scroll. (p8)

encourages me to try new products and exercises (p9)

I believe TikTok use is negatively impacting my attention span. (p9)

I find it comforting (p10)

provides short videos that don’t require a lot of reaction and feeds me personalised videos I would enjoy. (p10)

my for you page can feel frightingly relevant to me and my life. (p12)

I often do not hear or see what is going on in my surroundings and people have to try get my attention more than once. (p12)

it can feel so though I am in a state of flow (p13)

I believe the apps ability to capture my attention is due to the algorithm as I engage more when I am shown videos I am interested in. (p13)

I would describe it as a compulsive, mindless habit - 'doomscroll' (p14)

TikTok “FYP” has adapted very strongly to my personality and has the ability to sustain my attention for hours. (p14)

I don’t realise time has gone by, 20 minutes feels like 5 (p15)

I get very bored of the app if I see to many advertisements. (p15)

it creates this sense that I am both aware that I am mindlessly consuming content but don’t fight it as it is entertaining me.(p16)

by showing me content I am interested in it keeps me scrolling for longer (p17)

any content that doesn’t feel relevant I scroll past. (p18)

it feels really pleasant to be absorbed by the content and disconnect from what is going on but after it feels as though I have been wasteful with my time. (p18)

it feels as though I can’t turn it off (p20)

at time videos disturb my immersion but I usually just ignore them and scroll past (p20)

I use it as a way to relax even though I know it won’t provide relaxation. (p21)

It makes you block out your responsibilities and ongoing tasks and feels as though you reach a flow state, of mindless scrolling. (p22)

because the videos interest me it keeps me engaged and I enjoy them so I continue scrolling for longer. (p22)

When I start to see multiple 'brain rot' videos it makes me feel as though I should disengage and turn the app off. (P.22)

It feels like it is only me and the people on my screen and focus on my surroundings disappears. (p23)

I use TikTok intermittently throughout the day (p23)

I lose awareness and have often nearly missed my stop when using it on public transport. (p23)

It a good way to keep informed on current trends and events. (p24)

it makes it difficult to not become immersed when the algorithm shows me videos that engage me and align with my interests. (p24)

At times my fyp shows me content that feels like something I needed to see. (p25)

sometimes I don't even realise people have contacted me. (p25)

its especially easy to lose time when you are consuming a movie/tv shows broken up into multiple clips on TikTok. (p26)

When the content to relatable to you and your life, it can be easy to become absorbed for longer durations. (p26)

my usage will be at its worst for about a week or two before I just delete the app to stop the cycle. (p27)

provides me with a sense of emotional disengagement that I seek by using TikTok. (p27)

you can't really recall any of the videos you have consumed (p27)

passively watch all the content waiting for something to peak your interest (p27)

mindless to surroundings and tasks, even to my own comfort. (p27)

I tend to watch most videos in full which ends up with my fyp being of lower quality content that isn't relevant to me. (p27)

sometimes when I reflect on a scroll and can't even remember the videos I consumed (p28)

I find my fyp to be accurate at immersing me with my interests, and any that don't I just skip after a few seconds of watching (p30)

if I have neglected other tasks it makes me feel guilty. (p30)

it provides enjoyment but I still feel guilty about losing the time. (p33)

you don’t even realise that you are absorbed (p33)

It feels personally directed for me as it shows me content on my hobbies and interests (p37)

I feels as though my TikTok feed is very relevant and knows my mood at times and shows content that aligns with my mood at the current time (p39)

due to the effortlessness of scrolling you don’t even realise how long you have been scrolling. (p39)

I use TikTok to look for information on a specific topic and then find myself stuck in a scroll. (p39)

scrolling become automatic, unaware I am even scrolling (p40)

it knows my likes and dislikes and shows me videos that keep me engaged. (p40)

gives me something to chat about with friends. (p40)

videos are relevant and capture your attention and keep you scrolling. (p41)

the app design makes it easy to scroll past videos that I don’t want to watch. (p41)

it tracks your activity such as likes, saves and watch time to determine what keeps your attention for longer which is then more likely to keep you scrolling for longer. (p42)

I have also witnessed family lose awareness such as burning food. (p42)

I feel annoyed when I catch myself wasting time (p42)

I am usually disengaged when I come across a video I am not interested in. (p8)

my immersion can often be interrupted from disturbing content or news or videos that I find cringe (p4)

I get very bored of the app if I see to many advertisements. (p15)

content that doesn’t align with my interests (p16)

content containing loud or irritating audio or any form of hate speech disrupts my sense of peace and makes me stop engaging with the video. (p18)

Appendix G – Table of themes, codes and quotes

Theme	Sub-theme	Code	Quote
Flow-like experiences	Effortless absorption	Passive consumption	provides short videos that don't require a lot of reaction and feeds me personalised videos I would enjoy. (p10) passively watch all the content waiting for something to peak your interest (p27) scrolling become automatic, unaware I am even scrolling (p40)
Flow-like experiences	Effortless absorption	Focused attention	it can feel so though I am in a state of flow (p13) It makes you block out your responsibilities and ongoing tasks and feels as though you reach a flow state, of mindless scrolling. (p22) sometimes I don't even realise people have contacted me. (p25) mindless to surroundings and tasks, even to my own comfort. (p27)
Flow-like experiences	Temporal and attentional distortion	Time distortion	time goes by really fast (P4) I don't realise time has gone by, 20 minutes feels like 5 (p15)
Flow-like experiences	Temporal and attentional distortion	Reduced awareness of surroundings	I often do not hear or see what is going on in my surroundings and people have to try get my attention more than once. (p12) It feels like it is only me and the people on my screen and notice of my surroundings disappears. (p23)

			I lose awareness and have often nearly missed my stop when using it on public transport. (p23)
Flow-like experiences	Hedonic Immersion	Escapism	when I feel bored or as a distraction from nerves or anxieties. (p8) provides me with a sense of emotional disengagement that I seek by using TikTok. (p27)
Flow-like experiences	Hedonic Immersion	Gratifications	daily as a source of entertainment, a way to communicate with friends, and to stay informed about global events (P5) I find it comforting (p10)
Flow-like experiences	Hedonic Immersion	Social uses	It a good way to keep informed on current trends and events. (p24) gives me something to chat about with friends. (p40)
Algorithmic shaping of flow	Perceived personalisation	Content relevance	The algorithm definitely shapes my experience as if videos weren't so personally tailored to my interests I would not spend as much time on the app. (p5) my for you page can feel frighteningly relevant to me and my life. (p12) I believe the apps ability to capture my attention is due to the algorithm as I engage more when I am shown videos I am interested in. (p13) by showing me content I am interested in it keeps me scrolling for longer (p17) it makes it difficult to not become immersed when the algorithm shows me videos that engage me and align with my interests. (p24)

Algorithmic shaping of flow	Perceived personalisation	Sense of algorithm "knowing me"	it knows my upcoming travel plans and provides me with relevant content (p6) At times my fyp shows me content that feels like something I needed to see. (p25) It feels personally directed for me as it shows me content on my hobbies and interests (p37) my TikTok feed is very relevant and knows my mood at times and shows content that aligns with my mood at the current time (p39) it knows my likes and dislikes and shows me videos that keep me engaged. (p40)
Algorithmic shaping of flow	Feedback loops and sustained engagement	Infinite scroll	due to the effortlessness of scrolling you don't even realise how long you have been scrolling. (p39)
Algorithmic shaping of flow	Feedback loops and sustained engagement	Rapid filtering	any content that doesn't feel relevant I scroll past. (p18) at time videos disturb my immersion but I usually just ignore them and scroll past (p20) I find my fyp to be accurate at immersing me with my interests, and any that don't I just skip after a few seconds of watching (p30)
Algorithmic shaping of flow	Feedback loops and sustained engagement	Reinforcement cycles	"the algorithm maintains my interest by adapting content based on my previous engagement." (P1) TikTok "FYP" has adapted very strongly to my personality and has the ability to sustain my attention for hours. (p14)

Algorithmic shaping of flow	Feedback loops and sustained engagement	Habitual engagement	I would describe it as a compulsive, mindless habit - 'doomscroll' (p14) I use TikTok intermittently throughout the day (p23)
Algorithmic shaping of flow	Perceived manipulation and control	Engagement driven design	It often picks up my interest on a specific topic and will feed me content on it which leads to me spending more than I initially intended to. (P4) its especially easy to lose time when you are consuming a movie/tv shows broken up into multiple clips on TikTok. (p26) the app design makes it easy to scroll past videos that I don't want to watch. (p41)
Algorithmic shaping of flow	Perceived manipulation and control	Algorithm influencing behaviour	I find I am moderately aware of my environment, I often multi-task while consuming TikTok (P5) encourages me to try new products and exercises (p9)
Tensions and Limits of flow	Awareness vs immersion	Aware but still scrolling	it creates this sense that I am both aware that I am mindlessly consuming content but don't fight it as it is entertaining me.(p16) I use it as a way to relax even though I know it won't provide relaxation. (p21)
Tensions and Limits of flow	Awareness vs immersion	Awareness of tracking	due to tracking I think the algorithm shapes my attention and use easily, each video keeps me entertained and effortless scroll keeps me wanting more. (p7) it tracks your activity such as likes, saves and watch time to determine what keeps your attention for longer which is then more likely to keep you scrolling for longer. (p42)

Tensions and Limits of flow	Awareness vs immersion	Cognitive awareness of limits	When I start to see multiple 'brain rot' videos it makes me feel as though I should disengage and turn the app off. (P.22) my usage will be at its worst for about a week or two before I just delete the app to stop the cycle. (p27)
Tensions and Limits of flow	Loss of control	Reduced self-control	feels as though I can't switch it off (P1) It feels like I am not in my own body when I am absorbed on TikTok (P3) it feels as though I can't turn it off (p20) you don't even realise that you are absorbed (p33) I have also witnessed family lose awareness such as burning food. (p42)
Tensions and Limits of flow	Loss of control	Compulsive engagement	It's like my mind is blank, and I am in a repetitive cycle whereby getting to the end of a video is a reward and you get to scroll to start it all over again. (p8)
Tensions and Limits of flow	Loss of control	Prolonged use	because the videos interest me it keeps me engaged and I enjoy them so I continue scrolling for longer. (p22) I use TikTok to look for information on a specific topic and then find myself stuck in a scroll. (p39) I feel annoyed when I catch myself wasting time (p42)

Tensions and Limits of flow	Emotional and cognitive consequences	Short term gratifications vs post scroll regret	it feels really pleasant to be absorbed by the content and disconnect from what is going on but after it feels as though I have been wasteful with my time. (p18) if I have neglected other tasks it makes me feel guilty. (p30) it provides enjoyment but I still feel guilty about losing the time. (p33)
Tensions and Limits of flow	Emotional and cognitive consequences	Perceived negative cognitive effect	I find myself looking for something else to keep my mind occupied after a scroll. (p8) I believe TikTok use is negatively impacting my attention span. (p9) you can't really recall any of the videos you have consumed (p27) sometimes when I reflect on a scroll, I can't even remember the videos I consumed (p28)
Tensions and Limits of flow	Algorithm limitations	Irrelevant content	I tend to watch most videos in full which ends up with my fyp being of lower quality content that isn't relevant to me. (p27)
Tensions and Limits of flow	Algorithm limitations	Disruptions to flow	I get very bored of the app if I see to many advertisements. (p15) my immersion can often be interrupted from disturbing content or news or videos that I find cringe (p4) content containing irritating audio or any form of hate speech disrupts my sense of peace and makes me stop engaging with the video. (p18)