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Unveiling the power of youtube in digital financial literacy

Sylviana Maya Damayanti and Dini Lestari*

Abstract

Research aims: The importance of digital financial literacy (DFL) as a core component of education is expected to grow in the digital age. Social media platforms have made huge improvements in their ability to support information sharing and the establishment of educational communities. A total of 30 samples were obtained from YouTube video creators in Indonesia, Malaysia, and the Philippines. The authors compared two models of User Engagement Rate in this study, specifically Commitment 1: Engagement Rate and Commitment 2: Total Engagement. The objective of this study is, thus, to investigate the characteristics of social media video content that resulted in greater user interaction on social media platforms, specifically in the context of using YouTube as a platform for digital financial literacy tools.

Design/Methodology/Approach: The present study employed quantitative methodologies, specifically exploratory factor analysis and predictive regression models.

Research findings: The findings indicate that the fluency of videos, vividness level, and content type exerted a substantial influence on user engagement rate when considered in an integrated way rather than individually. The factors of popularity and virality had a substantial impact on the rates of user engagement.

Theoretical contribution/Originality: This study represents a pioneering investigation into the potential of YouTube as a catalyst for progress in the realm of financial education, with a specific focus on enhancing digital financial literacy.

Practitioner/Policy implication: Collaboration between content creators, corporate partners, and government entities can be leveraged to produce a very successful and widely shared video, hence creating the lucrative potential for monetization.

Research limitation/Implication: This study was limited to three countries located in the Southeast Asian region, serving as the residence for content providers.

Keywords: Digital Financial Literacy; Predictive Regression; Social Media; User Engagement; YouTube

AFFILIATION:
School of Business and Management, Institut Teknologi Bandung, West Java, Indonesia

***CORRESPONDENCE:**
dini_lestari@sbm-itb.ac.id

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Introduction

Various social media platforms can serve multiple functions. Topics such as games, education, traveling, and others can be explored through numerous social networking platforms. Financial literacy and independence experienced a notable surge in popularity during the preceding year, primarily due to the impact of the COVID-19 epidemic. As individuals struggled with financial challenges, there was a growing desire

to enhance their understanding of personal finance by seeking information and resources online.

The advent of digital technology has the potential to alter human behavior significantly, necessitating human ability to adapt and possess a comprehensive understanding of the advantages and drawbacks associated with digital financial technology. Digital financial literacy refers to the convergence of financial literacy, digital literacy, and social factors. It encompasses the understanding and utilization of financial knowledge and skills, access to digital resources, and the influence of social networks and social capital. Financial literacy alludes to acquiring skills and competencies that enable individuals to effectively utilize resources to achieve desired financial objectives (Hayati & Syofyan, 2021). Hence, individuals must acquire knowledge about digital financial literacy, given that the advent of digitization has led to increased personal accountability for one's financial actions. One of the platforms that uses information and education is social media. Most Indonesians use various forms of social media and have risen to fourth place globally, implying that social issues have grown increasingly relevant. Social media also allows for direct two-way interaction through interaction on the post. Based on the features of each platform, how user involvement with such social media platforms should be investigated further to employ digital financial literacy. Different intensity levels may result from the interaction of engagement behavior (Shahbaznezhad et al., 2021).

Prior research (e.g., Ridho, 2022) has focused on the relationship between social media comparison and the utilization of financial literacy. However, despite the fact that the emergence of social media gives new potential for providing information quickly and easily, the literature does not assess the performance of the financial literacy program depending on its social media platform. According to Cao et al. (2020) research, utility and compatibility are two reasons why people use social media when making financial decisions. To comprehend the appropriate context for digital financial literacy, it is necessary to examine the distinctive characteristics of each social media platform.

The analysis of social media data is now regarded as a relatively recent field of research (Zachlod et al., 2022). This study represents the initial examination of social media data within the realm of financial literacy research, specifically focusing on digital financial literacy. The consideration of social media platforms holds significance. According to Forbes Advisor, social media platforms such as YouTube, TikTok, and Instagram, which exhibit content community features, have gained significant popularity. It has been reported that approximately 30-40% of users on these platforms actively engage with financial information. Scholars and practitioners have also shown significant interest in comprehending, monitoring, and quantifying social media participation, as it is a crucial feature in digital financial literacy. This has led to the development of many conceptualizations in this field. Based on the factors mentioned above, the authors employed social media to examine the determinants of user engagement and the present condition of social media platforms concerning digital financial literacy in Indonesia.

This research makes several significant contributions to existing literature. It is crucial to examine the attributes of social media to establish and implement strategies specific to the diverse audience segments on these platforms. Comprehending the determinant of

user involvement is crucial, not only for addressing a vacuum in academic research but also for guiding institutions in creating more impactful financial education on social media platforms. Institutions or individual educators can seek encouragement on how to effectively provide financial education to their target audience, with a focus on engagingly developing digital financial literacy.

Literature Review and Hypotheses Development

Social media is an innovative platform that facilitates collaboration, idea exchange, and information sharing among individuals. Social media is intricately connected to mass communication theories, exerting a substantial impact on individuals' behavior while interacting on social media platforms. In their study, Ngai et al. (2015) identified two distinct mass communication theories that effectively explain social media utilization. Para-social Interaction (PSI) is a hypothesis initially employed in the 1950s to examine the impact of celebrities on consumer behavior, which is in television and film media. Colliander and Dahlén (2011) used PSI in their study on social media research to examine user behavior on brand attitudes and purchase intentions. As applied to conventional media, the Uses and Gratifications Theory (UGT) aims to comprehend customers' behavior in mass communication (Eighmey & McCord, 1998). UGT has received significant attention in social media research, particularly in examining methods to fulfill customers' requirements, as seen in the studies conducted by Chen (2010), Dholakia, Bagozzi, and Pearo (2004). The social features theory encompasses various social elements, including social influence (Kelman, 1958), which incorporates social identity and social capital (Chang & Chuang, 2011; Portes, 1998), facilitating social contact and the formation of social bonds. The relationship between social media usage and socio-psychological and intentional behavior has led to the extensive use of social factors in studying users' engagement, intentions, and behaviors regarding the adoption or usage of social media. This includes the research conducted by Fischer and Reuber (2011).

Social media platforms have fundamentally altered how customers and organizations connect by providing digital places for sharing and engagement, allowing users to comment, evaluate, produce, and share material within online networks, and facilitating collaborative operations (Trunfio & Rossi, 2021). In recent years, there has been a growing trend among financial institutions to prioritize developing educational programs that utilize various social media platforms to engage with individuals seeking to enhance their understanding of personal finance (Cao et al., 2020). Nevertheless, the unrestricted nature and absence of rules inherent in social media platforms can be leveraged by specific individuals to disseminate inaccurate information and deceive the public. In the field of social media, there exist several advantages and disadvantages. However, it is worth noting that social media may serve as a valuable tool for constructive endeavors, particularly in education, by providing accessible and flexible digital platforms for learning that can be accessed at any time and from any location. The impact of social media on financial literacy is prominent since it serves as a novel information channel for enhancing individuals' financial literacy (Loibl & Hira, 2005). The utilization of financial education content disseminated through social media platforms can improve individuals' financial

literacy. However, it is imperative to ensure that individuals are fully aware of their potential risk attitude to effectively evaluate the information provided by these platforms (Rizon et al., 2021).

The large volume of data obtained from diverse social networking platforms offers new perspectives for individuals, businesses, and other groups. The approach proposed by Choi et al. (2016) examined the trade-offs inherent in various social media platforms, aiming to facilitate the comparison of value in cross-platform data gathering and analysis. Incorporating social media in research often needs to be improved in terms of methodological efficiency. This is primarily due to the significant increase in user-generated data as a result of the broad adoption and complexity of social media platforms. Researchers also face challenges in managing the increasing volume and diverse data types, which require significant time and effort to handle effectively (Xu et al., 2022). Due to the reason mentioned above, an extensive amount of prior literature has employed a quantitative approach utilizing survey methods, as demonstrated by the research of Cao et al. (2020), Chhabra and Gupta (2023), Rizon et al. (2021), and Yanto et al. (2021). However, a need exists for studies employing an alternative quantitative approach, particularly in the context of financial literacy.

The Current State of Digital Financial Literacy

Utilizing software, applications, and digital platforms in financial technology has gained recognition as a potential means to enhance financial inclusion. This refers to providing financial products and services to previously marginalized households and small businesses through digital devices, notably smartphones. As outlined in the Policy Brief titled "*The Future of Work and Education for the Digital Age*" by the T20 Japan Task Force 7, G20 nations must collaborate in establishing uniform definitions of digital financial literacy. Additionally, they should develop and implement assessment tools to evaluate this literacy while formulating strategies and initiatives to foster digital financial education. Like digital and financial literacy, digital financial literacy is a multi-dimensional concept. At the same time, some previous literature (e.g., OECD 2017) has described various aspects of digital financial literacy, but there is still no standardized definition (Morgan et al., 2021). However, previous studies stated that digital financial literacy has unique aspects due to the nature of the products and risks involved (Normawati et al., 2021; Ravikumar et al., 2022; Rizon et al., 2021).

In recent years, there has been a substantial increase in efforts to promote digital financial literacy, as it is closely associated with key elements of financial notions, including financial inclusion and investment, particularly in digital financial services. The Indian Government, for example, has implemented various initiatives to encourage digital financial literacy, such as the National Centre for Financial Education (NCFE), the Digital Financial Literacy Campaign, and ICICI Bank's Digital Banking Skill Academy (Marvaniya, 2023). In comparison, in Indonesia, according to Deputy Secretary General II of the Indonesian Fintech Association, Indonesia's digital financial literacy rate is now 25%, lower than the corresponding inclusion rate of 85%. The underlying cause for this phenomenon is the Indonesian populace falling into the trap of online loan services, often needing a comprehensive understanding of the potential consequences. Within the scope of

research, Rahayu et al. (2022) conducted a study that revealed that only digital payment items exhibited a higher level of comprehension; in contrast, many individuals needed more comprehension and utilization of financial instruments, such as digital asset management, investing, and financing. The findings emphasize the significance of implementing a robust strategy for promoting digital financial literacy. The study carried out by Jhonson et al. (2023) also highlights the significant influence of digital financial literacy on an individual's financial well-being.

Determinants of User Engagement in Social Media

The implementation of effective strategies to engage users in getting digital financial literacy education requires researchers to deeply analyze the determinants of user engagement. Several studies have demonstrated that due to their ability to activate two-way symmetrical communication, social media can increase the level of engagement (Viglia et al., 2018). Few studies have focused on finding out the determinants of social media in the context of digital financial literacy. Based on past literature, the authors made propositions for social media posts according to which factors influence user engagement to make effective strategic approaches.

Fluency of Message

The first determinant examined under the engagement model is related to the fluency of the post. Fluency is a term used to describe the ease with which information is processed (Mcshane et al., 2019). This term involves those who are cognitively occupied, such as social media users, and encompasses "the subjective perception of the level of ease with which individuals process information" (Alter & Oppenheimer, 2009). Users prefer fluent posts in the social media context as they facilitate quick information processing (Mcshane et al., 2019; Surucu-balci et al., 2019). The fluency of a social media post is influenced by factors such as the length of the content and the presence of hashtags. Incorporating a hashtag in the post is intended to enhance user participation. According to Surucu-balci et al. (2019), prior research conducted by Pancer and Poole (2016) claimed that including a hashtag in a text may result in enhanced cognitive involvement in interpreting the representation's meaning owing to a lack of visual clarity. The findings presented here vary from the analysis conducted by Mcshane et al. (2019) on Twitter posts, which indicated that the impact of hashtag usage was less significant than often believed, as it led to less engagement in terms of likes and shares. In the findings of Surucu-balci et al. (2019), it was observed that posts with shorter lengths and without the use of hashtags tend to exhibit better rates of engagement. Hence, visual elements, such as photographs and videos, should be employed to aid in the translation of messages into significant material, thereby augmenting proficiency in the realm of digital financial literacy education.

H_1: *The post's fluency significantly influences the user engagement of digital financial literacy content.*

Content-Type

The post's content is the second determinant chosen from the engagement model. The engagement rate of users can be affected by posts based on various content themes. Based on previous research, social media content that influences engagement has been classified as rational (also known as an informational, functional, educational, or current event), interactional (e.g., experiential, personal, employee, brand community, customer relationship, and cause-related), and transactional (also known as remunerative, brand resonance, and sales promotion) (Shahbaznezhad et al., 2021). In a recent study, the authors studied Facebook posts and discovered that the content of social media posts considerably influences stakeholder involvement (Denktas-Sakar & Sürücü, 2020). Cvijikj and Michahelles (2013) also found that entertaining postings receive more likes, comments, and shares than instructive or commercial material. Khan (2017) discovered that the level of engagement might vary depending on whether the post is informative or amusing.

***H_2**: The post's content type significantly influences the user engagement of digital financial literacy content.*

Vividness level

Vividness is a crucial message component (Lee & Hsieh, 2019; Mariani et al., 2018). According to an elaboration-likelihood model (ELM), consumers process messages in two ways: the central, where consumers focus on the functional message content, and the peripheral, which includes cues such as message detailing, aesthetics, and other specifics in addition to the primary communication (Yousaf et al., 2021). The emphasis is on the media files (images, gifs, or videos) uploaded to a post, which differentiate the post's low, medium, or high vividness level (De Vries et al., 2012). Surucu-Balci et al. (2020) stated that low vividness occurs when posts contain simple phrases or links (text). When a photo is included in the post, the vividness is medium; while a video or gif is included in the post, the vividness is high. The literature has conflicting results regarding the relationship between media type or vividness level and engagement rate. The authors discovered that when the content has images or videos (Mcshane et al., 2019; Surucu-balci et al., 2019) or Facebook postings include photos and videos (Surucu-balci et al., 2019; Viglia et al., 2018), the engagement level is high (De Vries et al., 2012). Existing research is divided on whether message vividness facilitates or inhibits participation (Keller and Lehmann, 2008). Differences in the operationalization of vividness could explain this contradiction (Ophir et al., 2019). According to Nisbett and Ross (1980), vivid messaging with superior audio-visual components and interactivity creates immersive customer experiences (Lee & Hsieh, 2019; Mariani et al., 2018). According to ELM, messages that evoke both the central route (through impactful message content) and the peripheral way (by embedding interactive images, videos, or links) should result in higher/cognitive engagement (comments) than messages that only have one of the two (Agrawal et al., 2018; Mariani et al., 2018). Despite the contradictory results, the authors infer that the type of media or vividness determines the amount of engagement.

***H_3**: The post's vividness level significantly influences the user engagement of digital financial literacy content.*

Research Method

The proposed methodology utilized a data-driven approach consisting of three distinct stages, which were implemented to construct a linear predictive regression analysis. The purpose of this analysis is to conduct data analysis and identify predicted factors that contribute more reliably to the engagement rate. The study conducted by Patmanthara et al. (2019) revealed that social media penetration in Indonesia during the last quarter of 2018 was estimated to be 88% of the population, as measured by YouTube. According to the survey, as mentioned earlier, conducted by Populix on social media habits and internet safety, the degree of social media penetration in Indonesia continues to be the highest as of January 2023. The main focus of this study centers around the analysis of companies that are active in nations that have been designated as implementation countries, as elucidated in the research conducted by Ischenko (2023). According to Ischenko (2023), disparities exist in the efforts made by nations to promote financial literacy. The United Nations Capital Development Fund (UNCDF) has classified countries into three distinct categories: pre-formulation, formulation, and implementation. Pre-formulation countries, including Laos, Myanmar, and Vietnam, are in the early stages of developing a strategic plan to enhance financial literacy. Formulation countries, such as Brunei, Cambodia, and Thailand, have already established working groups and roadmaps to address this issue. Implementation countries, such as Indonesia, Malaysia, and the Philippines, are currently executing initiatives aimed at improving financial literacy. A dataset consisting of 30 samples was obtained from influencers based in Indonesia, Malaysia, and the Philippines. These samples were taken from the social media marketing analytics database accessible at www.phlanx.com. Furthermore, the researchers obtained influencer auditor reports to conduct a more in-depth examination. Utilizing the accessible statistical data, the authors analyzed the influencer's engagement rate, likes, and views to evaluate their level of popularity, dedication, and potential for viral reach. Content analysis was employed to assess the fluency, vividness, and diversity of content kinds in their messaging.

The variables included in this study were derived from several prior studies. User engagement rate, which serves as the dependent variable, was calculated using data obtained from the phlanx.com database. The engagement rate formula developed by De Luca et al. (2022) and Surucu-balci et al. (2019) was initially designed to analyze engagement on Twitter and Facebook posts. The authors made appropriate modifications to adapt this formula for evaluating interaction on YouTube material. User engagement rates encompass several metrics used to quantify different aspects of popularity, commitment, and virality. These metrics include average likes and the ratio of views to likes, which are used to gauge popularity. Commitment was measured by engagement rate and total engagement. Virality, on the other hand, was assessed using average views and the ratio of subscribers to views. The fluency of the messages was gauged by employing two factors, including video duration and hashtags and text overlays.

Given that YouTube mainly consists of video-based content, it is common to assess the length of these videos by categorizing them into three distinct durations: short, optimal, and long, to evaluate their motivational qualities. According to Hamid and El (2015), the authors proposed a categorization system for measuring the impact and efficiency of video length. They suggested that videos of around 20 minutes should be considered the optimal length, coded as 2. Videos with a duration of less than 10 minutes were classed as short, coded as 1, while videos longer than 20 minutes were classified as long, coded as 3. In addition, using hashtags and text overlays is essential, allowing the authors to search for specific subjects within video content effectively. In this study's analysis, the authors categorized the variables of time, hashtag usage, and text overlay usage. Specifically, the authors examined whether each post featured a hashtag or not and classified this as a binary variable with the values "yes" or "no."

Further, the present study draws upon the works of De Luca et al. (2022) and Surucu-balci et al. (2019) for reference. The classification of vividness level is determined by three distinct categories: low, medium, and high. The vividness level is low when video content is the only video. When the level of vividness is medium, it utilizes a combination of video content accompanied by a transcript and/or captions. Time stamps in a sub-chapter might be considered a characteristic of high categorization since it facilitates quicker access for the audience. The content type variable is determined by quantifying the number of content kinds present in the user's YouTube account. For instance, when influencers exclusively provide material concerning personal finances and investment, the coding would reflect a value of 2 for this particular category. This coding scheme is applied to other content categories in financial and digital financial literacy.

After gathering social media analytics data from YouTube, a statistical study was conducted to evaluate their dependability and consistency. The authors used three distinct statistical tests to demonstrate the dependability of the suggested model: Cronbach's, Gultman's -2, and -6, referring to (Drivas et al., 2022). Cronbach's -2 estimates the acceptability level of the two proposed factors, while Ursachi's (2015) measures the variance trustworthiness among the selected variables in each aspect (Callender et al., 1979). In Guttman's -6, the latter calculates the variance in each variable used in the suggested linear regression models (Revelle, 1979). Furthermore, using the descriptive statistics approach, the authors measured skewness to understand the beginning situation of all practically constructed variables. Skewness measures a variable's tendency to fall between minimum and maximum values. Negative skewness means that the values of most variables are closer to the maximum value. A positive value, on the other hand, shows that most values are closer to the minimal value. This aids in comprehending the overall tendency of the provided YouTube metrics and whether each evaluated variable is more relevant to the minimum or maximum values. An exploratory factor analysis (EFA) was also performed to determine that the two metrics were statistically significant. To assess the goodness of fit of each variable relative to the variables, EFA, Kaiser-Meyer-Olkin (KMO), Bartlett's test of Sphericity, and 2 tests were used. By constructing linear predictive regression models, the study aims to present a credible assessment model for social media participation by incorporating numerous factors representing popularity, commitment, virality, and fluency.

Table 1 Variable, Measures, and Descriptions

Main Variable	Measures	Description	Source
User Engagement Rate	Popularity 1 (AL)	The average number of likes per post	Modified from De Luca et al. (2022)
	Popularity 2 (VL)	Views-likes ratio, which is the views per 100 likes	
	Commitment 1 (ER)	The average interactions per video, divided by the total reach on the account	
	Commitment 2 (TE)	The average number of engagements (likes and comments) for an account	
	Virality 1 (AV)	The average number of comments per video	
	Virality 2 (SV)	The number of subscribers per 100 views	
Fluency of the Videos	Short Duration	Video length of less than 10 minutes	Dodson (2016), Surucu-Balci et al. (2020), Hamid and El (2015)
	Ideal	Video length of less than 20 minutes	
	Long	Video length of more than 20	
	Hashtag and Text Overlay Usage	Yes (0) or No (1) (Dummy)	McShane et al. (2019), Surucu-Balci et al. (2020)
Vividness Level	Low	Only videos	Yousaf et al. (2021)
	Medium	Transcript and/or captions enabled.	
	High	Time stamps enabled	
Content-Type	Low	Sub-content variety in terms of financial literacy and digital financial literacy is below 25% of the total average of a YouTube account.	Shahbaznezhad et al. (2021)
	Medium	Sub-content variety in financial literacy and digital financial literacy is around 25-50% of the total average of a YouTube account.	
	High	Sub-content variety in financial literacy and digital financial literacy is over 50% of the total average of YouTube accounts.	

Result and Discussion

Validation of Variables

The results of exploratory factor analysis (EFA) and reliability results are presented first. Table 2 reveals the reliability analysis and internal consistency of the variable by KMO and Bartlett's test of Sphericity. The authors set two combinations for the best fit for the proposed regression. KMO extracted higher values for combination 1 (0.673) and lower values for combination 2 (0.329) than the recommended tolerance of exclusion (<0.50).

This indicates that combination 1, containing average likes, engagement rate, average views, and duration, generated better results presenting goodness fit criteria.

Table 2 Exploratory Factor Analysis of the Two Combinations and All Variables

Combination 1		Combination 2		All Variables	
Popularity1	0.955	Popularity 2	0.731	Commitment 2	0.986
Commitment1	0.873	Commitment 2	0.697	Popularity 1	0.977
Virality1	0.919	Virality 2	0.718	Virality 1	0.929
Fluency1	0.258	Fluency 2	0.968	Commitment 1	0.821
Vividness	0.383	Vividness	-0.177	Fluency 1	0.242
Content-Type	0.664	Content-Type	0.329	Vividness	-0.138
				Popularity 2	0.740
				Virality 2	0.690
				Fluency 2	0.801
KMO	Barlett's Test	KMO	Barlett Test	KMO	Barlett's Test
0.673	<0.001	0.317	0.235	0.556	0.001

For all variables except vividness, the values were in the range of recommended limits.

The following table presents the results of the proposed variable's reliability and internal consistency. As observed, the Cronbach alpha was 0.558, which is an adequate value. Similarly, the variables indicated sufficient reliability in Guttman's method, which was 0.850 and 0.973.

Descriptive Data Summarization

The upcoming tables contain the descriptive results of the variables. The following descriptive statistics represent the influencers from three countries: Indonesia, Malaysia, and the Philippines.

Table 3 Descriptive Results of Variables

Variables	Mean	St. Deviation	Minimum	Maximum
Popularity1	807.52	2,010.96	1.4	8,700
Popularity2	3.5	1.36775	0.21	6.5
Commitment1	3.41%	3.75%	0.17%	16.91%
Commitment2	917.24	1931.006	1.4	8700
Virality1	28,303	70,614.85	45.6	367,800
Virality2	1.2033	2.02792	0.04	9.75
Fluency1	2.07	0.583	1	3
Fluency2	0.63	0.49	0	1
Vividness	2.37	0.669	1	3
Content-Type	2.03	0.718	1	3

Evidently, the mean value of popularity 1 was 807.5, while popularity 2 had a mean value of 3.5. This suggests that the average number of likes received by three countries per 1000 followers was still classified as poor. The significant disparity in follower counts between the "famous" influencer and the middle group of influencer followers contributed to the overall low average number of likes. However, both commitment variables 1 and 2

exhibited favorable levels of involvement, with a minimum value of 0.17% and a significantly high engagement status of 16.91%. The virality variables encompassed the level of passion exhibited by followers in terms of views and subscriptions to an account demonstrating sufficient value. This is evidenced by an average subscriber count of 28,303 and a maximum follower count of 367,800.

The fluency of messaging, as shown by fluency 1 and 2, had an average value of approximately 2 for influencer films that were of optimal duration and predominantly employed hashtags and text overlays. The factors of vividness level and content type indicate that the majority of videos had transcripts and captions, facilitating simpler viewing for the audience. Moreover, these videos predominantly consisted of two content types, including financial and digital financial information.

In addition, the concept of standard deviation can be categorized into two distinct categories. The first group encompassed low values of fluency, vividness, and content type, suggesting that the data points are closely grouped around the mean. On the other hand, the second group comprised high values of popularity, commitment, and virality, indicating that the data points are distributed more widely.

Predictive Regression Results

Table 4 presents the regression equation results, which provide insight into the potential expected change in the metrics when all variables were included, contingent upon the implementation of a certain commitment. The obtained data demonstrated a strong level of statistical significance, with a p-value of less than 0.001. The regression findings also incorporated F-values. The obtained F-values support the idea that the proposed predictive models were capable of rejecting the null hypothesis, positing that the regression coefficients were equal to zero. The results of the study also provide evidence for a significant statistical relationship and correlation between the variables and the two forms of commitment, namely Commitment 1 (Engagement Rate) and Commitment 2 (Total Engagement). As indicated in the table provided, the findings further substantiated the significance of both commitment factors. Both Engagement Rate and Total Engagement Rate demonstrated reliability in relation to several variables, including average likes, views-to-likes ratio, average views, subscriber-to-views ratio, video duration, hashtag and text overlay usage, vividness level, and content type. It is noteworthy to mention that the overall engagement (R2 = 0.973, F-value = 94.009) had a higher significance compared to the engagement rate (R2 = 0.798, F-value = 10.353).

Table 4 Regression Predictive Values

Variable (Constant)	Coefficient	R^2	F	ρ-Values
Commitment1	7.946	0.893	10.353	0.001
Commitment2	180.284	0.986	94.009	0.001

Tables 7 and 8 display the expected shifts in the variables Commitment 1 and Commitment 2 when the independent factors were incremented by a unit of one. A slight reduction in several factors is possible, including Commitment 1, Popularity variables (-

0.695), and virality 1 (-0.144). Additionally, a small to medium reduction could be achieved in vividness level (-3.79) and content type (-1.461). Three instances in Commitment 2, namely Virality 2 (-77.488), Fluency 1 (-121.641), and Fluency 2 (-67.875), exhibited potential for reduction. Except for Popularity 1 and Virality 1, the magnitudes of the changes in quantities were relatively small. In summary, the relationship between commitments 1 and 2 suggests that virality and popularity may grow more than other factors.

Table 5 Regression Predictive Values of Commitment 1 and Commitment 2

	Commitment 1		Commitment 2	
Variable	Coefficient	ρ-Values	Coefficient	ρ-Values
Popularity1	0.001	0.004	0.447	<0.001
Popularity2	-0.695	0.075	121.180	0.099
Virality1	3.105	0.811	0.015	<0.001
Virality2	-0.144	0.547	-77.488	0.094
Fluency1	0.017	0.980	-121.641	0.363
Fluency2	0.984	0.304	-67.875	0.704
Vividness1	-3.79	0.512	48.581	0.655
Content-Type	-1.461	0.019	-94.501	0.394

To examine the relationship between previously collected predicted values, the authors utilized the estimated regression equation to see if there existed a correlation between the outcome variable (the actual value of the outcome) and the predicted value of the outcome. The comparison of actual, anticipated values, and R values in Commitment 1 revealed discrepancies (Commitment 1: 0.893 to 0.787), while Commitment 2 exhibited consistent values (Commitment 2: 0.986 to 0.986). In summary, the predictive capability of total engagement, as represented by Commitment 2, surpassed that of Commitment 1, which is representative of engagement rate, in assessing the efficacy of social media in the context of digital financial education. The study underscores the need to maintain a consistent posting schedule and promptly engage with audience interactions for content authors.

Based on empirical findings, it is evident that the factors of popularity and virality play a significant role in fostering heightened levels of engagement in financial education content, particularly in the context of digital financial literacy topics on the YouTube platform. This is achieved through the augmentation of visibility, wherein the content gained prominence in recommend video lists, search results, and trending sections, thereby facilitating a broader reach across diverse social media platforms. Popularity can also function as a manifestation of social proof. When observers perceive that a financial education video has gained a substantial quantity of views, likes, and affirmative comments, it conveys to them that the topic possesses intrinsic worth and merits their attention. The phenomenon of social proof has the potential to shape the perspectives of viewers and motivate them to actively interact with the information by expressing their approval through actions such as liking, commenting, and subscribing.

Table 6 The Correlation Using the Estimated Regression Equation

		Commitment 1	Unstandardized Predicted Value	Predicted Value
Commitment1	Pearson Correlation	1	0.893**	0.787
	Sig. (2-tailed)		<0.001	(0.001
	N	30	30	30
		Commitment 2	Unstandardized Predicted Value	Predicted Value
Commitment2	Pearson Correlation	1	0.986**	0.986**
	Sig. (2-tailed)		<0.001	<0.001
	N	30	30	30

Discussion

This study investigates the measurement of video content efficacy in the context of digital financial literacy, specifically focusing on user engagement. Two models, Commitment 1 and Commitment 2, represent the measurement of effectiveness. The user engagement rate represents Commitment 1, while the total engagement represents Commitment 2. The findings of this study contradict the propositions outlined in the literature review section, mentioning that post fluency, content type, and vividness level substantially impacted user engagement as a component of overall user engagement. However, the user engagement rate encompassed other factors, such as fluency, vividness level, and content kind, which are all integrated variables.

Additionally, there is an independent variable that influences the user engagement rate. The comparison between the two commitment models revealed intriguing findings, particularly about the greater value of R2. Commitment 2, which exhibited a total engagement rate close to 100% (0.986 or 98.6%), outperformed Commitment 1. In contrast, it can be observed that both Commitment 1 and Commitment 2 exhibited fluctuations in value concerning user engagement, except popularity, as indicated by the average number of likes, and virality, which reflects the average number of views, both of which continuously enhanced the value of user engagement. The findings of this study suggest that the fluency of video and level of vividness can be influenced by the dimensions of commitment selected, precisely the engagement rate or total engagement, in line with the results of De Luca et al.'s (2022) study that mentioned the fluency of message (length of message and hashtag usage) had a significant impact on the stakeholder engagement rate. The findings also indicated a positive relationship between vividness and total engagement.

Furthermore, these findings corroborate the conclusions of Surucu-balci et al. (2019), who asserted that posts with vivid content, such as videos or gifs, elicited a higher rate of engagement compared to posts with medium (photos) or low vivid (texts) content, particularly among posts with fewer characters. This result is logical, as videos or gifs are typically more entertaining. Enhancing the vividness level of financial education content through the inclusion of visual aids, such as charts, graphs, and illustrations, as well as

providing timestamps for different sections of the video, can result in improved comprehension, increased retention, enhanced clarity of complex financial topics, and a more positive user experience (Yousaf et al., 2021).

The findings indicated a decline in user engagement rate in both Commitment 1 and Commitment 2 when considering the influence of content type, specifically factors like audience relevance. The relevance of the content to the target audience is crucial for its potential to develop momentum. The subject matter of financial education is extensive. If the instructional material fails to cater to the requirements or preferences of the audience, it may not properly captivate their attention. Irrespective of the nature of the content, the significance of its quality is paramount. The presence of high-quality production, lucid explanations, and insightful perspectives plays a substantial role in fostering audience engagement. The potential disengagement of viewers might occur when the content is devoid of substance or is inadequately presented. This is why diverse types of material may not consistently generate high user engagement and demonstrate the insignificance of the content type in terms of results. These findings support the results of prior studies that indicate differences in social media engagement experiences across platforms. The research suggests that the type of social media content that effectively drives engagement behavior may vary depending on the platform (Shahbaznezhad et al., 2021; Voorveld et al., 2018).

The results of the study also revealed that content providers that emphasized vividness, such as utilizing real-life examples and delivering information types, would boost cognitive processes, including visual, auditory and interaction processing that helps the absorption of information and achieve greater levels of engagement (Angelica et al., 2023). Enhancing comprehension and facilitating long-term retention, the effective communication of intricate financial concepts in an understandable and aesthetically pleasing manner is conducive to enjoyable learning experiences. In line with the social features theory, this study also showed that social media should have the power to influence and educate people. The capacity of YouTube to cultivate communities should not be underestimated. The sense of community generates a collaborative learning environment, which enhances the platform's overall impact on financial education (Ridho, 2022). From the influential user engagement rate, it has been proven that people tend to view and check various sources of information, such as social media, according to the needs that are suitable for them (e.g., fluency, vividness, and content kind), consistent with the uses and gratification (UGT) theory. The principles of uses and gratification theory are that viewers are goal-directed in their behavior, active as social media users, and aware of their needs and select media to gratify those needs required by humans, which is the need to be literate for digital financial literacy.

Conclusion

Social media platforms have emerged as essential tools for spreading information and cultivating educational communities within the dynamic area of digital communication. The present study aims to investigate the concept of digital financial literacy, with a

specific focus on evaluating the efficacy of YouTube as a platform for the sharing of financial information. The case study on YouTube highlights several factors that contribute to its efficacy as a platform for promoting digital financial literacy. The effectiveness of YouTube videos, especially within the financial education industry, can be attributed to their attractive appeal. Based on the results, the significance of the fluency of the video's content, level of vividness, and type of content was not observed in isolation but rather as a unified unit.

Exploring the user engagement model pertaining to financial education information, particularly digital financial literacy content on platforms like YouTube, presents novel avenues for additional research when compared to alternative social media platforms. In this context, the authors have initiated the process by selecting a content producer on the YouTube platform who consistently produces videos pertaining to the subject of money. This study is confined to three countries within the Southeast Asian region that are home to content creators.

This study presents several implications. Collaboration between content creators, corporate partners, and government entities can be leveraged to produce a very successful and widely shared video, hence creating lucrative potential for monetization. Increased engagement rates have a direct correlation with higher advertising revenue, sponsorships, and opportunities for partnerships. Consequently, content creators are motivated to generate a greater quantity of financially educational content of superior quality. The primary objective of financial education content is to disseminate knowledge and promote financial literacy. The widespread popularity and viral nature of such content enhance the likelihood of reaching a diverse and extensive audience, thereby contributing to a positive influence on overall societal financial literacy.

The investigation of the user engagement model in relation to financial education material, specifically digital financial literacy content on platforms such as YouTube, offers unique opportunities for further scholarly inquiry in contrast to other social media platforms. Within this particular context, the authors have commenced the procedure by carefully choosing a content creator on the widely utilized site known as YouTube. This content creator constantly generates videos that revolve around the topic of financial education. Nevertheless, this study was limited to three countries located in the Southeast Asian region, which serve as the residence for content providers and focused only on the perspective of the quantitative method. In conclusion, future research endeavors should use bigger sample sizes, spanning not only three countries but also incorporating comparisons with nations that have a significant degree of financial literacy. This methodology will facilitate the development of an all-encompassing framework for analyzing and measuring social media, which will be derived from a multitude of content providers across various regions. This methodology will also enable the formulation of efficacious initiatives for enhancing digital financial literacy customized to the distinctive attributes of social media platforms, such as YouTube. The utilization of diverse research methodologies, such as social media analytics and interviews, can enhance the

understanding of the topic matter. This aspect holds significant value as it facilitates the acquisition of insights from the users' standpoint.

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About the Authors

Sylviana Maya Damayanti, Dr., ST., MBA., CFP®., CRGP. (SMD.) – is an associate professor in Digital Financial Literacy. She obtained a Ph.D. degree from the Faculty of Economics, Doctorate of Business Management program at the University of Padjadjaran Bandung in 2015. She continued her education in the Executive Education Program at MIT Sloan, School of Management, USA, for Applied Business Analytics in 2020. She earned MBA degree from the Institut Teknologi Bandung majoring in Business Management in 2007 and immediately joined as the lecturer of the interest group of Business Risks and Finance School of Business and Management, Institut Teknologi Bandung (SBM-ITB). Sylviana can be contacted by email: sylvianamaya@itb.ac.id

Dini Lestari, S.Ak., MSM. (D.L.) – is a research assistant and obtain master degree in Master of Science Management at School of Business and Management, Institut Teknologi Bandung. She completed his undergraduate studies at Telkom University. Dini can be contacted by email: dini_lestari@sbm-itb.ac.id

Author Contributions

Conceptualisation, SMD. and D.L.; Methodology, SMD. and D.L.; Investigation, SMD. and D.L.; Analysis, SMD. and D.L.; Original draft preparation, SMD. and D.L.; Review and editing, SMD. and D.L.; Visualization, SMD. and D.L.

Conflicts of Interest

The author declares no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.