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Long-Term Effects of Algorithm-Driven Content Consumption on Youth Development and Psychological Perceptions

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Abstract

This study explores the long-term impact of algorithm-driven content on how youth grow and think. As apps and social media platforms continue to personalize content using algorithms, youth aged 13 to 21 are being shaped by what they see online. Using a mix of surveys and interviews, the research examines changes in behavior, attention, and emotions from constant exposure to personalized feeds. The findings show that spending a lot of time with algorithm-based content is linked to shorter attention spans, more frequent social comparison, trouble with emotional control, and weaker real-life social skills. Previous studies highlights that the current algorithm-driven content feeds are problematic in term of addictiveness and damaging effects on childrens well-being (Hadero & Ortutay, 2024). Many participants also reported feeling stuck in echo chambers

where they only saw content that matched their existing beliefs, which limited their ability to see other perspectives. Some felt dependent on their feeds, consumed content passively, and struggled to feel in control of their online experience—pointing to a strong mental connection with the technology. While these algorithms make digital content more fun and easier to access, they also create mental and emotional challenges that affect how youth build their identity and manage their well-being. The study calls for better digital education, more thoughtful and ethical algorithm design, and stronger policies to protect young users. These insights add to the growing conversation about how tech shapes mental health and stress the need for responsible tech practices to support healthier online experiences for the next generation.

Keywords: Algorithm-driven Content, Youth Development, Psychological Effects, Social Media, Attention Span

1. Background of the Study

The objective of this study is to assess the long-term effects of algorithm-driven content consumption on youth development and psychological perceptions. By understanding these effects, the study investigates how algorithmic decision-making on social media affects the youth's psychological, emotional, and cognitive states chronologically. From such findings, the study should shed light to educators, policymakers as well as the guardians in promoting healthy use of technologies while limiting the negative impacts on youths.

The unbelievably fast growth of social media platforms makes it challenging to predict changes in the consumption and distribution of information, particularly as experienced by young people. Engagement patterns, preferences, and browsing histories define the type of content that is displayed to the users by algorithms that are at the core of platform operations. Of course, the goal of these algorithms in increasing the level of satisfaction and interaction in users is noble; however, these harm the psychological, emotional, and cognitive aspect of youngsters. Several previous works have distinguished that current algorithm-based content feeds are problematic in terms of their addictiveness and damaging effects on children's well-being (Hadero & Ortutay, 2024).

Young people as active digital consumers who consume content provided by algorithms are even more vulnerable. They can manifest in many ways including; they perpetrate the echo chamber effect, fuel unrealistic societal roles, mental health, and perception of reality. In Crosier (2024), he pointed out that the effects of screen addiction stems from screen time due to interacting algorithms as numerous studies have established screen time risks developing mental illnesses in adolescents.

The effect of algorithms on youth is complicated and diverse. While they can enhance education and promote social interaction, they might also limit critical thinking, foster harmful comparisons, and introduce biases in the information obtained. Decision-making on social media can greatly affect the psychological, emotional, and cognitive growth of young individuals in multiple ways. The youths and teenagers represent the most engaged users of social media platforms, which have turned out to affect the youth's psychological and emotional impact on their everyday routines (Elwadhi 2024). Young people are very vulnerable to comparison, particularly regarding their body image and achievements. Regular exposure to idealized or altered images may result in feelings, which can contribute to mental health problems like anxiety or depression. Furthermore, seeking social approval via likes, comments, and shares can impact self-esteem, in youth development that result in feelings of loneliness or isolation if their content fails to resonate. There are multiple concerns about how algorithms affect the growth of young individuals. This indicates that algorithms have the potential to generate echo chambers, limiting access to diverse viewpoints and potentially strengthening established beliefs.

According to the study of Swart (2021), the impact of algorithms on the young individuals engage with, especially regarding social media. It highlights that although the impact of algorithms on individuals' everyday lives, there is a lack on how youth perceive and react to this. The article seeks to examine, from the users' viewpoint, how young individuals perceive and engage with news driven by algorithms, and how these interactions enhance their comprehension of algorithms. Especially, it concerns how young users interact with and gain insights from the customized news they find online and to youth development. Algorithms play an increasingly significant role in the daily lives of young childrens, particularly in shaping the experience of young people. The continuous exposure to algorithmic-driven platforms, including as social media feeds and personalized content recommendations. When young childrens' interact with algorithms, they are influenced not only by the material they see, but also by the fundamental mechanisms that underlie these systems. Wong *et al.* (2024) said that algorithms play an important role in young childrens' cognitive development, particularly in terms of improving their capacity to tackle complicated computational issues. Algorithms promote intellectual growth by creating new learning tools. These tools allow young children to explore new areas of knowledge, improve their decision-making skills, and even discover imaginative solutions to problems.

According to Metzler and Garcia (2023), algorithms that process data and recommend content have become ubiquitous on digital media. The researcher notes that their widespread use was not introduced systematically and is quite fast, which leads to the emergence of questions about the influence on quality of life at individual and societal level. However, the implications of algorithm curation for the psychological and developmental needs of youth are left unsurprisingly unexamined. The lack of information in this area shall be seen as a research gap significant enough to warrant the research of these impacts since the aggregate understanding of such impacts is vital to policy formulation and creation of protective measures.

Studies indicate that algorithms have a positive impact on psychological development (Wong *et al.* 2024). As the youth continue to interact with algorithms on a regular basis, it becomes increasingly crucial to understand the long-term consequences of this connection. It also provides benefits like entertainment and personalized search results, both of which influence young people's thinking. According to Vallejos *et al.* (2021), algorithms are also employed in education to assist in the study and learning process, allowing the Youth to get more knowledge. This is one of the algorithm's good effects on a youth's development.

There has been a profound change in how people, especially the youth, interact, as they increasingly rely on algorithms to personalize the content of digital platforms. Social media, video streaming services, and search engines often use algorithms to recommend content based on users' behaviors, preferences, and past interactions. While these systems are designed to enhance user engagement, they also play a significant role in shaping perspectives, behaviors, and ways of thinking. According to research by Vallejos *et al.* (2021), algorithmic processes can have profound effects on the well-being of young people. This study emphasized that these systems often prioritize "engagement metrics," which may unintentionally expose young users to harmful or polarizing content. Such exposure on social media can influence their emotional regulation, mental health, and social behaviors, particularly since they are still in a stage of cognitive and psychological development. Additionally, repeated recommendations from algorithms can reinforce and reshape certain perspectives, beliefs, attitudes, and behaviors, potentially affecting the long-term development of young individuals. Despite these findings, there remains limited knowledge about the long-term effects of algorithm-driven systems on youth development and their psychological outlook. Focusing on this gap is highly significant, as it can help better understand the risks and opportunities associated with algorithmic systems. This research aims to explore the long-term impacts, providing insights to guide the responsible design and regulation of digital platforms.

This study proposes to fill this gap by exploring the consequences of algorithm-aided content use on youthful development and psychological impressions. This paper aims at shedding light on the topic of algorithms for youth well-being and the risks that relate to such technologies in a bid to help in the constructive discussion of the responsible usage of such technologies. Knowledge of these aspects can help when designing rules and applications which will help to prevent negative effects and improve peoples' interaction with the internet.

Statement of the Problem

The main objective of this study is to assess the long-term effects of algorithm-driven content consumption on youth development and psychological perceptions. Specifically, it explores how sustained exposure to algorithm-driven platforms impacts individuals aged 13 to 24 years old in terms of psychological well-being, personal development, decision-making, critical thinking, and social interactions. Also, the research aims at finding out how the youth deal with the impact of these platforms; their coping methods.

1. To what extent does sustained exposure to algorithm-driven platforms correlate with levels of psychological well-being (e.g., stress, anxiety, self-esteem) among

individuals aged 13-24?

2. How does long-term consumption of algorithm-curated content influence decision-making tendencies and critical thinking abilities in young users?
3. What are the patterns of social interactions and offline engagement among youth with high versus low exposure to algorithm-driven content?
4. How do young individuals perceive the role of algorithm-driven content in shaping their personal development and life choices?
5. What are the lived experiences of youth regarding their awareness and control over the influence of algorithm-driven platforms on their psychological and social well-being?

Scope and Delimitation

This section of the study defines the scope and delimitations of the research study, identifying the primary goal and outlining the study's boundaries. This provides a structure that both supports and defines the study's focus. The researchers are tasked with adopting a mixed-method approach to analyze both quantitative and qualitative data in the same study. This research will be conducted in Noveleta, Cavite, to investigate the long-term effects of algorithm-driven content on youth development.

The primary goal of this study is to assess the long-term impacts of algorithm-driven content on youth development and psychological perspectives, with a particular emphasis on how algorithms affect behavior through social media interactions. It focuses on platforms like social media and streaming services, which utilize algorithms to personalize content based on user behavior. The study will look at the positive and negative consequences of algorithmic influence on youth aged 13 to 24, particularly those who regularly use social media platforms, including how much time they spend per day or week on these platforms. People who are not in the target age range (13–24 years old) or who do not regularly access social media will not be included.

The study prioritizes examining the long-term impacts of algorithm-driven content, which is usually measured over time of months or years to give better insight of these platforms' effects on youth. The study focuses on the student community as a part of youth who actively use applications that involve algorithms. To this end, the study will highlight students in order to understand their narrative, behavioral and emotive accounts of the impact of these platforms in their lives.

Researchers will not discuss how algorithms used in the software design or the manner in which the algorithm content affects participants' behavior and psychological health. This build participant-focused reconstructs the emphasis on perceptions and ponderings over purely analysis, which is beneficial to stress the human side of content consumption through algorithms. The sample size in quantitative approach could exceed 60 respondents depending on availability and participants' interest. The respondents for the qualitative approach are 10 participants who will also come from the participants of the quantitative approach where survey questionnaires with the open-ended questions will be the method of data collection.

Regarding geographical generalization of students for the study to be practical, the participants in the study will only be those that are accessible. While this limits the diversity of the sample, it allows for a deeper, more focused

investigation of participants' experiences within a manageable scope. This suggests that the findings can be generalized, or borrowed and modified to an extent, for other youth, keeping in mind cultural and geographical differences.

Conceptual Framework

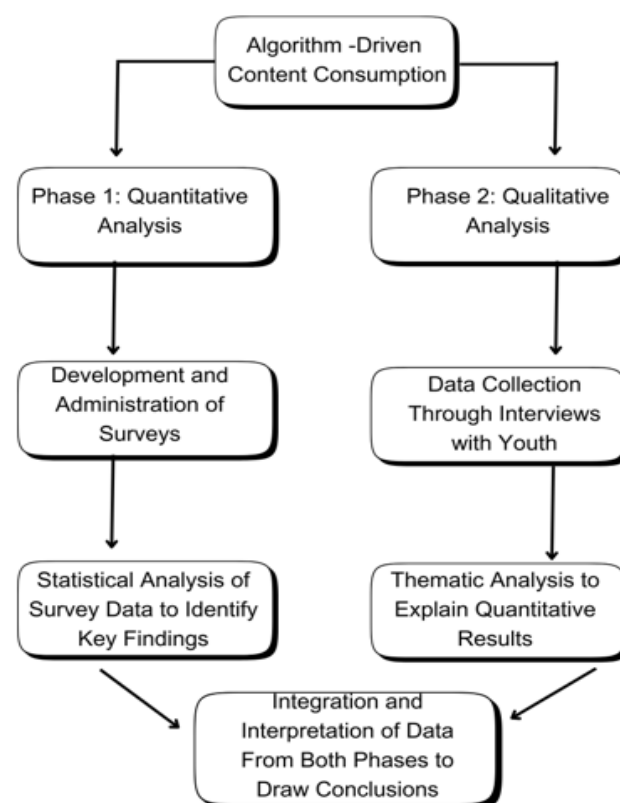


Fig 1: The Conceptual Framework of the Study

The researchers employed an sequential explanatory mixed methods design and adopted an observation cross-sectional two-phase collecting and analysing strategy to investigate algorithmic curation of content consumption. Initially, the researchers were concerned with qualitative methodology and engaged themselves in the development of questionnaires. These surveys collected quantitative data regarding usage of content influenced by algorithm consolidation. This paper presented the quantitative analysis of data that was collected by using questionnaires and the results were aimed at developing an initial appreciation of the phenomenon under investigation so as to guide the next phase of the study.

The second phase involved data collection through interviews in order to get rich description of the behaviours, histories and perceptions of the target population impacted on by algorithms. The information derived from the interview was analyzed thematically while making specific trends identified in the quantitative phase have a deeper analysis. Lastly, the researchers synthesise the data obtained from both phases to balance quantifiable outcomes with rich, qualitative data to gain a deep insight into the role of algorithms when consuming content.

Theoretical Framework

These are the Social Learning Theory, Media Dependency Theory, and Digital Well-Being Theory, these theories make

up the theoretical framework for this research owing to their ability to help understand the consequences, in the long run, of algorithm-recommended content among the youths. These theories in combination stress interactions of algorithms with behavior, media dependency, and eustress–distress ratio as the grounds for studying psychological, emotional, and cognitive effects on youths, their growth.

The Social Learning Theory is developed by Albert Bandura and gives the viewer a way to interpret how youth are affected by aesthetics and comprehensiveness of social engineering on social media. Algorithms increase the likelihood of interacting with a particular set of behaviours or ideas or emotions to the point that young individuals are surrounded with observation and reinforcement. According to Winstone *et al.* (2022), using social media can lead to digital stress which is a mild negative impact that stems from negative experiences touching on use of digital technology or having constant access to social information on the internet. For instance, advertising materials that depict certain lifestyles or certain cultural values may affect their self-images, emotional states and behaviors.

This focus of this study is on the behavioural interactivities between the individual and the digital environment. Social media platforms, controlled by the algorithms, can be considered as the reflection of the modern ‘social model’, where people learn how to behave, what emotions to express, etc. According to Liao (2024), this model significantly reduces the cost of accessing information and changes people’s habits and experiences of obtaining information on the internet. Through reinforcement mechanisms such as likes, shares, and comments provide tangible measures of social and personal worth (Merino *et al.*, 2024).

The Media Dependency Theory is a framework or method that shows how frequently people rely on media, including social media and online applications. It has become a habit among people, particularly those aged 13 to 24. It is evident that many people rely on media which drives them to adapt the behavior because of the algorithm-driven content that they see. According to Theocharis *et al.* (2021), the media dependency hypothesis can provide a person with misinformation, it is simpler to learn about recent news in the world, but it can also cause misinformation, which will only end up spreading the misinformation to others and influence the way they think. Because it is evident that adolescents aged 13 to 24 are prone to believe misinformation on social media. Social media algorithms have both positive and negative consequences for youths. They can increase engagement and creativity, but they also lead to concerns such as misinformation and mental health issues (Ytre-Arne *et al.* 2020).

Once individuals become used to media dependency, it is tough to break the habit. Depending on the media might have positive and negative effects. However, it also supports the individuals, particularly students aged 13 to 24 (youth), by assisting them with their academics. Studying the effects of media platforms dependency, adaptability to algorithmic content, and the impact of algorithm-driven content on human behavior and perception is an excellent plan to know what effects they have had on the long-term use of media (Wani *et al.* 2024). Furthermore, this research might help in determining methods for avoiding negative outcomes while enhancing benefits. Understanding these dynamics is

essential for promoting healthier and more informed media consumption habits.

Among the general public, there appears to be a growing need and interest in receiving digital mental health and well-being support as it gives a positive and negative impact on young individuals. Young people’s mental and emotional health can be impacted by technology use in both positive and bad ways. On the plus side, technology gives people access to mental health services, online support groups, and instructional materials that can aid in the management of stress, anxiety, and depression. Despite its contentious nature, social media platforms may also help people feel connected and supported, especially those who might find it difficult to interact with others in person or feel alone (Eisenstadt *et al.* 2021). Digital technologies that support self-care and self-awareness include mindfulness applications and mental health tracking. However, there are a number of possible risks associated with excessive or unhealthy technology use. Regular use of social media, especially by teenagers, can lead to unfavorable self-comparisons, problems with body image, and feelings of inadequacy. Applications offering social companionship and basic therapy tools have grown in popularity for emotional, social, and psychological support on young individuals.

When considering the balance between the benefits and potential harms of technology use for young people, it is essential to concentrate on how technology influences the growth, health, and social interactions (Laestadius *et al.* 2024). The advantages of technology for young individuals are clear in sectors such as education, communication, and information access, allowing them to acquire new abilities, maintain connections, and interact with various viewpoints. Nevertheless, the possible risks are considerable as well, encompassing mental health concerns, excessive reliance on technology can interfere with sleep routines and lead to a more inactive lifestyle, both of which harm physical well-being.

Significance of the Study

This study explores the long-term effects of algorithm-driven content consumption on youth development and psychological perceptions. This paper provides useful information of the various concerns to different stakeholders and helps them understand how algorithms affect the society in one way or the other in the digitised world.

Students will develop critical thinking skills as a result of the performance of the algorithmic content and to better consume media.

Teachers will find useful information on how algorithmic content influences youths; thus, implementing valuable recommendations on the content of educational programmes in media literacy to promote sound and conscious consumption of media content by youngsters.

School administrators will gain the knowledge and skill in putting down an ethical and appropriate learning environment in relation to the learning content and material exposure to the learners.

The environment will improve as the study encourages ethical algorithm utilizations, along with the call for the elimination of detrimental content that has adverse effects on the self and the broader community

Consumers will benefit by gaining awareness of how algorithmic content affects their well-being, empowering

them to make informed choices and engage with digital media more responsibly.

Young people will derive improved awareness of how algorithm-driven content affects their psychological and emotional well-being thus promoting more conscious and healthy interaction with technology.

Policy makers will be in a position to design regulations that ensure the youth are shielded from the effects of algorithmic systems, but at the same time, the youth are taken through the right healthy environment in the use of the digital services.

Guardians and Caregivers will be helped by learning how algorithmic influences youths' emotion and psychological wellbeing so that they can facilitate proper young healthy use of digital platforms.

Future researchers will establish a more complicated correlation between algorithms of digital content and youth conduct to enhance the protective reliant strategies of youths in the digital world.

Definition of Terms

Addiction: Indicates uncontrolled or excessive use and dependence such as excessive screen time resulting from algorithm-based content.

Algorithm: Represents processes or systems that are controlled by instructions or strategies that in turn are used by social media to display content based on the movements and interests of its users.

Altered images: Signifies images that have been altered using special tools to appear more attractive by society's standards.

Applications: Refers to software and tools powered by algorithms to perform a specific task and enhance the user experience.

Cognitive: It is related to a person's thinking, learning, memories, and solving problems that also helps people to understand and make decisions.

Computational issues: Refers to problems related to logical or algorithmic reasoning.

Critical thinking: This refers to the human ability to analyze, evaluate, and make a decision based on logic.

Digital consumers: These are the people who use online content or services.

Echo Chamber Effect: refers when people are only exposed to ideas or beliefs that are similar to them, so the different perspectives of people become limited.

Engagement metrics: Regarding the measurement of user participation, such as likes, comments, and time spent on the platform, used by algorithms to prioritize content.

Entertainment: Refers to activities or contents that provide entertainment or pleasure; algorithms provide personalized entertainment.

Fundamental mechanisms: Refers to the basic processes that operate and enable algorithms.

Long-term consequences: Regarding the long-term effects or results of continued use of algorithm-driven content.

Personalized content: Refers to content that is tailored based on user preferences, habits, or history.

Polarizing content: Refers to content that divides opinions or promotes extreme views.

Policy formulation: Refers to the process of making policies to solve issues and improve the system.

Search engines: Refers to online tools that help find information on the internet, usually powered by algorithms.

Social approval: This is the acceptance or recognition from others, based on this study, it is often measured by the number of likes, comments, and shares on social media.

Societal level: It is related to the entire society, including collective practices, norms, and effects on the community.

Societal roles: Refers to expectations and a social norm that can be influenced by unrealistic images found on social media.

Technologies: Refers to devices and systems, including algorithms used for practical purposes.

Youth: Refers to young people, especially those in adolescence or early adulthood.

2. Review of Related Literatures and Studies

The current study on algorithms is highlighted in this chapter, which also summarizes all related literature, previous studies and papers that researchers have studied. In order to help readers better understand the research, this chapter provides facts and a summary on the research issue.

Youth Development and Algorithmic Influence

Young individuals increasingly engage with news personalization on social media, enhancing their algorithmic literacy through active management of their content feeds. This article explores how young individuals perceive and manage news personalization on social media, focusing on how these experiences enhance their algorithmic literacy.

According to Perez *et al.* (2021), many young users employ strategies such as following diverse accounts and adjusting platform settings to mitigate filter bubbles and tailor their news consumption. However social media algorithms significantly shape the values, habits, and perspectives of young individuals by curating content that resonates with their identities and beliefs. Many teens perceive these algorithms as accurate reflections of themselves, leading them to engage more deeply with content that aligns with their interests and values.

Social media algorithms are complex systems that determine the visibility and ranking of content across various platforms, significantly influencing user experience. As young users navigate these algorithmically curated environments, they may become increasingly unaware of the data-driven nature of their experiences, raising concerns about privacy and the potential for addiction to social media. According to Nassif (2024), young adults navigate the influence of algorithms on social media, highlighting how these algorithms can reinforce beliefs, create distorted self-images, and normalize harmful ideologies, leading to unhealthy habits and societal pressures.

Social Media Algorithms and Self Perceptions

Social media algorithms have a significant influence on users' self-worth and body perception, especially in younger audiences. These algorithms filter content that frequently highlights perfected lifestyles and unattainable beauty ideals, resulting in continuous social comparisons. Human-algorithm interaction has emerged as a pressing area in social media research because algorithms curate and govern most communication on social media (Taylor *et al.* 2022). Algorithms are a key part of our daily lives, influencing how we find and interact with information online. They determine what content we see on social media, news sites, and other platforms, often prioritizing what will keep us engaged rather than providing a balanced view (Dogruel, *et*

al. 2022). Individuals often compare themselves to these carefully selected images, leading to feelings of inadequacy and uncertainty. Social media algorithms have a big impact on how teenagers see themselves. These algorithms show content that matches users' interests, often highlighting idealized images and lifestyles. As teens scroll through platforms like TikTok, they frequently encounter posts that promote unrealistic beauty standards, which can lead to negative comparisons and feelings of inadequacy. Many young users start to believe that this curated content reflects who they are, but it can actually distort their self-image and contribute to mental health issues like body dissatisfaction and low self-esteem. This situation emphasizes the need for greater awareness about how social media affects the well-being of young people. This constant exposure can create a skewed perception of oneself, where people feel compelled to meet impossible standards, ultimately negatively impacting their mental well-being. The dopamine-driven nature of social media engagement exacerbates these issues. Users encounter short instances of joy from likes and comments, leading to a reliance on online approval for self-esteem. When posts do not achieve the anticipated engagement, it can result in weakened self-esteem and heightened anxiety.

This cycle reinforces the notion that self-worth is contingent upon external validation, further entrenching negative body image and self-perception. Furthermore, the echo chambers formed by these algorithms amplify sensations of loneliness and isolation. Users frequently encounter content that matches their current beliefs and preferences, potentially restricting access to varied viewpoints and reinforcing negative stereotypes. This lack of varied content can lead to a distorted perception of reality, complicating individuals' ability to cultivate a genuine self-image based on authenticity instead of crafted idealism.

Algorithmic Content and Social Relationships

One of the factors influencing how young people use online platforms for social interaction is the algorithm. It has a role that has influenced how young people who are internet-focused socialize and connect online. Bernstein *et al.* (2024) claim that surveys on social media sites like Facebook, Twitter, and TikTok have the ability to influence users' opinions when they see a post that they don't like. The algorithm has established guidelines that users can provide feedback to one another, the ability for users to provide feedback can improve social interaction on the internet. The algorithm was developed by the platforms to reduce the amount of content that violates community standards, such as false information. This rule that the algorithm does is beneficial for improving how individuals socialize through online platforms. According to Swart *et al.* (2021), the news and information that young people consume today is increasingly influenced by social media algorithms. Often, young people are focused on social media platforms where the algorithm dictates the content they see. There are times when algorithms help facilitate socialization and give information to young people. Despite this, social media algorithms play an important role in the way information is obtained and in helping young people interact with their peers.

Algorithms have a significant impact on social relationships, influencing how people engage with one another. Social media algorithms have a significant impact on how

individuals interact with each other on those platforms. According to Norberg & Horne (2024), the social media algorithm can have an impact on people's virtual social connections and harm their capacity to interact with others. Because the algorithm impacts what internet users perspective, it influences how people interact with one another. Flyers are no longer necessary for others to obtain information or learn about the advantages of a product. Social media has accelerated and transformed people's connections with one another more digitally, but as a result, verbal communication is becoming less efficient. Face-to-face communication has become less active, yet social skills and communication will develop as a result of people's involvement in the social media algorithm. Even while social media makes communication easier and faster, interactions in person seem to have more depth and emotional connection. Being reliant on digital connections has resulted from this change, which could affect the development of essential nonverbal communication skills like body language and tone of voice that are critical to creating closer personal bonds (Esposito, 2022).

Voting and other real-world actions are limited by algorithmic content. People's social relationships are only shaped by algorithms if they spend a lot of time on social media, which is how they communicate or obtain information. As a result, users of social media platforms are prone to rapid influence from the algorithms they encounter (Jung *et al.* 2023). Users' preexisting opinions and preferences are reinforced by these algorithms, which give priority to content that is most likely to provide an interaction. Social differences may widen as a result of people becoming more divided in their opinions and less exposed to different points of view.

According to some previous research, the algorithm is intended to improve relational well-being and social connectedness. Algorithm-driven content is used to refine and expand the way users socialize on social media. This encourages users to use social media algorithms to speed up communication (Taylor & Chen, 2024). TikTok and other social media platforms claim that its algorithms—the technology that determines which posts/videos users see—are intended to promote social connection. The algorithm guides and influences people to develop social connections.

The Psychological Impact of Algorithm-Driven Content

The psychological impact of algorithm-driven content can be called a double-edged sword, this metaphor means that something has benefits and drawbacks. It also includes the mental health, emotional responses, and behavioral changes of people who are exposed to or use it. Social media or content delivery platforms are the ones that shape people's experiences in the way they influence what content should be seen and how it should be perceived (Graffius, 2024). Therefore this influence leads to positive and negative psychological outcomes.

One of the primary ways algorithms influence its users is through how they choose the content that can only be shown to its users, this process is known to be called as personalization of content. People who use and engage with these kinds of platforms may become more active, frequently commenting or reacting to posts more often and interacting with others, but this also has negative effects. As users become more active, there are possibilities of affecting their emotions or self in an undesirable way. An example of

this is having a narrow perspective because they often see information that only aligns to their beliefs and they are no longer exposed to different perspectives or opinions. This statement is supported by the findings of Agudo and Matute (2021) where their discussion focuses on the effect of algorithmic recommendation systems that may cause bias in the information received by the user that results in having a narrow perspective and negative emotions. Similar to the study of Cinelli *et al.* (2021) who show how the algorithmic curation of social media creates echo chambers, limiting users to different perspectives and reinforcing social polarization that causes negative emotional effects. In addition, the algorithm often creates a feeling of fear of being left out or being "out of the loop". This statement is similar to the concept "fear of missing out" (FOMO) and because of this they may feel pressure to comply with criteria set by the algorithmic recommendation. This statement is also consistent with the study of Franco (2024) in which the FOMO concept that comes from social media is also one of the main reasons why its users have social anxiety and other health issues. This study emphasized how FOMO causes emotional stress and increases pressure on social media users.

Consequences of Long Screen Time

Long-term use of mobile devices and social media platforms can also have negative effects on users. It is unavoidable and will significantly affect users' physical and mental health, particularly those who don't take breaks for screen time. According to Liu *et al.* (2023), children who are exposed to screens on a regular and constant basis may develop ADHD (*Attention Deficit Hyperactivity Disorder*). Addiction is triggered by prolonged screen usage, particularly in young people who continue to use screens. Their study also suggested that adults should limit their children's screen usage to prevent them from developing ADHD. One of the reasons for depression, anxiety, loneliness, and FoMO (*Fear of Missing Out*) is social media and screens. Excessive screen usage has a harmful effect on brain development. This is a poor situation that should not be allowed to continue. Constant use or focus on the screen is unavoidable if it is not limited. Excessive smartphone use may raise the risk of cognitive, behavioral, and emotional issues in adolescents and young adults, as well as the chance of early-onset dementia in late life. According to Neophytou *et al.* (2021), too much screen time can harm a person's mental health, learning, and memory. According to Anderl *et al.* (2023), the continuous use of smartphones or any digital gadgets for a long time reduces people's social connectedness. Spending too much time on social media and other platforms or on screens makes it harder to properly communicate with others, it encourages more people to use their smartphones to socialize. Due to their increased focus on extended screen time, individuals are clearly no longer vocally interacting with one another. Prolonged usage of screens can lead to reduced performance on activities and make them impossible to complete. Additionally, it will make less time available for spending precious moments with family, which may lead to conflict between family members (Santos *et al.* 2024). Long periods of screen time can have an impact on a person's physical and mental health, particularly if they are exclusively focused on the screen. Serious harm can arise from the effects of extended screen time on the human body.

because a lack of physical activity can lead to obesity, cardiovascular issues, and musculoskeletal issues, creating a link between digital use and physical health (Suganya *et al.*, 2024). A person is more likely to become unhealthy because they have less time for physical exercise and focus more on screen time. The lack of physical activity may cause a conflict in the person's body, and the prolonged use of screens may cause a conflict in the eyes.

Excessive screen usage has several harmful consequences for mental and physical health, as well as verbal communication abilities. It is apparent that individuals are consumed by excessive screen time, and they are gradually recognizing that they rely on smartphones, televisions, and personal computers. According to Nakshine *et al.* (2022), dependence on digital gadgets, which results in a rising daily screen time, has been linked to a number of negative impacts on physical and mental health. It may cause stress, anxiety, and sleep problems, as well as be a risk factor for obesity, hypertension, and poor stress regulation. Prolonged screen time can have an impact not only on the eyes, but also on other body parts and other health-related.

Misinformation and Media Dependency

The proliferation of misinformation on social media platforms is significantly influenced by algorithmic structures that prioritize engagement over accuracy. Algorithms are designed to maximize user interaction, often leading to the promotion of sensational and polarizing content, which in turn facilitates the spread of misinformation. According to studies, algorithm recommendations provide priority to posts containing emotionally charged content, and these are posts that are often associated with fake news; such articles are promoted and shared by users (Bozarth *et al.*, 2022; McLoughlin, 2023). This algorithmic bias aside from promoting the spread of fake news also helps to sustain these platforms because people engage with the posts that algorithms present to them due to their emotionally appealing narratives.

Furthermore, the design of current algorithms tend to be reductionistic in scope and seeks to eliminate misinformation one case at a time instead of adapting a broad strategy that would address the problem proactively (Fedoruk *et al.*, 2021). This "Point-And-Shoot" methodology lacks the context that is attached to misinformation mainly because of the looping process of the spread of the information which may at times redevelop even when it has been flagged or removed. According to the same study, experts suggest that a more democratic approach, using the algorithms, to create better algorithm could again have helped in analyzing the fact that negative sentiment is related to misinformation and therefore, could increase positive interactions that would reduce the chances of fake news being spread.

The role of media dependency is further complicated by the credibility of misinformation sources. Studies have shown that misinformation originating from credible sources is often perceived as more trustworthy, which complicates efforts to correct false narratives (Zeng, 2023). This dynamic is further compounded by the reality that people turn to social media for their information, meaning that a feedback loop of lies can be created thanks to the algorithms that are designed to achieve engagement, rather than truth. As a result, the reliance on such site goes not only

establishes the nature and types of information controlled but also undermines the public's ability to reason through media and therefore critique it.

To combat misinformation effectively, it is essential for social media platforms to implement more robust content moderation strategies that go beyond simple removal of false posts. This includes the integration of surveillance algorithms that can better identify and flag misleading content before it spreads widely (Berkowitz & Vann, 2023). Additionally, fostering user awareness and critical thinking skills about the sources and credibility of information can empower individuals to navigate the complex media landscape more effectively, reducing their dependency on potentially misleading algorithms (Rahman, 2024).

In conclusion, the interactivity of the social media algorithmic designs and the usages made by users give rise to the circulation of false information. Through exploring the processes by which algorithms work, the related actors can gain better knowledge to combat fake news and decrease media reliance.

Educational Benefits of Algorithmic Tools

The integration of algorithmic tools especially in developing personalized learning experiences as well as customizable educational methods has for example greatly influenced educational sectors. The utilization of such tools has been discussed in several researches in various colleges and universities showing that such tools can enhance the learning process and increase the learning achievements of students.

An interesting development is the application of machine learning based approaches to student performance prediction and possible at-risk student detection. For example, Pilotti *et al.* (2022) investigated the ways in which data on the first days of classes and first tests can be used by teachers to identify students with low potential for success, and then make adjustments to increase that potential. This feature makes it possible to offer help before a child's performance drops, which helps to create a more sensitive learning environment that will be able to immediately address student's problems. Similarly, Daoyan (2024) discusses the relationship between students' psychological conditions and academic results. This study supports the integration of data mining algorithms for the development of instructions that will cater with students' psychological feelings and motivation. Such conclusions indicate the need for developing strategies of individual learning supported by the algorithms.

Furthermore, algorithms are used in designing interactive education environments. Jovanovic *et al.* (2024) have proposed ComVIS, an interactive simulation environment intended to enhance students' understanding of compiler construction. This tool uses features to enhance the learning outcomes which are more amplified than the conventional methods. It has been precisely established that the active participation of such tools is not only helpful for superior understanding but is also effective in promoting understanding, especially in areas of difficulty.

Issues of ethics of using algorithms are also very important to address. Existential bias in algorithms is another area that George has covered; it will worsen the existing inequalities if studied in the context of education. This underscores the need for educational institutions key in a conversation about the appropriate use of AI and algorithmic tools and how

they can enhance equity not perpetuate inequities (George, 2023). In addition, Ifenthaler (2024) also suggests that there has to be a human in the loop if we are to correct any biases and implement it in front of the educators to make use of the AI tools to produce positive educational results.

Apart from these applications, the adoption of generative AI tools has proved to help in improving the learning process. Smyrniou (2023) also found that use of such tools can help learners in development of ideas for their essays and help in formatting of the essays hence enhancing their performance. This capability does not only help students to learn more effectively, but also helps create a more engaging and personal learning process.

Therefore, the advantages of algorithmic tools for education are complex and include client-based analytics for student performance, virtual learning environment, and the social impact of the tools. These advancements illustrate the transformative potential of algorithms in education, paving the way for more personalized, equitable, and effective learning experiences.

Regulating Algorithm-Driven Platforms

The regulations of algorithm-driven platforms, particularly the social media platforms, therefore, must involve various third pillars inclusive of ethical, accountability, and user perspective approaches. More and more, algorithms decide how users interact with a service or content and what content is allowed to surface, thus strong methods to ethically manage them are crucial.

The first issue of algorithm-driven platforms is the possibility of publishing fake or false data and shaping filter bubbles. Thus, primarily, algorithms introduce material that is in line with a user's previously held opinion, which may lead to further polarisation and lack of consistent users' exposure to relevant information. A study indicates that AI algorithms on social media result in limited diversity of opinions, limiting the creation of echo chambers that of healthy conversations (Mohamed, 2024). This problem becomes even more pronounced when considering the concerns of social media companies, which encourage users to interact with their services without considering the ethical implications accepted in theory, to deceive a user in order to capture his/her attention (Medina, 2024). Therefore, such risks call for regulation that will ensure proper disclosure of factors that inform the development of algorithms.

Moreover, the ethical implications of opting for algorithms for selection does not end here since it brings to the table more ethical concerns than merely disinformation. A set of challenges has been explored by scholars, such as privacy infringement and reiteration of prejudice by recommendation systems (Saurwein & Spencer-Smith, 2021). These biases can bias the algorithms in various ways, for example, reproducing social bias or discriminating against some categories of people which, in turn have very important ethical issues concerning fairness and (lack of) equality in the decision making process (Gomathi, 2024). In light of these concerns, scholars call for more effective set of norms that would maintain users' primary and primary interest rather than just expected profit. They realize that such guidelines may range from actions for bias mitigation to the use of better algorithmic solutions.

In addition to ethical considerations, the integration of AI in social media necessitates a balanced approach that considers both user engagement and privacy. According to Hakimi

(2024), an attempt should be made to construct a user-oriented approach so that gains generated by personalization do not harm users and their rights to privacy. This balance is highly important since most of the social media platforms require artificial intelligence strategies in the handling of the user experience and the search for the most appropriate solutions for the enhanced consent of the data collection (Wang, 2023). In addition, algorithmic accountability plays an essential role in promoting the culture of accountability within companies using social networks as well as obliging them to take responsibility for the effects their algorithms bring about (Russell *et al.*, 2022).

Therefore, addressing the problem of algorithm-driven platforms in the social media context, requires a complex solution based on ethical code, platform transparency, as well as platform accountability. By addressing the challenges associated with misinformation, bias, and user privacy, policymakers can create a more equitable digital landscape that prioritizes the well-being of users and society at large. The continuous public discussion about these concerns confirms everyone's commitment seeking co-operation and shared decision-making to outline sound guidelines for ethical algorithmic development.

3. Research Methodology

Research Design

This research uses a sequential explanatory mixed-methods design to examine the effects of algorithm-driven content consumption on youth development. The quantitative phase includes structured questionnaires administered on participants aged between 13 and 24 years in order to measure the impact of algorithms on anxiety, rationality, evaluation and social relations. These surveys employ standardised instruments of self-esteem, anxiety and the extent of social comparison. Inferences involving qualitative analysis are made numerically, affording substantial numerical support to studies of the effects of algorithmic content (Room, 2024).

The qualitative phase involves administering semi structured interviews to select respondents from the survey sample. These interviews will concern core facets of the youths' biography: Their algorithmic content, their uses of coping resources, and how algorithmic content influences their experiences. The principles of thematic analysis are used to obtain more detailed information, which supplement the data obtained in the quantitative stage. Moreover, Avci *et al.* (2024) for the combination of quantitative and qualitative methods elicits richer understanding of how the algorithms of social networks influence the identification and decision-making of adolescents. This design makes a provision for close scrutiny of the involvement of algorithms in the lives of youths.

Data Gathering Procedure

The researchers for this study will conduct survey interviews with respondents who are knowledgeable about the study's topic. Data gathering is crucial for solving research questions because it provides researchers with insights into customer behavior, decision-making processes, and satisfaction levels (Taherdoost, 2021). The purpose of this research is to investigate how machine learning and neural network algorithms can be applied in the retail business to analyse consumer perceptions and map the customer journey. By merging traditional methodologies

with sophisticated data-driven tools, the study aims to provide a holistic picture of how technology affects customer experiences.

Quantitative methods will be crucial in this research since they allow for the collection and analysis of numerical data in order to detect trends and test ideas. Structured tools, such as surveys, will be used to collect data from a larger population, guaranteeing that the findings are statistically reliable and generalizable. Machine learning algorithms, for example, will be utilized to process massive datasets and quantify crucial variables including satisfaction, purchasing behavior, and engagement levels (Kliestik *et al.*, 2022). These techniques improve the accuracy and efficiency of data analysis, allowing researchers to detect trends and correlations that are important for understanding consumer decision-making processes.

Qualitative methods will supplement the quantitative approach by emphasizing the breadth and variety of individual perspectives. Survey questionnaires, for example, will yield detailed information in open-ended questions that reflects the intricacies of consumer attitudes and motivations. These interviews through online surveys or online interviews are especially beneficial for evaluating how customers interact with algorithm-driven platforms, such as tailored suggestions or curated material, and how those interactions influence their decision-making (Feezell *et al.*, 2021). The qualitative analysis will include coding and thematic analysis to uncover major themes, ensuring that the study gives a comprehensive understanding of the elements that influence consumer happiness and engagement.

Quantitative Phase

Step 1: Sources of Survey

Researchers will use reliable sources to develop survey questionnaires, to ensure its alignment with the objective of this research. These sources will help to better understand the important parts regarding the problem being researched.

Step 2: Construction of Survey

Researchers create survey questions that are directly related to what they are researching or the problem they are discussing. The developed questions are divided into sub-questions to cover the objective more thoroughly and it is easier to obtain the information needed for a more in-depth analysis.

Step 3: Validation of Survey

The researchers collaborated with experts to check and verify the contents of the survey. Feedback from this was gathered to confirm that the questions were relevant to the target population of the study.

Step 4: Getting the Samples for the Quantitative Phase

This research used stratified random sampling techniques to select respondents. The target population includes young people actively consuming content based on the algorithm, with 60 and above respondents identified for the quantitative phase.

Step 5: Accumulating Data for the Quantitative Phase

Using the survey instrument, data collection was carried out. Insights from respondents' responses were gathered systematically to ensure consistency and reliability.

Step 6: Summarizing the Accumulated Data for the Quantitative Phase

Using the Explanatory Sequential Design in analyzing the collected data. The results were organized to facilitate understanding and interpretation, focusing on descriptive and correlational analysis.

Step 7: Conclusion for the Quantitative Phase

The findings were able to summarize the statistical results, emphasizing the youth's development and their psychological perspective. The information gathered formed the basis for the development of the general conclusion of the study, which responded to the main problem statement and provided concrete recommendations that could be implemented.

Qualitative Phase

Step 1: Source of Interview Phase

The student researchers presented the data they had gathered after organizing and understanding the data from the first method of data collection. Then they combined the research questions into a complete questionnaire, which will use the data they had gathered to answer the problem statement.

Step 2: Construction of Interview Questionnaire

The general question from the problem statement is included in the interview questionnaire. Before asking the respondents any questions, the student researchers will give them the interview questionnaire's source. The researchers will create suitable and useful questions for young people between the ages of 13 to 24 in Noveleta, Cavite.

Step 3: Validation of Interview Questionnaire

To formulate reliable and precise questions for the qualitative phase, researchers must already be familiar with the data from the quantitative phase.

Step 4: Correction of Interview Questionnaire

The questions that are created for the interview will be carefully examined and analyzed by the researchers to help the respondents understand the questions and provide accurate answers.

Step 5: Getting the Samples for the Qualitative Phase

The researchers selected participants for the qualitative phase through purposive sampling, focusing on individuals who could provide detailed and meaningful insights for the study.

Step 6: Accumulating Data For the Qualitative Phase

The researchers will interview youth aged 13 to 24 in Noveleta Cavite. Researchers chose the youth respondents to find out what were the effects of algorithm-driven consumption on them and how it affected their behavior and perceptions after the survey data collection in quantitative phase and the interviews for data collection for the qualitative phase.

Step 7: Summarizing the Accumulated Data for the Qualitative Phase

The researchers summarized the qualitative data using thematic analysis to identify key patterns and themes that addressed the study's research questions.

Ste 8: Conclusion for the Qualitative Phase

The main components of the problem statement, the ideal situation, and the statistical findings were all able to summarize the main point in the statement of the problem from the collected data. The information gathered will serve as the foundation for developing a conclusion that can respond to the general question in the problem statement and offer a solution and suggestion.

Population and Sampling

The target population for this study includes the population group of 13 to 24 year old users who are using or interacting with algorithm enhanced features such as social network sites, streaming services and search engines. The psychological and developmental effects of algorithmic content are particularly damaging to this age group. Research has revealed that social media generates algorithms into adolescence that self-stimulate emotions, stress and fuels societal unattainable comparisons (Park, 2024). This is directed at young people especially those that are active users of Facebook, TikTok and YouTube since these platforms dominate the lives of most youths and dictate their actions as well as perceptions (Nepali, 2023). Both probability, stratified random sampling for the quantitative phase and purposive sampling for the qualitative phase will be used. The stratified random sampling in the quantitative phase makes it possible to cover as many different age subgroups as possible (13-17, 18-21, and 22-24) because a broad range of experience with algorithm-oriented content is considered. This procedure improves on the generality of the results. In the first qualitative sampling, purposive sampling would mean identifying participants who as per the quantitative analysis are greatly interacting or have psychological impact from the virtual environment and offer deeper data on such phenomena (Solomon, 2024).

During the quantitative phase, the study will recruit at least 60 respondents to improve statistical reliability; on the other hand, qualitative studies will recruit 10 respondents to obtain thematic saturation. People for this study will be selected from educational institutions and social media platforms with notice taken to get a diverse sample. Therefore, this dual-phase sampling approach enables a vast understanding that captures the impact of algorithm driven contents on youths developmental enhancement in its nuanced ways (Sellman, 2024).

Data Analysis

Both quantitative and qualitative research were examined in this study. A step-by-step approach is introduced to guide the interpretation and integration of the findings (Skamagki *et al.* 2022) Surveys and interviews were used by the researchers to obtain data. In the quantitative phase, the likert scale will be used, with 1 representing the lowest, 3 being the neutral, and 5 representing the highest. In addition, the student researchers will interview ten respondents for qualitative phases that belong to youths in Noveleta, Cavite, ages of 13 to 24.

Quantitative Tool

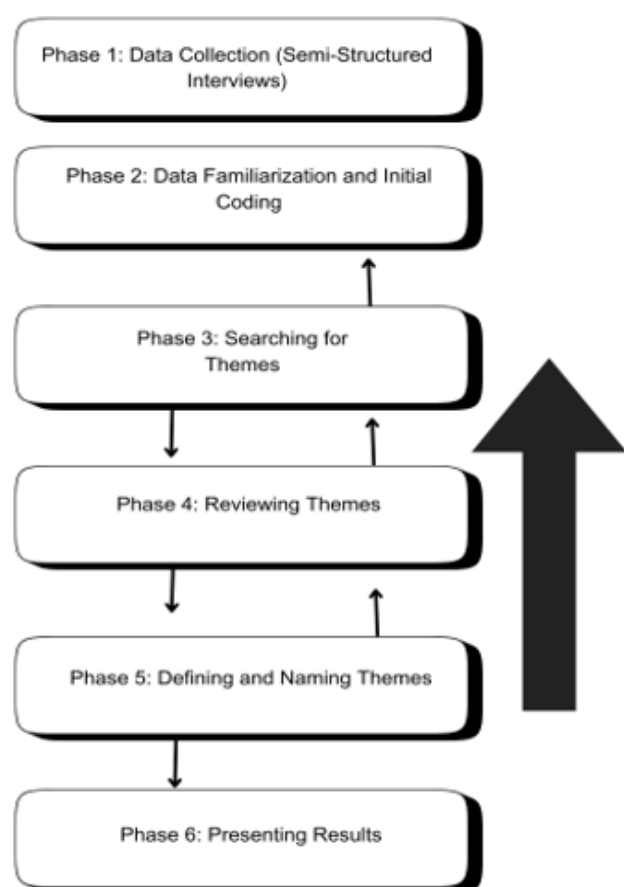
As for the quantitative data analysis, a questionnaire will be primarily used to collect the specified responses regarding the frequency and type of content consumed with the help of

algorithms as well as the psychological effects in question among youth. In addition, frequency and percentage distributions, and measures such as means will be used to describe the data in order to understand the trend in the various responses.

To find out the correlation between the frequency of exposure to algorithm-driven content and youth development a test of Pearson correlation will be used given that the relationship between the exposure and youth development is assumed to be linear and the distribution of the variables is normal. This technique allows us to study and analyze variable relationships with clear results and high precision.

Qualitative Tool

In the qualitative phase, semi-structured interviews will be conducted to gain deeper insights into how algorithm-driven content affects youth development. Thematic analysis will be employed to analyze the interview data, following a structured process: Familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and finally presenting the results. This approach will allow the researcher to identify recurring patterns and themes related to the personal experiences and psychological impacts of algorithm-driven content. By integrating qualitative insights with the quantitative findings, the study will provide a holistic understanding of the issue.



This figure displays the exact process researchers should use to perform thematic analysis in their qualitative studies. The researchers use semi-structured interviews to collect data that helps build their initial coding framework. By reviewing the collected codes researchers assess their overall

occurrence patterns and importance to the studied data. The identified themes are analyzed to ensure coherence and alignment with the research objectives. The researchers finalize the selection of themes before assigning specific names to them for detailed analysis. Finally, the results are presented in a clear and structured format, effectively linking each finding to its corresponding research question.

4. Results and Discussion

This chapter presents the findings and analysis of the study “Long-Term Effects of Algorithm-Driven Content Consumption on Youth Development and Psychological Perceptions”. It is systematically divided into two sections: Data analysis and discussion. The collected data will be subjected to thematic analysis to identify key patterns and insights relevant to the research objectives.

Quantitative and Qualitative Phase

SOP 1: *To what extent does sustained exposure to algorithm-driven platforms correlate with levels of psychological well-being (e.g., stress, anxiety, self-esteem) among individuals aged 13-24?*

Table 1: Most Used Platforms and Their Relationship with Stress and Self-Esteem Levels

Most Used Platforms	Stress Level (Mean)	Self-Esteem (Mean)	Interpretation
Facebook, TikTok, Instagram	2.00	3.00	Moderate Stress, Natural Self-Esteem
Facebook	2.67	3.00	Moderate Stress, Natural Self-Esteem
Facebook and TikTok	3.00	3.50	High Stress, Slightly Positive Self-Esteem
Facebook and Messenger	2.00	3.00	Moderate Stress, Natural Self-Esteem
Facebook and Instagram	3.50	3.00	High Stress, Neutral Self-Esteem
Facebook, Messenger, TikTok, Instagram, and Spotify	3.00	3.00	High Stress, Neutral Self-Esteem
TikTok, Facebook and Youtube	2.00	4.00	Moderate Stress, Positive Self-Esteem
TikTok, Youtube, Instagram, Facebook and Twitter	4.00	3.00	Very High Stress, Neutral Self-Esteem
TikTok, Facebook and Instagram	2.33	2.67	Moderate Stress, Slightly Low Self-Esteem
Twitter, Medium and TikTok	4.00	1.00	Very High Stress, Low Self-Esteem
Youtube	2.33	3.33	Moderate Stress, Slightly Positive Self-Esteem
Messenger, Facebook, Twitter and Instagram	2.00	2.00	

The data presented in Table 1 illustrates the relationship between the most frequently used social media platforms and corresponding mean stress and self-esteem among youths. The combinations involving platforms such as TikTok, Facebook, Instagram, and Twitter are associated with higher mean stress levels. For example, users engaging with TikTok, Youtube, Instagram, Facebook, and Twitter report very high stress levels (**M=4.00**) while maintaining a

neutral self-esteem ($M=3.00$). Conversely, individuals primarily using platforms like Youtube exhibit moderate stress levels ($M=2.33$) and slightly positive self-esteem ($M=3.33$).

These findings align with recent research indicating that problematic technology use among youths is significantly associated with increased life stress and decreased self-esteem. According to Idress *et al.* (2024), sleep patterns and reduce physical activity, both which are critical for mental well-being.

Furthermore, constant exposure to social media encourages users to compare themselves to others online, which can be detrimental to their self-esteem (Piccerillo & Digennaro, 2024). This effect is particularly significant during youth ages, a developmental state where individuals are shaping their identities and evaluating themselves based on both internal and external perceptions.

In summary, the data underscores a complex relationship between social media usage patterns, stress levels, and self-esteem among youths. While certain platforms may offer avenues for self-expression and connection, excessive or problematic use is linked to adverse mental health outcomes. These insights emphasize the importance of promoting balanced and mindful engagement with social media to support the well-being of young individuals.

Table 2: Anxiety Levels and Frequency Distribution

Anxiety Level	Mean Score	Interpretation
Anxiety Level	3.53	Minimal

The average score for respondents' anxiety levels, as determined by analysis, was 3.53. The particular assessment tool used must be identified in order to properly understand this score because different instruments have different scoring schemes. According to the Generalized Anxiety Disorder 7-item (GAD-7) scale, which is frequently used to assess the intensity of anxiety, scores fall into the following categories:

- **0–4: Minimal Anxiety**
- **5–9: Mild Anxiety**
- **10–14: Moderate Anxiety**
- **15–21: Severe Anxiety.**

According to Blanco *et al.* (2021), the GAD-7 scale is approved by the ethics committee of the Clínica Santa Cruz de Bocagrande Cartagena, Colombia. In this context, a mean score of 3.53 falls within the **Minimal Anxiety** range, suggesting that, on average, participants experience minimal anxiety symptoms. It is also important to note that while the GAD-7 is a valuable screening tool, it should be used in conjunction with comprehensive clinical evaluation to ensure accurate diagnosis and appropriate intervention.

Anxiety Level	Counts	% of Total	Cumulative %	Interpretation
NO	28	47.5%	47.5%	Low Anxiety
YES	31	52.5%	100.0%	High Anxiety

For the second table, the data indicates that **52.5%** of respondents answered “YES” to experiencing anxiety, while **47.5%** responded “NO”. This distribution suggests that a slight majority of the sample reports experiencing anxiety symptoms. The clinical significance of this finding depends on various factors, including the population studied and the criteria used to define anxiety within the assessment tool.

Table 3: Frequency of Content Type

Content Type	Frequency (Count)	% of Total	Rank	Interpretation
Educational	1	1.7%	8	Low Engagement
Entertainment	9	15.3%	2	High Engagement
Social Issues	2	3.4%	6	Moderate Engagement
Lifestyle & Well-being	1	1.7%	8	Low Engagement
News	1	1.7%	8	Low Engagement
Others	4	6.8%	5	Moderate Engagement
Entertainment & Educational	1	1.7%	8	Low Engagement
Entertainment & Social Issues	1	1.7%	8	Low Engagement
Entertainment; Educational; Lifestyle & Well-being	4	6.8%	5	Moderate Engagement
News; Entertainment; Social Issues	2	3.4%	6	Moderate Engagement

The analysis of the engagement among respondents reveals that **Entertainment** content holds the highest engagement, with 9 occurrences, accounting for **15.3%** of the total responses. This suggests a significant preference for entertainment-related material. Moderate engagement is observed in categories such as **Social Issues** and combined content types like **Entertainment & Education** and **News; Entertainment; Social Issues**, each with 2 to 4 occurrences and percentage ranging from **3.4% to 6.8%**. These findings indicate that while entertainment is the dominant preference, there is also a notable interest in content that addresses social issues and combines multiple themes. Categories like **Educational**, **Lifestyle & Well-being**, and **News** exhibit low engagement, each with only 1 occurrence (**1.75**). This pattern underscores the varying degrees of audience interest across different content types.

Understanding the frequency distribution of content engagement is crucial for developing effective content distribution strategies. By analyzing how often specific content types are consumed, creators and marketers can tailor their distribution efforts to align with audience preferences, thereby enhancing visibility and engagement. According to Til (2024), The prominence of entertainment content suggests that integrating entertaining elements into other content categories might increase overall engagement.

Theme 1: Emotional Shifts from digital content

The study looked at why people get addicted to social media. It considered factors like entertainment, having free time, communicating with others, improving mood, and wanting new content. (Barween Al Kurdi, 2024).

Connection Between Mood and Content: Your mood plays a significant role in how you interact with content. When you're in a good mood, you tend to understand and remember information better, especially if it's positive. Conversely, a bad mood can make you focus more on details that match your emotions. This affects not just how you consume content but also what kind of information you seek out. Affective experiences are commonly represented by either transient emotional reactions to discrete events or

longer term, sustained mood states that are characterized by a more diffuse and global nature. (Leonard F., et al. 2023). One participant said,

"I'm seeing online platforms affect my mood and emotions because it shows content based on what I like and what I have watched before, and this can have both good and bad effects."

It says that online content can affect your mood and emotions because it's often tailored to what you like and have watched before. This can have both good and bad effects. If you watch negative content, it might make you feel worse, while positive content can improve your mood. According to Silva et al. (2024), young people today are growing up in a social media-saturated world where technology plays a central role in shaping most of their experiences. And the rapid rise of social media use has consequently created parental and societal fears about young people's social and psychological well-being. The content on social media might affect young individuals by how good it is to influence people that turn out their feelings are the same as it.

"some content is same as my feelings"

Content can evoke feelings similar to those of a person by using emotional triggers. For instance, emotional content on social media can influence how people perceive and react to messages, often aligning with their emotional state or mood. According to Schreiner et al. (2021), the characteristics of social media content, such as its topic or length, influence user engagement. Additionally, it looked at whether emotional responses play a role in this process, for example, if content that evokes strong emotions can boost engagement and how it relates to humans.

"because it's relatable"

Content affects human behavior by influencing emotions and actions. It can shape attitudes, increase engagement, and even change how people interact with each other. For example, emotional content can make people more likely to engage with it, and social media can influence how people think and behave.

Human reasoning is influenced by our real-world experiences and beliefs, leading to significant content effects. We tend to reason more accurately when the meaning of a problem aligns with logical conclusions. This interplay between content and reasoning is crucial in discussions about the core nature of human intelligence (Lampinen et al. 2024).

"because it affects your personal beliefs and knowledge, it either makes u happy or sad depending on the content the algorithm shows you Influence on Beliefs & Knowledge"

According to the study, your personal beliefs and knowledge, will in turn affect how you feel. Depending on the content they show, you might feel happy or sad. This happens because algorithms shape your worldview and can change your beliefs, leading to different emotional responses.

Young people struggle with permanent online connections that are associated with their generation. This study looks at teenagers' effective relationship to connectivity and disconnectivity, and how it is socioculturally influenced by the media, family, and peers (Agai, et al. 2023).

Emotional detachment in media consumption: This refers to a psychological and emotional phenomenon where individuals disengage or distance themselves emotionally from the content they consume. This detachment can manifest as a coping mechanism, allowing people to avoid being overwhelmed by the intense emotions or demands presented in media, such as violent imagery, distressing news, or emotionally charged narratives the ways in which the media might influence learning about emotions and socializing groups to normative emotional responses (Robin 2021).

"I'm not affected by it because for me it's just on social media whether it's a true story but it."

According to the study, Young people, especially teenagers, face challenges with constant online connections. Social media can both unite and isolate them. Also according to the respondent she/he's not affected by it because some young individuals aren't allowed to get involved in something whether it's true or not.

Previous studies have shown that people have mixed feelings about algorithmic news curation, they are comfortable with it, yet worried about the data collection involved. This article expands on media dependency theory and the idea that news finds the consumer (NFM) to delve deeper into this contradiction (Gagrčin et al. 2023).

Digital content influence: Refers to the impact that online media has on audiences, businesses, and society as a whole. Digital content encompasses any media created, hosted, and distributed via the internet, including vlogs, videos, podcasts, social media posts, infographics, and interactive tools. Its significance lies in its ability to drive brand awareness, build trust. Unlike traditional media, content on these platforms is produced by numerous creators competing for viewer attention (Ren, 2024)

" it depends on what you see on soc-med"

People have mixed feelings about algorithmic news curation, feeling both comfortable with its convenience and uneasy about the data collection it involves. This ambivalence is reflected in how we consume news on social media, where algorithms decide what we see and the way it's heavily influenced by social media, which has become a primary source for many people.

According to the study of (McLoughlin et al. 2024), online and offline, human attention biases toward emotional and moral information are equally common. Moral and emotional information are given preference in the online information ecosystem when these biases combine with content algorithms that select users' news feeds on social media in order to enhance attentional capture. We examine the data supporting the human-algorithm interactions and contend that false information takes advantage of this mechanism to proliferate online that human-algorithm interactions and argue that misinformation exploits this process to spread online.

Connection Between Mood and Content: Your mood plays a significant role in how you interact with content. When you're in a good mood, you tend to understand and remember information better, especially if it's positive. Conversely, a bad mood can make you focus more on details that match your emotions. This affects not just how you consume content but also what kind of information you seek out. Affective experiences are commonly represented by either transient emotional reactions to discrete events or longer term, sustained mood states that are characterized by a more diffuse and global nature. (Leonard F., *et al.* 2023).

“These platforms show me more of what I interact with, so if I often click on negative posts, my feed might become filled with similar content.”

In that case, it says that there's a part in algorithm-driven content on social media that can negatively impact young individuals by contributing to mental health issues like anxiety and depression, especially on what they see through online. But when a person gets involved in a positive, the algorithm driven-content effects change.

According to (Kavaklı, *et al.* 2021) The mediating effect of social comparison on the relationship between social media addiction, and self-esteem and general belongingness. In today's world, social network sites are a crucial part of individuals' life, and social media addiction is a widespread and severe problem. Also, individuals may receive some beneficial effects from ordinary social media usage, but especially social media addiction might influence self-esteem and belongingness of individuals in a negative way.

The connection between emotion and self-worth: Is deeply intertwined, as self-worth significantly influences emotional well-being and vice versa. Self-worth, defined as the intrinsic belief in one's value as a person, serves as a foundation for emotional health. When individuals possess a strong sense of self-worth, they are more likely to experience positive emotions such as confidence, resilience, and satisfaction. The connection between emotion and self-worth is deeply intertwined, as self-worth significantly influences emotional well-being and vice versa. Self-worth, defined as the intrinsic belief in one's value as a person. (Birni *et al* 2024).

“algorithm-driven content affects my emotions. Social media often makes me doubt myself, especially when I see someone I love posting about a celebrity who looks incredibly attractive, someone I feel I can't compete with. Their appearance is on another level, making me insecure”

It is stated and explains how social media and online content can make us feel bad about ourselves. When we see posts about celebrities or our partner's crush, it can make us feel insecure and lower our confidence. Even if we're in a good mood, these posts can ruin our day because social media makes us compare ourselves to others. It is also stated that things like porn can change how we view relationships, making us treat people as objects and expect real-life relationships to be like what we see online.

The inability to experience pleasure or interest in activities (commonly referred to in clinical settings as anhedonia) is characteristic of depression, anxiety, post-traumatic stress

disorder and other mental health conditions. Diminished positive emotions and anhedonia predict poor long-term outcomes, but conventional psychological treatments have only modest effects upon positive emotions. (Craske, *et al.* 2024)

Emotional Uplift from Digital Content: Digital content can uplift emotions by leveraging storytelling, sensory engagement, and human connection. Videos, are particularly effective because they immerse audiences in authentic narratives that evoke empathy and resonate deeply, it builds on this positive effects together, to present herein aim to provide an understanding of the inspirational content available on social media and the way social media users use this and to recall, and interact with this content. (Dale 2020).

“because everytime i watch a recommended funny videos it makes me laugh”

The respondent stated that watching recommended funny activities lighten their day up, in fact digital content positively impacts young individuals by reducing stress, improving mood, and enhancing emotional regulation. It provides a platform for self-expression, creativity, and social connection, which are crucial for building confidence and mental well-being.

The unequal power dynamics in news is consumed through platforms and suggests that mixed experiences may result from relying on algorithms dependency for news or content even though this reliance comes with potential risks and concerns. (Schaetz *et al.* 2025).

Digital content influence: Refers to the impact that online media has on audiences, businesses, and society as a whole. Digital content encompasses any media created, hosted, and distributed via the internet, including vlogs, videos, podcasts, social media posts, infographics, and interactive tools. Its significance lies in its ability to drive brand awareness, build trust. Unlike traditional media, content on these platforms is produced by numerous creators competing for viewer attention (Ren, 2024).

“algorithmic content does influence emotions and mood because it's specifically targeted to our likes and history of interactions.”

It is stated that the algorithmic content has influenced individuals by its target and affects our emotions and mood because it's tailored to our past interactions. This personalized approach can evoke strong feelings, either uplifting or unsettling us, and it subtly influences our mood.

SOP 2: How does long-term consumption of algorithm-curated content influence decision-making tendencies and critical thinking abilities in young users?

Table 4: Gender and Perceived Information Accuracy & Confidence

Gender	Accuracy of Information (Mean)	Confidence (Mean)	Rank
Female	3.58	3.61	1
Male	3.29	3.52	2
Prefer Not to Say	3.00	3.00	3
General Average	3.29	3.38	

The data indicates that female respondents have a higher mean score (3.58) in assessing the accuracy of information compared to male respondents (3.29). Similarly, females exhibit slightly higher confidence levels (3.61) than males (3.52). These findings suggest that women may perceive information as more accurate and feel more confident in their assessments than men. However, it's essential to consider the broader context. According to Christensen (2023), while men often report higher self-assessed technological abilities, this confidence gap varies across different fields and is influenced by cultural and societal factors.

Table 5: Opinions or Beliefs, Influence and Frequency Distribution

Category	Opinion or Beliefs (Mean)	Encourages or Discourages (Mean)
Mean	3.20	3.27

The mean score for **Opinion or Beliefs** is (3.20), while **Encourages or Discourages** has a mean of 3.27. This suggests that respondents' opinions or beliefs moderately influence their tendency to encourage or discourage certain behaviors. Understanding how opinions shape behaviors is crucial, especially in contexts like public health. For example, the study of Matei (2025) highlighted how shifts in parental beliefs about vaccinations, influenced by exposure to accurate information, led to changes in their health-related behaviors.

Table: Frequency of Opinion or Beliefs

Response	Count	% of Total	Cumulative %
NO	12	20.3%	20.3%
YES	47	79.7%	100.0%

Out of the total responses, 79.7% answered "YES" to holding specific opinions or beliefs, while 20.3% answered "NO." This distribution indicates that a significant majority of respondents acknowledge having particular opinions or beliefs. The prevalence of strong opinions can impact societal dynamics, as seen in studies on political polarization. For example, the study of Rothman (2024) that entrenched beliefs contribute to family estrangements and societal divisions, emphasizing the importance of understanding and addressing deeply held opinions.

Table: Encourages or Discourages

Response	Count	% of Total	Cumulative %
NO	16	27.1%	27.1%
YES	43	72.9%	100.0%

In this table, 72.9% of respondents indicated "YES" to encouraging or discouraging certain behaviors, while 27.1% responded "NO." This suggests that a substantial portion of individuals actively seek to influence others based on their beliefs. The role of social norms and peer influence is well-documented in behavioral science.

Theme 2: Enhancing Cognitive Skills Through Media Engagement

According to Lionetti *et al.* (2024), several theories suggest that people differ significantly in their environmental sensitivity, defined as the capacity to perceive and process

information about the environment. People differ in how much they notice and react to their surroundings, a trait called environmental sensitivity. Others might be more resilient to stress but also miss out on benefits from supportive environments.

Enhancing Cognitive Skills Through Media Engagement: Engaging with media can help improve cognitive skills in several ways. For example, activities like playing video games can enhance visual-spatial skills, such as tracking objects and solving problems. The popularity of video on social media has been on a steady rise. Yet, given the criticality of engagement in computer-mediated activities, research on engagement with videos on social media is scarce. Motivated by this research gap, we theorize and test the effects of visual cueing on cognitive engagement with videos on social media (Chen *et al.* 2022).

"because of its topics that affect the feelings of one person."

It is stated that people who are more sensitive to their environment or the topic they might encounter often feel emotions more strongly. They might feel happier in supportive situations but also get stressed or upset more easily. It processes their emotions deeply, which can sometimes lead to overthinking or struggles with anxiety. Social media have become an integral part of youth's daily lives. Although it brings many benefits such as creative self-expression and opportunities for social connection. (Zou W *et al.* 2024)

"also makes us feel secured and validated by the contents that are being shown at our social media platforms"

According to the study it says that social media badly affects and it is part of people's daily lives, well it is stated that algorithm content or social media gives young people validation (feeling good about themselves) and comfort by letting them share things, and connect with others. It's like having a quick way to feel accepted or less lonely. But relying too much on it can hurt self-esteem if they don't get enough approval online.

According to Ali *et al.* (2024) Despite the internet being a vital source providing protection, it also contains some concerns regarding their safety, physical and psychological growth, and well-being.

"because sometimes when I'm sad then while browsing sa fb makakakita ako ng memes or something na nakakatuwa nag cchange mood ko"

It is stated that content in social media can change someone's mood, in fact social media can really change your mood based on what you see. Just like funny posts (like memes) it might cheer you up when you're sad, but sad or upsetting content can ruin a good mood. This happens because platforms show you stuff they think you'll engage with, and how you react depends on your personality and habits

The growth in social media use has given rise to concerns about the impacts it may have on users' psychological well-being. This paper's main objective is to shed light on the

effect of social media use on psychological well-being (Ostic et. al. 2021).

“in a good way”

It is stated that somehow, algorithm driven-content gives good influence to young people in a good way, because algorithms help people by showing them stuff they'll like, connecting them to others with similar interests, and making life simpler. They learn what you enjoy and suggest posts, videos, or articles that save time and help you discover new things.

According to Haeringen *et al.* (2023), emotions are known to spread among people, a process known as emotion contagion. Both positive and negative emotions are believed to be contagious, but the mass spread of negative emotions has attracted the most attention due to its danger to society.

“syempre madadala ka sa mga makikita mo”

It says that algorithms can affect the emotion of a person, which is the way people unconsciously "catch" emotions from others, even online. This happens because humans naturally mimic emotions they encounter, like sharing happy posts after seeing joyful updates. Algorithms boost this by prioritizing through emotionally.

According to (Joëlle Swart, 2021) Young people's increasing dependence on social media for news demands increasing levels of news literacy, leading to a rise in media literacy programs that aim to support youth's abilities to critically and mindfully navigate news. However, being news literate does not necessarily mean such knowledge and skills are applied in practice. This article starts from young people's own news practices and on social media to explore when news literacy becomes meaningful in the practice of everyday life.

“because when I am not able to engage with any algorithm-driven content, I feel so down and sometimes I even get in a bad mood that also affects the people around me.”

It is stated that this can influence our mood and emotional state, sometimes leading to feelings of loneliness, anxiety, or depression. The absence of this interaction disrupts my emotional balance, impacting my relationships and overall well-being. Sometimes algorithm driven content affects the loneliness of a person in their opinion they feel down when they're not able to connect or engage in algorithm driven content.

The way people interact with social media can greatly influence their mental health. This research explores how social media engagement affects mental health, based on the principles of the Elaboration Likelihood Model and Schema Activation Theory. It seeks to reveal the behavioral distinctions in information sharing among the general populace and those with depression, while also clarifying the psychological processes that explain these differences (Liu *et al.* 2024).

“because for me whenever i keep seeing certain types of content that match my interests it will then influence how I feel. For example, whenever I see sum uplifting or funny content, it boosts my mood.”

This statement means that the content a person consumes (like videos, posts, or media) has a direct impact on their emotions and mood. When they encounter content that aligns with their personal interests or preferences, it can influence how they feel. For example, if they come across uplifting or funny content, it can improve their mood or make them feel happier.

The more individuals curate their social media identities, the less authentic their identities would be online and offline, lower levels of authenticity would predict greater social anxiety and lower levels of algorithm driven-content authenticity would serve as a mediator between the curation of one's social media identity and increased levels of social anxiety (Solnik, 2024).

“algorithm-driven content can influence emotions and mood through curated feeds.”

The statement said that Algorithm-driven content affects emotions and mood by creating personalized feeds based on what users like and interact with. These algorithms may have an effect on user behavior and use it to show content that evokes strong emotions, often focusing on negative content because it gets more reactions.

According to Jennifer A. H., *et al.* (2022). The relationship between social media usage and body image has been well-established in the literature; however, social media companies' use of algorithms may intensify this association, as algorithms provide viewers with personalized content that is often more extreme, less monitored, and designed to keep users engaged for longer periods of time.

“because it made me realize things.”

It is stated how they realize things using social media, that's why engaging with social media often leads to reflecting and aware us about our lives and interactions. It acts like a mirror, showing us our thoughts and behaviors in a new light. This reflection can help us grow by things we might have missed. It makes us more aware of how our online actions affect our real-life experiences.

In the digital age, where we are bombarded with information from all sides, attention has become a precious commodity. Understanding the attention economy explores the intricacies of the attention economics and sheds light on how our attention is captured, traded, and sometimes even exploited in today's hyper-connected world (Asfour, *et al.* 2024).

“prioritizing what keeps users hooked their attention rather than what is necessarily good for them.”

The statement says that social media platforms are designed to prioritize capturing and maintaining user attention, often at the expense of what is genuinely beneficial for young individuals, because it may affect them and they should check what comes after users seek attention to the things that they are prioritizing and good for them.

SOP 3: *What are the patterns of social media interactions and offline engagement among youth with high versus low exposure to algorithm-driven content?*

Table 6: Gender and Offline Social Activities

Gender	Offline Social Activities (Mean)	Rank
Female	3.17	3
Male	3.67	1
Prefer Not to Say	3.50	2
General Average	3.45	

The data indicates that male respondents have a higher mean score (**3.67**) in offline social activities compared to females (**3.17**). This suggests that men are more engaged in offline social interactions than women. Research supports this observation, highlighting that traditional gender roles influence social participation. Men often engage in activities that extend beyond the household, such as paid work and community involvement, which are associated with higher social participation. Conversely, women may prioritize family commitments and cultural activities, leading to less engagement in broader social activities (Ong *et al.* 2024).

Table 7: Interaction Between Family and Friends; Frequency Distribution

Category	Interaction Between Family and Friends (Mean)	Interpretation
Mean	3.64	Moderate

With a mean score of **3.64**, the data suggests that respondents experience a moderate level of interaction between family and friends. This level of interaction is crucial for social health, as strong connections with family and friends contribute to overall well-being.

Response	Count	% of Total	Cumulative %
NO	21	35.6%	35.6%
YES	38	64.4%	100.0%

In Table 3, **64.4%** of respondents reported engaging in interactions between family and friends, while **35.6%** did not. This suggests that a majority of individuals benefit from these social interactions. According to Fitzpatrick *et al.* (2024), they found that adolescents who reported higher family support experienced lower depressive and anxiety symptoms. Similarly, increased friend support was associated with reduced psychological distress, highlighting the protective role of social connections during adolescence.

Table 8: Qualitative Responses for Reflecting the Interest

Response	Code	Category	Theme
Algorithm-driven content reflects and shapes interest overtime	Both reflects and shapes interest overtime	Interest development	Shaping and Evolving Interest
Algorithmic recommendations lead to engaging and addictive interest	Both reflects and shapes interest overtime	Interest development	Shaping and Evolving Interest
Discovering new ideas and techniques through online content	Learned new things	Knowledge expansion	Shaping and Evolving Interest
Exposure to new topics lead to changing interests	Both reflects and shapes interest overtime	Interest development	Shaping and Evolving Interest
Engaging with recommended content	Content matches	Interest-driven content	Shaping and

sparks curiosity	interests	exposure	Evolving Interest
Career aspirations influenced by online content	Shapes career interests over time	Interest development	Shaping and Evolving Interest
Algorithms introduce both familiar and new interest	Learned new things	Knowledge expansion	Shaping and Evolving Interest
Initial interests are reinforced, but new ones are develop over time	Both reflects and shapes interest overtime	Interest growth & learning	Shaping and Evolving Interest
Increased exposure leads to self discovery	Shapes career interests over time	Interest formation & self-discovery	Shaping and Evolving Interest
Repeated exposure to topics increases engagement	Content matches interests	Interest-driven content exposure	Shaping and Evolving Interest

In contrast the qualitative data categorized into themes related to algorithm-driven content and interest development. Responses show that individuals recognize both reflective and shaping influence of algorithms on their interests. This is consistent with contemporary research indicating that personalized content recommendations significantly influence user engagement and long-term interest formation. These findings suggest that algorithms not only reinforce existing preferences but also introduce users to new interests, potentially altering career aspirations and social behaviors over time.

Theme 3: Strengthening Connections Through Online and Face-to-Face Interaction

The purpose of this theme is to explore how digital technologies, particularly social media and algorithm-driven content, influence personal relationships in the modern era. It highlights the interplay between online interactions and real-life connections, emphasizing how digital platforms shape communication, bonding, and cultural exchanges. Research indicates that while digital tools can enhance connectivity, they also introduce challenges such as algorithmic bias and the superficiality of fleeting trends (Abidin, 2021).

Digital Influence on Personal Relationships: This focuses on how digital platforms and content, such as algorithm-driven feeds and viral trends, affect the way individuals interact with friends and family. It examines whether these digital elements enhance or hinder personal connections, particularly in the context of strong offline relationships and the adoption of online cultural phenomena. Studies suggest that while algorithms personalize content, they may also create echo chambers that limit diverse perspectives, and that viral trends can foster shared experiences but may lack depth (Abidin, 2021).

One participant stated,

"It doesn't change how I interact with my friends and family because my relationships and personal connections with them are strong in real life. We can say that algorithm-driven content influences what we

see online, but they don't affect how I communicate or bond with the people close to me."

This suggests that strong real-life relationships can mitigate the influence of digital algorithms on personal interactions. The participant emphasizes that while algorithms shape online content consumption, they do not significantly impact the quality or nature of communication with close ones. This aligns with research indicating that strong offline relationships can act as a buffer against the potential negative effects of digital media (Valkenburg *et al.*, 2021).

Moreover, another participant noted,

"Due to the fact that trends are forever changing, and also it is something that everybody gets involved in every day, like the Skibidi Toilet or Sigma Face."

This statement highlights the transient nature of digital trends and their pervasive influence on daily life. The participant acknowledges that trends like "Skibidi Toilet" or "Sigma Face" are widely adopted, suggesting that they serve as common cultural references that can foster shared experiences and conversations. However, the fleeting nature of these trends may also lead to superficial engagement rather than deep, meaningful connections. This reflects the concept of "digital ephemerality," where online content is short-lived but highly impactful at the moment (Abidin, 2021).

Additionally, another participant observed,

"Some contents have some knowledge that you could get as a source of knowledge for you to realize and reflect. Because of the slangs."

This statement underscores the educational and reflective potential of digital content, particularly through the use of slang. The participant suggests that online content can serve as a source of knowledge and self-reflection, especially when it incorporates culturally relevant language or slang. This aligns with the idea that digital platforms can facilitate informal learning and cultural exchange (Duraisingh, Blair, & Aguiar, 2021).

Self-Sufficiency in Socialization: This focuses on how individuals rely on their own attitudes and behaviors to socialize, emphasizing personal agency in building and maintaining relationships. It highlights the importance of individual effort in fostering meaningful connections, both online and offline. (Brennan, 2025)

It is stated that,

"I socialize with people by my own attitude or what."

This statement underscores the participant's reliance on their personal attitude and behavior to socialize. It suggests that self-awareness and individual effort play a significant role in building and maintaining relationships. This aligns with research on self-efficacy in socialization, emphasizing the importance of personal agency in fostering meaningful connections. For instance, Liu *et al.* (2023) found that self-efficacy significantly influences self-management behaviors, with social support acting as a mediator, highlighting the

role of personal agency in health-related social interactions.

Strengthening Relationships Through Digital Connectivity

examines how digital platforms and algorithm-driven content influence communication skills and relationship dynamics. It highlights both the positive and negative impacts of digital tools, such as memes, slang, and educational content, on interactions with friends and family. For example, while algorithms can help maintain relationships by surfacing posts from close contacts, they may also create a false sense of connection, as digital visibility does not necessarily equate to meaningful engagement. Additionally, the prevalence of sensationalist content on platforms like TikTok can lead to unrealistic expectations in relationships, affecting how individuals perceive and interact with their partners (Pillay, 2025).

A participant stated that,

"It helps me improve my communication skills."

This statement highlights the positive impact of digital platforms on communication skills. The participant suggests that engaging with online content has enhanced their ability to communicate effectively. This aligns with studies showing that digital tools can facilitate skill development, particularly in areas like language use and interpersonal communication.

For instance, Osuh (2024) found that digital technology can offer significant benefits for young children's language development and cognitive skills, as digital activities often involve sensory exploration and learning. Additionally, Davis (2025) discusses a free online virtual reality platform designed to help individuals overcome public speaking anxiety, integrating exposure therapy and stress-reducing techniques to improve communication confidence.

Another participant reflected,

"It's different between family and friends, the way to talk."

This reflects the participant's awareness of distinct communication styles when interacting with family versus friends. It suggests that digital platforms may amplify these differences, as individuals adapt their communication to suit different relationships. This aligns with research on relational communication, which emphasizes the role of context and relationship type in shaping interaction patterns (Valkenburg *et al.*, 2021).

A participant also noted,

"I feel that algorithm-driven content has changed how I interact with friends and family. It influences what I see and talk about, sometimes making conversations more interesting by showing me new topics."

This highlights the role of algorithm-driven content in shaping conversations and introducing new topics. The participant suggests that digital platforms enhance interactions by providing fresh and engaging content, which aligns with research on the positive effects of personalized content on social engagement. For instance, Huang and Ji

(2025) found that algorithmic curation significantly increases user engagement with novel content compared to peer-shared content, suggesting that algorithms effectively promote interactions with diverse and non-redundant topics. Additionally, social media algorithms analyze user behavior to curate personalized feeds, enhancing user experience by presenting content that aligns with individual interests, thereby keeping users engaged and encouraging prolonged platform use. However, while personalized content can enhance engagement, it may also create "filter bubbles," limiting exposure to diverse perspectives and reinforcing existing biases (Algocademy, 2025).

It is stated that,

"Algorithm-driven content has changed how I interact with my friends and family in some ways. With my friends, the way I talk has changed because of the memes and brainrot from TikTok. I sometimes use certain phrases, jokes, or references from TikTok, which makes our conversations more fun and relatable. But in some ways, it has also changed my interactions for the better. I see posts and videos online that give tips on how to communicate respectfully with loved ones. These help me understand how to express my feelings better, handle conflicts, and appreciate my family more. So while some of the influence is just for fun, some of it actually helps me improve how I interact with the people I care about."

This illustrates the dual impact of algorithm-driven content on relationships. On one hand, memes and trends from platforms like TikTok create a shared language that makes conversations more engaging and relatable. On the other hand, educational content on communication and conflict resolution helps the participant strengthen emotional connections and navigate difficult conversations with friends and family more effectively. This reflects the broader role of digital platforms as both entertainment and educational tools, shaping how individuals interact with others (Abidin, 2021).

SOP 4: How do young individuals perceive the role of algorithm-driven content in shaping their personal development and life choices?

Table 9: Interest and Shaping Overtime

Category	Mean Score
Interest and Shaping Overtime	3.19

The mean score of **3.19** suggests a moderate level of interest and its evolution over time among respondents. This indicates that while there is some engagement, there is room for increased involvement or interest in the subject matter.

Table 10: Frequency of Interest and Shaping Overtime

Response	Count	% of Total	Cumulative %
NO	11	18.6%	18.6%
YES	48	81.4%	100.0%

Shaping Over Time reveals that **81.4%** (48 respondents) answered "YES", indicating that their interests have

changed or developed over time. This suggests that personal interests are not static but rather evolve due to various influences such as life experiences, education, social interactions, exposure to new ideas, and technological advancements.

On the other hand, **18.6%** (11 respondents) answered "NO", meaning that their interests have remained largely unchanged over time. This could be due to strong personal preferences, consistent environmental influences, or a stable set of values and beliefs that shape their interests.

Table 11: Algorithm Awareness and Control Over Content

Gender	Awareness in Algorithm Influence (Mean)	Control Over Content (Mean)	Rank
Female	3.64	3.25	2
Male	3.76	3.33	1
Prefer Not to Say	3.50	3.00	3
General Average	3.63	3.19	

The data reveals that males have a slightly higher mean score (**3.76**) in awareness of algorithm influence compared to females (**3.64**) and those who prefer not to say (**3.50**). Similarly, males report a higher mean score (**3.33**) in perceived control over content than females (**3.25**) and those who prefer not to say (**3.00**). This suggests that males may be more cognizant of algorithmic influences and feel a greater sense of control over the content they encounter. According to Friebel *et al.* (2021), women display more stability and less flexibility than men in their interactions, which may influence their perception of control in digital environments.

Table 12: Taken Steps to Limit Algorithm Content and Frequency Distribution

Category	Mean Score
Taken Steps to Limit Algorithm Content	3.29

A mean score of **3.29** indicates a moderate level of proactive measures taken by respondents to limit algorithm-driven content. This suggests that while some individuals are taking steps to control their content exposure, there is potential for increased awareness and action in this area.

Response	Count	% of Total	Cumulative %
NO	17	28.8%	28.8%
YES	42	71.2%	100.0%

The data indicates that **71.2%** (42 respondents) answered "YES", meaning they have actively taken steps to limit algorithm-driven content. This suggests a growing awareness of how digital algorithms influence online experiences and a proactive effort to curate, control, or reduce algorithmic influence over the content they consume. On the other hand, **28.8%** (17 respondents) answered "NO", indicating that they have not taken any steps to limit algorithm-driven content. This could be due to a lack of awareness, passive content consumption habits, or trust in algorithmic recommendations.

Theme 4: Navigating Relationships in the Digital Age

In the contemporary digital landscape, personal relationships are profoundly influenced by technology. Digital platforms

offer avenues for connection, yet they also present challenges that can affect the quality of these interactions.

Digital Influence on Personal Relationships: Digital platforms, especially social media, have transformed how individuals connect with friends and family. While these platforms facilitate constant communication, they can also introduce issues such as distraction and reduced quality of in-person interactions. A study by Kakembo (2024) highlights that social media fosters constant connectivity but may also fuel jealousy and trust issues in intimate relationships.

It is stated that,

"It doesn't change how I interact with my friends and family because my relationships and personal connections with them are strong in real life. We can say that algorithm-driven content influences what we see online, but they don't affect how I communicate or bond with the people close to me."

This view highlights the resilience of strong offline relationships against the potential negative impacts of algorithm-driven content. Research suggests that individuals with robust real-life connections are less affected by social media's drawbacks, allowing them to maintain meaningful interactions despite digital influences (Jarai, 2023).

One participant shared that,

"Due to the fact that trends are forever changing, and also it is something that everybody gets involved in every day, like the Skibidi Toilet or Sigma Face."

The rapid evolution of digital culture often fosters shared experiences, yet it can also lead to surface-level engagements. While viral content can create a sense of community, studies suggest that it doesn't always translate into lasting personal connections.

Another participant mentioned that,

"Because of the slangs."

The widespread use of slang in online communication can enhance group identity and belonging, yet it can also create barriers for those unfamiliar with certain terms. Research indicates that while digital slang strengthens in-group connections, it may exclude others, affecting the inclusivity of online interactions.

Self-Sufficiency in Socialization: The ability to build and maintain relationships relies heavily on individual attitudes and behaviors. Self-awareness and effort are crucial in fostering meaningful connections, both online and offline. Studies show that those who actively engage in socialization tend to have more fulfilling relationships.

It is stated that,

"I socialize with people by my own attitude or what."

This statement reflects the importance of personal disposition in interactions. Research suggests that proactive social behaviors contribute to stronger and more meaningful

relationships, regardless of the communication platform.

Strengthening Relationships through Digital Connectivity: Digital platforms provide tools that can enhance communication and relationship-building. AI-driven personalization, for instance, tailors content to individual preferences, potentially improving user engagement and satisfaction (Nkembuh, 2024).

Someone noted that,

"It helps me improve my communication skills."

Engaging with online content can sharpen communication abilities. A study by Kakembo (2024) found that social media fosters constant connectivity, encouraging public sharing and influencing relationship expectations.

Another participant commented that,

"It's different between family and friends, the way to talk."

This observation highlights how people adapt their communication styles based on relationship contexts. Research shows that individuals adjust their language and tone when interacting with family versus friends, reflecting different expectations and social norms.

One perspective emphasized that,

"I feel that algorithm-driven content has changed how I interact with friends and family. It influences what I see and talk about, sometimes making conversations more interesting by showing me new topics."

Personalized content can enrich conversations by introducing new discussion points, yet it may also create echo chambers, limiting exposure to diverse perspectives. Studies on AI's role in social media suggest that curated feeds shape user interactions and influence social discussions (Ali et al., 2024).

Expanding on this, another individual expressed that,

"Algorithm-driven content has changed how I interact with my friends and family in some ways. With my friends, the way I talk has changed because of the memes and brainrot from TikTok. I sometimes use certain phrases, jokes, or references from TikTok, which makes our conversations more fun and relatable. But in some ways, it has also changed my interactions for the better. I see posts and videos online that give tips on how to communicate respectfully with loved ones. These help me understand how to express my feelings better, handle conflicts, and appreciate my family more. So while some of the influence is just for fun, some of it actually helps me improve how I interact with the people I care about."

This insight illustrates the dual impact of algorithm-driven content. While digital trends enhance relatability among friends, informative content can improve communication

within families. Research indicates that AI-powered personalization can both entertain and educate users, shaping their social interactions (Nkembuh, 2024).

Digital Learning for Relationship Growth: Digital platforms serve as valuable resources for self-improvement, providing content that fosters reflection and personal development. Studies show that social media can influence relationships in both positive and negative ways, keeping people connected while potentially reducing face-to-face interaction quality (Jarai, 2023).

It is stated that,

"Some contents have some knowledge that you could get as a source of knowledge for you to realize and reflect."

This statement emphasizes the role of digital content in informal learning and self-improvement. Research supports the idea that online platforms can aid personal growth by offering accessible knowledge and insights.

Emotional Impact of Digital Communication on Relationships: Digital communication significantly shapes emotions and interpersonal dynamics. Studies suggest that frequent use of emojis correlates with higher emotional intelligence, improving the ability to express and interpret emotions in online interactions (Blanchard, 2024). Conversely, the "Face Down Phone Theory" suggests that even placing a phone face down during conversations can disrupt social engagement and impair cognitive function, ultimately weakening relationship quality (Leigh, 2024).

One participant noted that,

"Pag nag-iiba ang mood mo or emotion, nagbabago yung pakikitungo mo sa mga kasama mo."

Mood fluctuations can significantly affect social interactions. Research indicates that individuals experiencing negative emotions often struggle with emotion recognition and empathy, leading to difficulties in communication (Liu *et al.*, 2023). Additionally, negative interactions can reinforce mood disturbances, creating a cycle between emotional state and social engagement (Griffin *et al.*, 2022).

Theme 5: Shaping and Evolving Interests

The purpose of this theme is to explore how algorithm-driven content affects people's interests over time. It shows that these platforms don't just reflect users' current preferences by repeatedly showing them what they already like, but they also influence and shape their interests, passions, and perspectives (Dean & Morgenstern, 2022). This theme also emphasizes how users can discover new passions, likes, and gain new knowledge through the content they are exposed to.

Interest Development: Interest development refers to the process by which individuals discover new interests or deepen their existing ones. This development is often influenced by a person's environment, social circles, and the social media platforms they frequently use. In the context of algorithm-driven content, user interests are shaped by repeated exposure to personalized content tailored specifically for them. Algorithms continuously show users

similar or related content based on their previous interactions, which can lead to the formation of new interests or the expansion of current ones. This constant exposure encourages users to engage more deeply with certain topics over time.

According to Chen *et al.* (2025), content that is repeatedly shown to users plays a significant role in shaping their interest development. Their study found that continuous exposure to such content gradually fosters the growth of users' interests. Furthermore, the study highlights that social media and other online platforms do not merely reflect users' activities but also actively contribute to shaping and influencing their interests over time.

Several respondents expressed that algorithm-driven content does not only influence them to some contents that are always and repeatedly shown to them but it also contributes new knowledge when exposed to it. One respondents stated that,

"I believe algorithm-driven content both reflects my genuine interests and shapes them over time because there are times that it simply shows me what I already like and engage with, and it also does repeated exposure to certain types of content that sometimes influences my opinions, interests, or behaviors, even if I was not initially interested in them."

This response highlights how algorithm-driven content not only reflects users' existing interests based on their past interactions but also gradually influences them by exposing them to certain types of content. Over time, this repeated exposure helps shape their interests. This observation aligns with the findings of Chen *et al.* (2025), which state that content repeatedly shown to users plays a significant role in shaping their interest development.

Another participant reinforced this idea by stating,

"Because over time, my interest in other things becomes mostly addictive and more engaging."

Similarly, another participant shared,

"I think algorithm-driven content does both. Because it reflects my genuine interests by showing me more of what I already like, but over time it also shapes my interests by introducing me to new topics."

These statements suggest that algorithm-driven content not only reflects users' interests but also deepens their engagement with those interests. Additionally, it exposes them to new topics. As a result, users become more motivated to interact with the content repeatedly. This further proves that algorithm-driven content plays an active role in shaping an individual's behavior and preferences. This statement aligns with the findings of Obiegbu and Larsen (2024), which indicate that repeated exposure to certain content or branding deepens the relational bond with the brand, ultimately leading to brand loyalty. The same principle applies to algorithm-driven content—since it is personalized based on a user's interests, they are repeatedly exposed to similar content. Over time, this repeated interaction strengthens their engagement, gradually shaping their behavior and preferences.

One participant shared a personal experience about how algorithm-driven content, through the use of social media platforms, influenced their career aspirations. This participant stated that

“Algorithm-driven content definitely shapes my interests over time. This is especially true when I think about my future career. Before, I wanted to become a doctor of optometry, but because of the content I constantly see online, my interests started to shift. Algorithm-driven content exposed me to videos about MMA fighting, fitness training, and even modeling, which made me more interested in those fields. Over time, I started considering becoming an MMA fighter, a fitness trainer, or even a model. The more I watched, the more I felt encouraged to explore these career paths, showing how much social media influences the way I see my future.”

This statement demonstrates how algorithm-driven content goes beyond merely influencing a user's interests and, over time, can also impact significant life decisions. As seen in the earlier statement, repeated exposure to specific content led one individual to consider shifting career paths. This aligns with the findings of Chen *et al.* (2025), which suggest that algorithm-driven content does not only gradually influence users' interests but also shapes their identities and aspirations.

In summary, this study emphasizes that algorithm-driven content plays a crucial role in shaping users' behavior and perceptions. It shows that personalized content not only reflects users' existing interests but also introduces them to new content. Over time, this repeated exposure becomes a major factor in changing their interests, behaviors, perceptions, and even life decisions. Some respondents shared experiences illustrating how this personalization influences them in various ways, with some even stating that it has impacted their career aspirations.

Interest-Driven Content Exposure: Exposure in interest-driven content refers to the process by which users are presented with personalized content that aligns with their personal interests. This type of personalized content is facilitated by algorithms, which determine the content shown to users based on their past interactions, behaviors, and preferences to enhance their content experience (Teepapal, 2025). Over time, this exposure not only reflects users' existing interests but can also introduce new topics or content, which may eventually influence and change their interests.

Some respondents support this idea, emphasizing that algorithm driven content gradually shapes their engagements. One participant stated that,

“Yes, pag nagkakaroon ka ng mga content na nakakainteresado sayo.”

This suggests that the personalized content repeatedly presented to users is aligned with their current interests. Another participant added,

“I think it's because at first, it shows what I already like, but as I keep seeing certain topics, I start paying more attention to them, even if I wasn't interested before.”

This statement highlights how repeated exposure to certain content can gradually shape and expand users' interests over time due to their continuous exposure to these contents (Teepapal, 2025).

In summary, the repeated exposure of users to tailored content based on their existing preferences gradually shapes and expands their interests over time (Teepapal, 2025). Respondents highlighted that as time goes on, users become more interested and start dedicating time to content they were not initially interested in. This suggests that algorithms play a role in broadening and gradually changing their interests.

Knowledge Expansion: Knowledge expansion refers to the broadening of users' understanding, which is often driven by personalized content generated through algorithm-driven systems. Continuous exposure to such content contributes significantly to this process, allowing users to acquire new information and insights over time (Maghsudi *et al.*, 2021). One respondents affirmed this by stating,

“It actually helps me to find something to do, so it does shape them over time, because I learned a lot of techniques and new ideas online.”

This statement emphasizes that algorithm-driven contents align with their current interests. Another participant noted,

“I think algorithmic content both mirrors and determines my interests. Initially, it exposes me to things I already enjoy based on what I have done before, but eventually, it can begin to introduce new things I wasn't aware I was interested in. So, while it mirrors some of my real interests, it also determines what I become interested in or spend more time on.”

This highlights that algorithm-driven contents can gradually expand users interests by repeatedly exposing them to specific contents that aligns with their interests.

In conclusion, consistent algorithmic exposure demonstrates how algorithms actively shape and change users' choices by reinforcing their interests while discreetly expanding their area of interaction (Teepapal, 2025).

Interest Growth & Learning: Interest development and learning are the processes by which people's interests change as a result of constant exposure to information that is generated by algorithms. Based on their previous interactions, algorithms first show users subjects they are already familiar with, therefore repeating their preexisting interests. But as time goes on, these systems also introduce fresh and relevant content, which gradually broadens and influences users' participation and knowledge (Baker, 2024). One respondent described this effect, stating,

“I think algorithm-driven content does a bit of both. At first, it shows what I'm already interested in, based on what I've liked or searched before. But over time, it also suggests new things that I might not have thought about, which can end up shaping my interests more. So, it's like my interests are both reflected and changed by what I see.”

The statement emphasizes the dual purpose of algorithmic systems, which serve as both guides that broaden interests beyond original bounds and mirrors that reflect present

preferences. This theory is supported by research, which highlights how recommendation algorithms in media and online learning platforms not only improve user engagement but also make learning easier by progressively introducing new topics (Patel *et al.*, 2023).

In conclusion, by continuously repeating preferences and gradually expanding users' areas of engagement and learning, algorithm-driven exposure promotes interest growth and knowledge development.

Interest Formation & Self-Discovery: Interest Formation and self-discovery are the processes by which people become more self-aware and acquire new interests as a result of exposure to tailored content. Based on behavioral data, algorithms select content to create an environment where users may interact with customized content throughout time, assisting in the development of their changing identities. (Eg *et al.*, 2023). One participant affirmed this, stating,

"As I see more interesting content and things online, for me, it shapes my interest over time in which I know myself more."

This statement is consistent with studies that indicate digital interactions help people construct their identities by introducing them to new viewpoints and concepts, which increases their self-awareness (Soh *et al.*, 2024). Thus, consistent exposure to algorithm-driven material not only reinforces existing interests but also promotes self-discovery by exposing users to new information and experiences.

In conclusion, algorithmic material exposure is essential for self-discovery since it helps users better grasp who they are and shapes their changing interests.

SOP 5: *What are the lived experiences of youth regarding their awareness and control over the influence of algorithm-driven platforms on their psychological and social well-being?*

Theme 6: Ensuring Reliable & Accurate Algorithms

The purpose of this theme is to highlight the importance of developing algorithmic systems that consistently produce accurate, fair, and trustworthy outcomes across various applications. It places a strong emphasis on designing systems that function effectively in a variety of scenarios while reducing biases and mistakes to guarantee moral and open decision-making. Strong, flexible, and interpretable algorithms enable consumers to comprehend their results and have faith in their efficacy. Strict testing, bias reduction, ongoing observation, and validation are necessary to meet these objectives and guarantee algorithm-driven systems' long-term accuracy and fairness. These principles align with the framework proposed by Loftus *et al.* (2022), which highlights the essential qualities of ideal algorithms particularly in healthcare, such as explainability, flexibility, accuracy, autonomy, fairness, and repeatability. Algorithms can optimize their possible advantages while lowering the risks of bias and inaccuracy by putting such guidelines into practice. (Loftus *et al.*, 2022).

Algorithm Reliability & Accuracy: Algorithm Reliability & Accuracy refers to the capacity of an algorithm to minimize biases and mistakes while reliably producing accurate, equitable, and trustworthy outcomes. Algorithms that are reliable operate as anticipated under many

circumstances, preserving their stability and efficacy throughout time. According to Balayn *et al.* (2021), ensuring accuracy requires rigorous testing, data validation, and bias prevention to align algorithmic outputs with actual or expected values. To improve fairness, transparency, and reliability in decision-making systems, both must be attained through stringent testing, data validation, bias prevention, and ongoing monitoring. These ideas are especially crucial in industries where algorithmic results have a big impact on actual decisions, such as healthcare, finance, and artificial intelligence. One participant highlighted this by stating:

"To let them know that some of the algorithms are not true and to let them gain some knowledge about it."

The significance of educating people about the restrictions, as well as any algorithmic errors, is emphasized by this statement. As Decker *et al.* (2024) argue, increasing awareness of these shortcomings helps users understand when and why algorithmic outputs may differ from expected results, leading to more thoughtful decision-making.

Another participant emphasized the significance of this awareness, stating:

"They need to know this.."

This viewpoint highlights how important it is to make sure people are aware of algorithmic dependability. People can engage with automated decisions more critically when they are aware of the possible biases and errors in algorithmic systems.

Finally, another participant remarked:

"Because it teaches a lot of knowledge about how to control the algorithm."

This perspective emphasizes how knowing algorithm accuracy and dependability offers people with real-world experience to oversee and enhance these systems. As Decker *et al.* (2024) highlight, understanding how algorithms work, including how to minimize bias and validate data, gives users the ability to step in when systems generate unfair or erroneous results.

To sum up, raising awareness of algorithm accuracy and dependability is crucial because it facilitates people's comprehension, control, and enhancement of automated systems. Continuous efforts to test, validate, and prevent bias guarantee that algorithms in high-impact industries continue to be reliable, fair, and efficient.

Responsible Digital Behavior: Responsible Digital Behavior refers to the ethical and thoughtful use of digital platforms, ensuring respectful interactions, privacy protection, and the promotion of a healthy online community. This includes actions such as verifying information before sharing, preventing cyberbullying, safeguarding personal data, and respecting intellectual property rights. According to Soler-Costa *et al.* (2021), awareness of digital footprints and the long-term impact of online activities is crucial for responsible engagement in digital spaces. The rise of social media and AI-driven content has made digital literacy essential for navigating

online environments, critically evaluating information, and fostering a safer and more respectful digital society. Some respondents acknowledge the challenges of responsible digital behavior, as one participant stated:

"Because most youth do not know how to use social media or how to be a responsible user."

This implies that a large number of young people are unaware of appropriate online behavior, underscoring the necessity of teaching digital literacy. A different respondent highlighted a wider social issue,

"Because most of the generation now lacks discipline and respect."

This statement emphasizes the significance of responsible digital behavior as a crucial element of digital citizenship by reflecting the belief that digital spaces may promote behaviors that go against conventional ideas of discipline and respect (Riccio, 2022).

Impact on Thoughts and Misinformation Prevention:

Digital content significantly influences individuals' thoughts, opinions, and decision-making. Exposure to biased or inaccurate information can lead to misconceptions and the spread of false narratives. According to Caled and Silva (2021), recommendation systems, search engines, and social media algorithms tailor content based on user preferences, which can result in echo chambers and limit exposure to diverse perspectives. To combat misinformation, responsible digital practices, fact-checking tools, and reliable algorithms that prioritize accuracy must be implemented. Additionally, AI-driven systems should be used to detect misleading information, enhance media literacy, and promote critical thinking, enabling users to evaluate sources effectively before sharing content.

Respondents expressed concerns about the influence of digital content, with one stating,

"Because some of them are influenced by the media and they're not aware of it."

This demonstrates how algorithm-driven information can have a subtle yet significant effect on people who might not be aware of it. Another participant added,

"It's very concerning that children easily believe anything on the web."

This highlights how prone younger audiences are to false information, underscoring the importance of teaching them digital literacy and critical thinking skills. Furthermore, another respondent pointed out,

"Young individuals need to learn more about algorithm-driven content because it affects what they see online and can change their thoughts, interests, and feelings. Without understanding it, they might believe false or misleading information."

This claim emphasizes how crucial it is to teach young people about algorithmic influence so they can use digital platforms more sensibly and critically.

In conclusion, algorithm-driven suggestions shape the information users are exposed to, and digital content has a significant influence on people's thinking, attitudes, and decision-making. The danger of echo chambers and false information emphasizes the necessity of fact-checking tools, responsible digital habits, and AI-driven systems that put accuracy first (Putri *et al.*, 2024). Respondents emphasized the value of media literacy and critical thinking abilities while voicing worries about the unquestioning acceptance of online content, especially among younger consumers. To guarantee that people interact with digital content more carefully and ethically, it is crucial to educate them about algorithmic influence, especially young people.

Cognitive Engagement: Cognitive Engagement refers to the level of mental involvement individuals have when interacting with digital content. While passive consumption can lead to reduced critical thinking, high cognitive engagement fosters learning, problem-solving, and informed decision-making (Yaseen *et al.*, 2025). Thoughtful content selection, such as educational and intellectually stimulating material, can enhance cognitive engagement. Additionally, interactive media, adaptive learning platforms, and AI-driven recommendations tailored to users' cognitive needs can further promote meaningful engagement. Encouraging active participation—such as discussions, content creation, and critical analysis—can enhance digital literacy and cognitive development.

One respondent emphasized the importance of active engagement:

"To ensure an active processing mind through all of the scrolling."

This claim implies that people should interact with stuff that stimulates their thoughts and improves their cognitive abilities rather than aimlessly ingesting it.

In summary, people's interactions with digital content are greatly influenced by cognitive engagement, which also affects their capacity for critical thought, learning, and decision-making. Engaging with informative and thought-provoking content can improve analytical and problem-solving abilities, whereas passive consumption may impede cognitive development. Meaningful engagement can be further supported by AI-driven recommendations that are tailored to users' cognitive needs, interactive media, and adaptive learning platforms. Users will interact with digital content more thoughtfully and enriching if active participation is encouraged, such as through debates, content production, and critical analysis (Yaseen *et al.*, 2025).

Effective Time Management Using Reliable Algorithms:

In the digital age, distractions from social media, notifications, and algorithm-driven content can hinder productivity. Effective time management is essential to maintaining focus and efficiency. Reliable algorithms assist individuals in optimizing their schedules by prioritizing tasks, setting reminders, and minimizing digital distractions. Smart productivity tools, AI-driven calendars, and focus-enhancing applications use data-driven insights to help users manage their time effectively (Zirar *et al.*, 2023). Additionally, features such as screen time tracking, content filtering, and AI-powered task automation help users maintain productivity while balancing digital consumption. One participant highlighted the need for such tools, stating:

"To help them manage more of their time."

This highlights the need for digital solutions that support time management, making sure that technology boosts output instead of acting as a distraction.

In a digital world where social media and algorithm-driven information are constant distractions, time management skills are essential. By planning activities, sending reminders, and cutting down on pointless screen time, trustworthy algorithms and AI-powered solutions help people remain productive. Maintaining efficiency and focus is greatly aided by features like work automation, content screening, and screen time tracking. Users may ensure that technology is a source for improvement rather than distraction by utilizing these digital solutions to balance their productivity and digital consumption (Zirar *et al.*, 2023).

5. Summary of Findings, Conclusion, and Recommendation

This chapter presents the key findings of the study, the conclusions drawn from the results, and recommendations for addressing the effects of algorithm-driven content consumption on youth development and psychological perceptions. The findings highlight the significant influence of algorithmic content on emotions, cognitive skills, relationships, interests, and overall digital literacy. Based on these insights, the study provides recommendations to promote responsible content consumption, enhance critical thinking, and support healthy social interactions in the digital age.

Summary of Findings

The conducted study aims to understand and investigate the impact of algorithm-driven content consumption on the cognitive, emotional, social, and behavioral development of youth. A mixed-method design integrating both quantitative and qualitative approaches was used, following a sequential explanatory research design. The chosen population consists of youth aged 13 to 24 who actively engage with algorithmic content across various digital platforms.

Theme 1: Emotional Shifts from Digital Content

Algorithm-driven content significantly affects youth emotions and psychological well-being (De *et al.*, 2025). Respondents reported that their social media feeds mirror their moods—when they feel happy, they see uplifting content, but when they feel down, they encounter emotionally charged posts. Idealized lifestyles and filtered realities contribute to increased social comparison, with many experiencing heightened stress due to sensationalism and targeted ads. Users of TikTok, Instagram, Facebook, and Twitter reported the highest stress levels, with a mean score of **4.00**, while YouTube users exhibited moderate stress, with a mean score of **2.33**, and slightly positive self-esteem, with a mean score of **3.33**.

Despite these negative effects, some respondents found that algorithmic recommendations helped them discover self-improvement resources, fostering personal growth. To manage emotional fluctuations, some youth actively curate their feeds by avoiding negative content and following uplifting pages, while others take social media breaks when overwhelmed. According to Labrague (2021), emotional resilience and coping mechanisms improved in cases where

individuals engaged with supportive communities and educational content.

Theme 2: Enhancing Cognitive Skills Through Media Engagement

Algorithm-driven content has a dual effect on cognitive development (Shanmugasundaram & Tamilarasu, 2023). It fosters specialized knowledge acquisition and strengthens pattern recognition skills but also leads to cognitive narrowing, limiting exposure to diverse perspectives. Many respondents reported relying heavily on algorithmic recommendations, raising concerns about intellectual echo chambers. Engagement with short-form content correlates with diminished attention spans and instant gratification tendencies, as several respondents admitted to skimming rather than deeply engaging with content.

Content type plays a crucial role in cognitive effects. Educational content had a stronger impact on cognitive abilities, with a mean score of **4.21**, whereas entertainment-based content had a lower impact, with a mean score of **3.87**, showing that social media can enhance cognitive skills when used constructively. Some youth cope with misinformation by fact-checking sources and engaging in discussions that challenge their views, while others passively consume content, reinforcing biases.

Theme 3: Strengthening Connections Through Online and Face-to-Face Interaction

Algorithm-driven content shapes how youth engage in both digital and real-world interactions (Swart, 2021). Many participants stated that social media trends influence their real-life conversations, slang, and discussion topics. While some preferred online conversations for convenience and self-expression, others believed that digital interactions reduced meaningful emotional connections.

Respondents who primarily engaged with interactive content, such as discussion forums and live-streamed debates, had a mean score of **4.09** in social engagement, while those who consumed only passive content had a lower mean score of **3.68**. Some youth set boundaries between online and offline interactions, engaging in social gatherings to balance their digital and real-world relationships. Others use social media to maintain long-distance friendships, though many still believe face-to-face conversations are more meaningful.

Theme 4: Navigating Relationships in the Digital Age

The way algorithm-driven content influences relationships varies among individuals (Metzler & Garcia, 2023). Some participants reported that social media trends, memes, and online discussions shape their communication styles and topics with friends and family. Others noted that algorithmic content introduces new conversational topics, slang, and expressions, reinforcing shared cultural experiences.

However, concerns about digital disinhibition were raised, with a portion of respondents acknowledging that they communicate differently online than in person. The anonymity of digital spaces and algorithmic reinforcement of extreme viewpoints contribute to a reduced ability to navigate real-life conflicts effectively. To manage the impact of social media on relationships, some participants limit their time on digital platforms to prevent unnecessary comparisons or jealousy. Others actively communicate about online trends to maintain a sense of reality and use

digital platforms as tools for learning relationship skills, such as conflict resolution and emotional expression.

Theme 5: Shaping and Evolving Interests

Algorithm-driven content consumption has a lasting effect on youth identity formation, career choices, and aspirations. Many respondents believe social media algorithms influenced their personal interests, with some stating their career aspirations were shaped by online content.

The long-term influence varies by content type. Participants who engaged with skill-building and educational content reported a mean score of **4.23** in personal development, whereas those primarily consuming entertainment-driven content had a lower mean score of **3.61**. Additionally, individuals who actively curated their social media feeds to include educational and motivational content reported higher levels of self-confidence and goal-setting behaviors.

However, risks such as emotional desensitization and unrealistic expectations exist, with some stating that prolonged exposure to idealized digital personas affected their perception of real-world achievements. Some youth cope with the overwhelming exposure to new content by being selective about what they engage with. Others balance their online interests with offline hobbies to ensure they do not become overly dependent on algorithm-driven content for entertainment and learning.

Theme 6: Ensuring Reliable & Accurate Algorithms

Many participants emphasized the need for digital literacy among young people. They pointed out that most users do not fully understand how algorithms work, making them more susceptible to misinformation (Rainie *et al.*, 2022). A significant number of respondents admitted that they rarely go beyond their recommended feeds to explore new content, reinforcing algorithmic filter bubbles.

The effectiveness of digital literacy efforts depends on access to education and awareness programs. Participants noted that schools and parents play a crucial role in teaching young people how to critically evaluate online content. Others emphasized the need for stricter content moderation and policies to ensure that social media platforms do not exploit users' emotions or reinforce harmful behaviors.

Some participants take control of their algorithm-driven experiences by adjusting their privacy settings, blocking misleading content, and unfollowing sources of misinformation. A few advocate for digital literacy programs to help young people become more responsible media consumers, ensuring they navigate algorithm-driven content safely and effectively.

Empirical Implications

The findings of this study provide valuable insights into how algorithm-driven content consumption affects youth development and psychological perceptions. The study confirms that social media algorithms significantly influence emotions, cognitive skills, social interactions, personal interests, and overall well-being. Many participants reported emotional shifts based on the content they engage with, highlighting the power of algorithms in shaping online experiences. The study also reveals that while algorithms can promote critical thinking by exposing users to diverse content, they often reinforce existing beliefs, creating echo chambers that limit intellectual growth. Additionally, while

social media can enhance connectivity, excessive reliance on digital interactions may weaken face-to-face communication skills. The findings underscore the need for digital literacy programs to equip youth with the skills to critically analyze online content and mitigate negative psychological effects.

Theoretical Implications

This study contributes to the understanding of algorithm-driven content consumption through the lens of various psychological and media theories. Social Learning Theory (Bandura) is evident in how youth model behaviors and emotions based on the content they repeatedly see online. The Media Dependency Theory supports the finding that youth rely heavily on algorithm-driven content for entertainment, education, and social interactions, shaping their beliefs and decision-making processes. Digital Well-Being Theory highlights the importance of maintaining a balance between online and offline interactions to prevent emotional distress and cognitive overload. The study strengthens these theories by providing empirical evidence that digital consumption is not passive but actively shapes youth behavior, perceptions, and mental health.

Conclusion

The findings of this study indicate that algorithm-driven content consumption has significant cognitive, emotional, behavioral, social, and long-term developmental effects on youth. While algorithms offer opportunities for personalized learning, engagement, and exposure to diverse content, they also present risks such as cognitive narrowing, emotional distress, compulsive content consumption, altered social interactions, and long-term developmental shifts.

Algorithm-driven content plays a critical role in shaping the psychological and emotional well-being of young individuals. The study highlights how social media algorithms influence mood, self-esteem, critical thinking, relationships, and personal interests. Although digital platforms can facilitate learning and social connectivity, they also pose challenges such as emotional instability, misinformation, and reinforcement of biases. Excessive exposure to algorithmic recommendations can lead to intellectual dependency and a decline in critical thinking skills, making it essential for young users to develop self-awareness and responsible digital consumption habits.

Furthermore, the study underscores the importance of media literacy and digital well-being in navigating algorithm-driven environments. The ability to critically assess online content, regulate screen time, and balance digital engagement with offline interactions is crucial for maintaining a healthy and informed digital lifestyle.

To mitigate the negative impacts of algorithm-driven content consumption, the study recommends implementing digital literacy programs, critical thinking education, and algorithm transparency policies. These initiatives can empower young individuals to make conscious, informed decisions about their media consumption, fostering a more balanced and intentional digital experience. Additionally, future research should explore adaptive strategies and policy interventions that promote ethical and user-centric algorithm designs, ensuring that technology serves as a tool for positive youth development rather than a source of unintended psychological harm.

Recommendation

The study revealed how algorithm-driven content consumption influences youth development and psychological perceptions. Based on the summary of findings and conclusion presented, the following recommendations are:

Social Media Developers will gain a better understanding of how algorithms impact young users, enabling them to create more transparent and ethical content recommendation systems that promote balanced and diverse digital experiences.

Policymakers will gain insights into the need for digital literacy programs and content regulation to minimize the negative effects of algorithm-driven content on youth. They can implement policies that encourage responsible content consumption and protect young users from harmful exposure.

Mental Health Professionals will recognize the emotional and psychological effects of algorithm-driven content, allowing them to develop more targeted support strategies to address self-esteem issues, anxiety, and digital addiction among youth.

School Administrators will be able to incorporate media literacy and digital well-being initiatives into the school curriculum, ensuring that students are equipped with the knowledge to navigate algorithm-driven content responsibly.

Teachers will be better prepared to guide students in understanding how social media algorithms work, fostering critical thinking skills and responsible digital consumption habits.

Students will become more aware of the influence of algorithm-driven content on their emotions, relationships, and interests. This awareness will help them develop healthier social media habits and improve their ability to critically evaluate the information they consume.

Parents and Guardians will understand the impact of social media algorithms on their children, allowing them to provide guidance, set digital boundaries, and encourage a balanced use of technology.

Researchers will benefit from this study by gaining insights into the long-term psychological and developmental effects of algorithm-driven content. They can use these findings to explore further solutions for promoting digital well-being.

Future Researchers will have a foundation for expanding this study by exploring other aspects of algorithm-driven content consumption. They can build upon these findings to investigate new solutions for mitigating negative effects while maximizing the positive aspects of digital media.

Reflection

Conducting this study has provided a deeper understanding of the complexities of algorithm-driven content and its impact on youth development. According to a study by Galindo-Domínguez *et al.* (2024), there is a significant relationship between social media use and critical thinking skills among university students. It has become clear that social media is a powerful tool that can either enhance or harm psychological well-being, depending on how it is used. The study reinforces the importance of critical thinking and self-awareness in navigating digital spaces. It also highlights the need for collective responsibility—among youth, educators, parents, and policymakers—to create a safer and more informed digital environment. By applying these

insights, future generations can develop healthier digital habits and make more conscious decisions in their online interactions (Duterte, 2025).

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