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A PREDICTIVE MODEL FOR ONLINE CONTENT VIRALITY: THE CASE OF UNIVERSITY OF THE PHILIPPINES OPEN UNIVERSITY'S MASSIVE OPEN ONLINE COURSES CALENDAR

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29 May 2024

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Biographical Sketch

Shaira Francia Tanay earned a Bachelor of Science in Development Communication from the University of the Philippines Los Baños in 2018 and a Master of Development Communication from the University of the Philippines Open University in 2024.

Since 2018, Shaira has worked at UPOU as a Research Assistant and Learning Management Systems Administrator for the MODeL platform, the university's system for MOOCs. Her academic focus is rooted in her passion for development communication, particularly in empowering marginalized communities. Her undergraduate thesis explored farmers' motivations in promoting organic agriculture, and she led climate change education initiatives for fisherfolk in her hometown, Bato, Camarines Sur.

For her master's thesis, Shaira developed a predictive model for online content virality, helping development communication practitioners become more effective catalysts for social change. Her research provides key insights into why content goes viral, enabling institutions and individuals to refine their digital strategies for broader audience reach.

Beyond academia, she found solace in exploring indigenous cultures through immersive travel experiences, trekking, and hiking. She pursued creative interests in embroidery, poetry, and videography, which served as outlets for personal expression and self-discovery.

Acknowledgment

In my three years in graduate school, I gained a skill far more valuable than anything I learned from our course sites and modules: the ability to ask for help and the more challenging skill of accepting it. I realized that the pursuit of knowledge is not an individual endeavor but a communal effort. As the saying goes, *"It takes a village to raise a child,"* and to that, I say, *"It takes an online (and offline) village to graduate from an open distance university."* Thus, I extend my sincerest gratitude to the following individuals who made up my village:

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To my MDC classmates and community, whose individual excellence in enriching academic discourse consistently inspired me to strive for the best—even in the simplest forum discussions—thank you for encouraging me to exceed expectations and go the extra mile in my studies.

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To all my dear friends, your support means the world to me, and I deeply appreciate each of you. Most importantly, this study would not have been possible without the grace and favor of our Creator, from whom I have drawn my strength and wisdom throughout this learning journey.

Dedication

This study is dedicated to all lifelong learners, whose passion inspired this work. May the insights of this research inspire you as profoundly as you have inspired me.

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Abstract

In today's interconnected digital landscape, social media platforms drive the dissemination of online content. Cutting through this digital clutter to achieve visibility and resonance has become essential for effective communication on these platforms. A widely recognized but little-understood phenomenon in social media is "going viral," characterized by rapid and extensive dissemination across social circles. Understanding the factors that initiate viral spread typically occurs after the content has gained traction. However, there has yet to be a consensus on a universal model for predicting virality.

The study focused on identifying the key drivers of virality, understanding the interactions among these drivers, and developing a predictive model to anticipate content-sharing behavior. A quantitative methodology was employed, including a cross-sectional survey of 380 respondents who registered for UPOU MOOCs during a user surge from January 19 to March 2, 2023. Data collection was conducted through an online survey, and the analysis involved descriptive statistics, correlation analyses, and binary logistic regression to predict sharing behavior.

The study developed a predictive model that provides a comprehensive framework for understanding the dynamics of online content sharing. It highlights the interplay of external, intrapersonal, and interpersonal factors in driving the sharing of online content. The model emphasizes the significance of both online and offline sharing behaviors, demonstrating the lasting impact of word-of-mouth. This sharing

behavior creates a social sharing infinity loop, where content perceived as relevant or useful continues to be disseminated, further enhancing its virality.

In conclusion, the study offers valuable insights into the complex dynamics of content virality, emphasizing the importance of understanding the various factors that influence sharing behavior. These insights can help optimize the reach and impact of online content.
Keywords: Virality; Predictive Model for Virality; Massive Open Online Courses; MOOCs; Enrollment Surge; Social Media; Facebook

Chapter I

INTRODUCTION

Background of the Study

The University of the Philippines Open University (UPOU) envisions itself as a leader in teaching and learning in the digital age, equipping Filipinos with the necessary knowledge and skills for the 21st century. Through innovative teaching methods and technologies, UPOU aims to contribute to the improvement of the educational system in the country and share these innovations with other institutions through cooperative programs (About UPOU, 2023).

As part of its mission and in response to Republic Act 10650 (Open Distance Learning Law), UPOU aims to provide wider access to quality higher education. One way it achieves this goal is by offering Massive Open Online Courses (MOOCs), aligning with its advocacy for openness in higher education and its status as a Public Service University (Almodiel et al., 2020; Bandalaria, 2013).

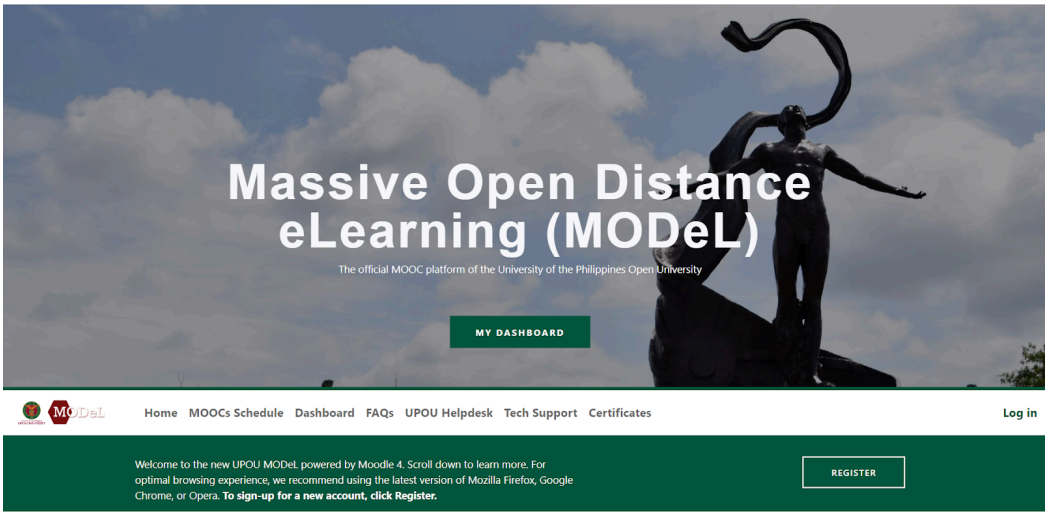
A MOOC is a model of educational delivery that is, to varying degrees, massive, open, online, and a course (Educause Learning Initiative, 2013). “Massive”, in theory, means the course can accommodate an unlimited number of participants. This means that the course is designed to maintain the same level of service even as the number of participants increases. “Open” refers to free access to the course with no entry qualifications or restrictions. “Online” indicates that the course is delivered via the Internet and is accessible through devices such as laptops, desktops, tablets, or smartphones. “Course” denotes the structured learning

experience, which, like traditional online higher education, includes lectures, assigned readings, online discussions and forums, and quizzes and tests on the course material.

Mulder and Jansen (2015) defined MOOCs as online courses that offer a complete learning experience, are designed for large numbers of participants, and are accessible to anyone, anywhere, with no enrollment restrictions or qualifications.

In 2013, UPOU launched the first MOOC in the Philippines, “Introduction to Mobile Application Development using the Android Platform.” The course was initially hosted on UPOU’s @ral, which has since evolved into the UPOU Massive Open Distance eLearning (MODeL) platform. The main page of MODeL, accessible to the public at www.model.upou.edu.ph, is shown in Figure 1.

Figure 1
The UPOU MODeL home page, which serves as the landing page of the official platform



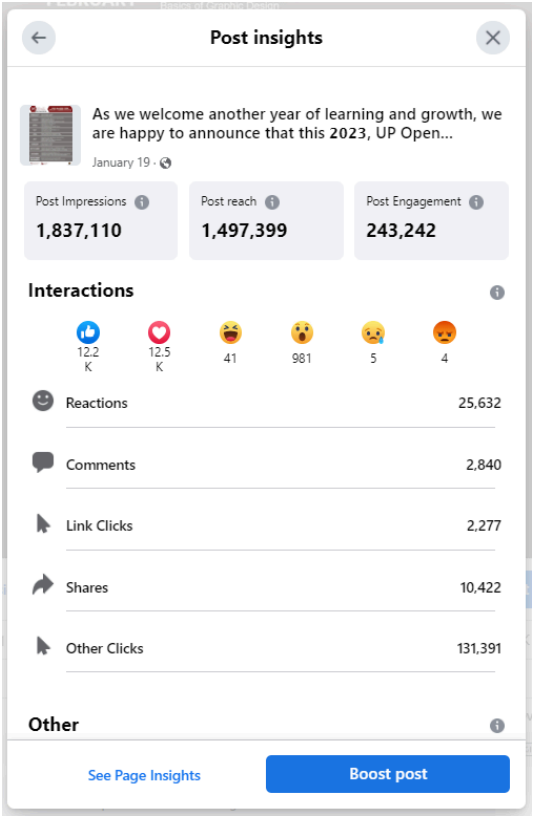
Since 2013, UPOU has conducted MOOCs, workshops, and “MOOCathons” targeting particular social sectors and skill sets. These initiatives led to the creation of several courses, including those on technology entrepreneurship, business process management, promoting and protecting children's rights, inter-local government collaboration, Philippine arts and culture, ASEAN art, Filipino language and society, and oral English communication (Romualdo, 2017).

Annually, a MOOC Calendar is released to announce the courses scheduled for the year. Figure 2 illustrates the UPOU MODeL 2023 MOOC Calendar, providing an overview of the courses available for that year.

Figure 2
The UPOU MODeL 2023 MOOC Calendar

In 2023, MOOC enrollment saw a massive surge. After posting the UPOU MODeL MOOC Calendar for the year on the official UPOU MODeL Facebook Page (i.e., “UPOU Massive Open Distance e-Learning”) on January 19, 2023, at 4:30 PM, the post went viral, reaching 1,497,399 people and garnering 25,632 reactions, 2,840 comments, and 10,422 shares (see Figure 3). This post engagement led to a surge in MOOC-related inquiries, comments, and buzz, which resulted in a substantial increase in enrollments.

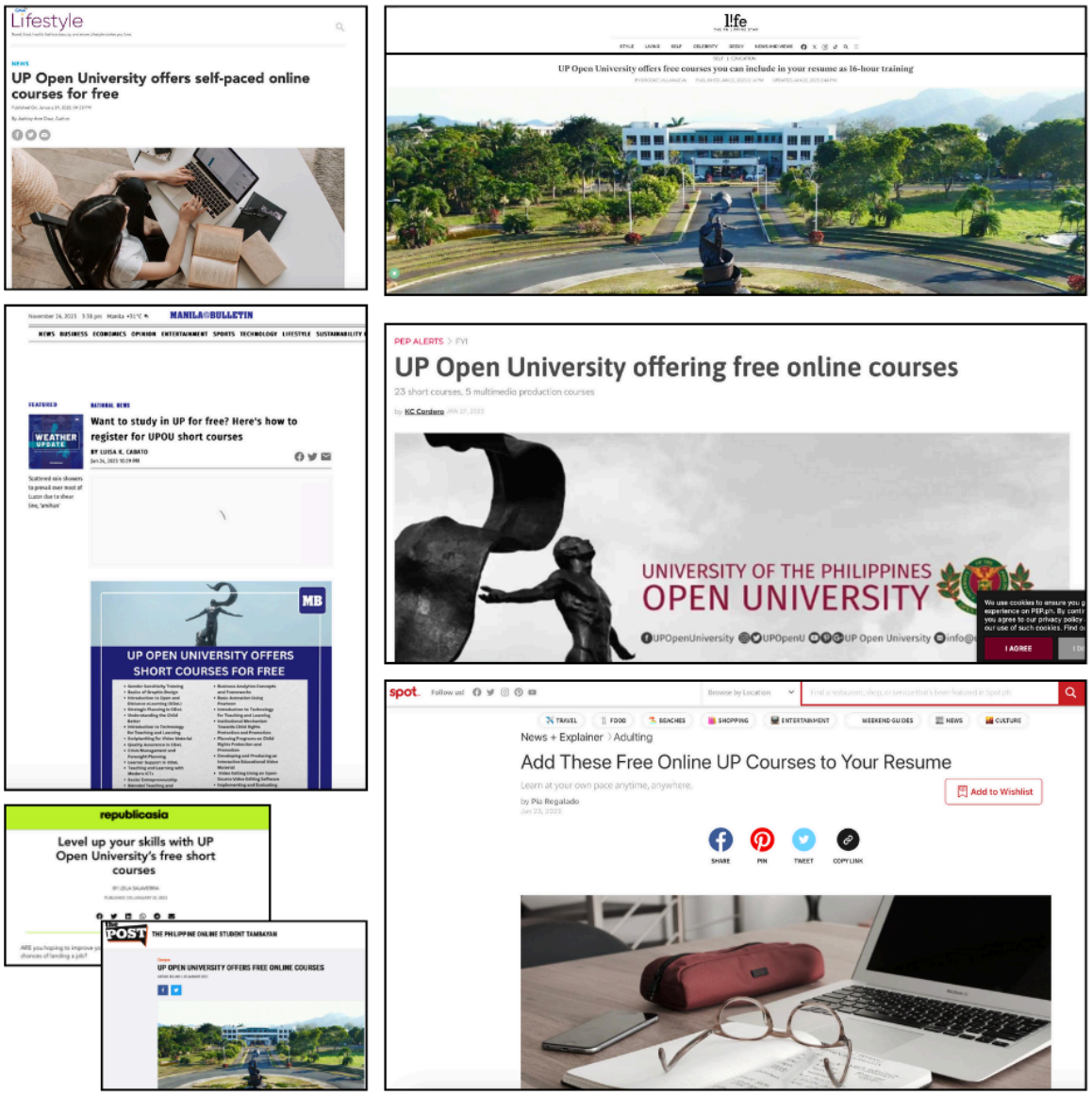
Figure 3
Post insights of the MOOC Calendar posted on the official Facebook page of UPOU MODeL



The UPOU MODeL MOOCs garnered significant attention, as shown in Figure 4 and detailed in Table 1, through widespread coverage in online news reports.

Figure 4

Compilation of screenshots of news articles about UPOU MOOCs that circulated online following the posting of the UPOU MODeL 2023 MOOC Calendar



GMA Lifestyle, the online lifestyle magazine affiliated with GMA Network (a Philippine free-to-air television and radio network), published an article titled *"UP Open University offers self-paced online courses for free"* on January 24, 2023. On the same day, Manila Bulletin, an online newspaper in the Philippines, released *"Want to study in UP for free? Here's how to register for UPOU short courses."*

SpotPH, an urban lifestyle guide and website, featured *"Add These Free Online UP Courses to Your Resume"* on January 23, 2023. Philippine Star, covering various aspects of Philippine news, posted *"UP Open University offers free courses you can include in your resume as 16-hour training"* on January 22, 2023. PepPH, an entertainment and lifestyle website in the Philippines, shared *"UP Open University offering free online courses"* on January 27, 2023. RepublicAsia, a Manila-based media company reported *"Level up your skills with UP Open University's free short courses"* on January 24, 2023. Furthermore, The Post, an online student website in the Philippines, and Good News Pilipinas, a news and information website focusing on positive Filipino culture, also reported on the UPOU 2023 MOOCs.

Table 1
Online Media Coverage of UPOU MODeL 2023 MOOCs

Date Posted	Website/ News Agency	Headline	Link
22 January 2023	Philippine Star	UP Open University offers free courses you can include in your resume as 16-hour training	https://philstarlife.com/self/214281-up-open-university-free-courses?page=3
23 January 2023	SpotPH	Add These Free Online UP Courses to Your Resume	https://www.spot.ph/newsfeatures/adulting/103495/up-open-university-online-courses-how-to-enroll-2023-a4832-20230123
24 January 2023	Manila Bulletin	Want to study in UP for free? Here's how to register for UPOU short courses	https://mb.com.ph/2023/01/24/want-to-study-in-up-for-free-heres-how-to-register-for-upou-short-courses/
24 January 2023	RepublicAsia	Level up your skills with UP Open University's free short courses	https://republicasiamedia.com/level-up-your-skills-with-up-open-u

Date Posted	Website/ News Agency	Headline	Link
			niversitys-free-short-courses/
25 January 2023	The Post	UP Open University offers free online courses	https://thepost.net.ph/news/campus/up-open-university-offers-free-online-courses/
25 January 2023	Good News Pilipinas	UP Open University offers free online courses this 2023	https://www.msn.com/en-ph/news/national/up-open-university-offers-23-free-courses-this-2023/ar-AA16I53U
27 January 2023	PepPH	UP Open University offering free online courses	https://www.pep.ph/pepalerts/fyi/171153/up-open-university-free-online-courses-a4888-20230127

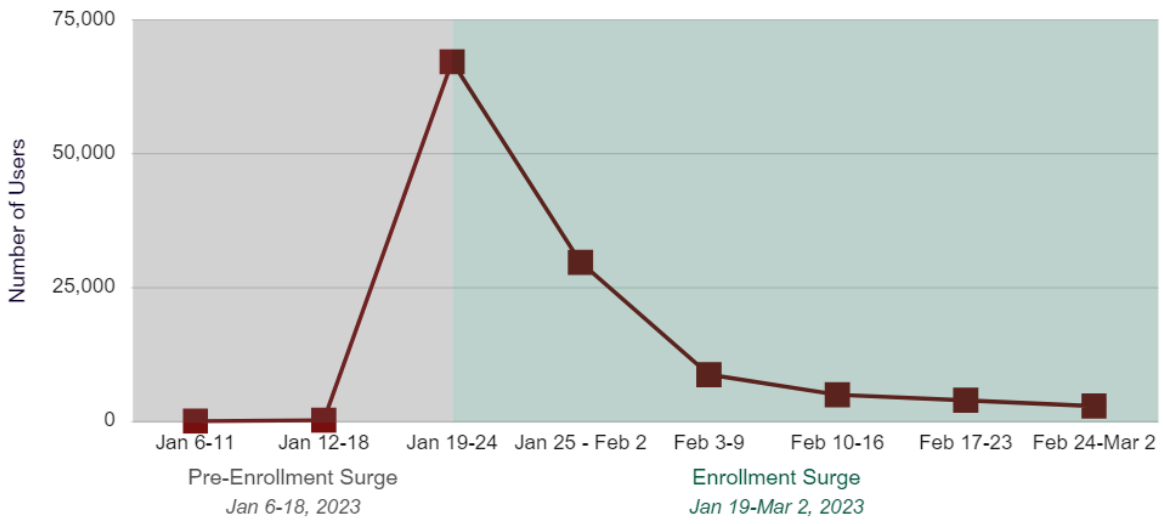
After just one week, the number of registered users on MODeL increased by 67,224, adding to the pre-existing 85,985 users. This resulted in an approximate 78.15% increase in user registrations. The new users registered via the MODeL website. To manage the surge in account creation requests, the MODeL Team implemented a new registration method using Google Forms. This software, part of the free Google Docs Editors suite, effectively handled the influx of requests.

To effectively manage the enrollment process and meet public demand, a weekly bulk enrollment system was introduced, as shown in Figure 5. This approach enabled the MODeL Team to organize the influx of users and streamline the process for both the team and the public.

Figure 5
New sign-up process for UPOU MODeL employing weekly bulk enrollment to manage the enrollment surge

The first batch of bulk enrollment occurred from January 25 to February 2, 2023, resulting in 29,756 new registrations. The second phase, from February 3 to February 9, 2023, added 8,790 users. During the third phase, from February 10 to February 16, 2023, 5,021 users were registered. The fourth batch, from February 17 to February 23, 2023, resulted in 3,986 new registrations. Finally, the fifth batch, spanning from February 24 to March 2, 2023, contributed 2,909 users. Over two months, the number of MODeL users more than doubled, rising from 85,985 to 193,442—a growth of over 100%.

Figure 6
Line graph illustrating the number of MODeL users before and during the enrollment surge



With the increase in users, there has been a corresponding surge in enrollment. UPOU continues to offer free online courses through MODeL, having provided a total of 203 courses since its inception (see Table 2).

Table 2
Summary of UPOU MOOCs Offering from 2013 to 2023

Year	Number of Courses Offered	Number of Users	Number of Enrolled Students	Number of Completers
2013	1	No data	390	No data
2014	1	No data	859	No data
2015	10	1,706	2,547	48
2016	7	1,450	857	110
2017	23	3,222	1,741	154

Year	Number of Courses Offered	Number of Users	Number of Enrolled Students	Number of Completers
2018	38	1,983	2,251	441
2019	18	2,366	1,515	252
2020	41	29,302	35,913	9,839
2021	17	7,358	8,055	1,577
2022	22	7,884	11,192	2,399
2023	25	193,442 (as of March 2, 2023)	47,922 (as of March 2, 2023)	15,948 (as of March 2, 2023)

The significant increase in enrollment between January 19 and March 2, 2023, can be attributed to the remarkable virality of the 2023 MOOC Calendar shared on the UPOU MODeL Facebook Page. This phenomenon highlights the influential role of virality in the digital era and its impact on user engagement. The calendar effectively captured the attention of a broad audience, leading to widespread dissemination through active user participation, including likes, comments, and shares. As the content spread across social networks, it reached an expanding audience, increasing awareness and interest in the available courses. Consequently, this widespread dissemination resulted in a surge in enrollments. The viral nature of the content played a pivotal role in sustaining enrollment momentum, underscoring the profound effect of viral sharing on generating attention and engagement within online communities.

Statement of the Problem

Understanding the factors that drive the widespread dissemination of online promotional materials is crucial for institutions aiming to communicate social causes to a broader audience, including educational institutions like UPOU. Neglecting a comprehensive study on this subject can lead to missed opportunities to optimize promotional strategies, thereby limiting the reach to a broader audience. This oversight can result in inadequate resource allocation, wasting valuable time, effort, and financial resources. Moreover, a lack of awareness about an institution's public service initiatives can hinder its efforts to establish leadership within its respective field. For UPOU, this is particularly relevant in the field of distance education and its ability to attract prospective learners. The absence of insights into viral dissemination can pose challenges in achieving enrollment targets and impede growth in the ever-changing online education landscape. Additionally, without a thorough understanding of online learning trends, institutions may struggle to tailor their course offerings to meet evolving demands, potentially resulting in reduced student satisfaction.

Therefore, conducting a rigorous study on the viral dissemination of promotional materials is crucial for institutions aiming to optimize their strategies, attract learners and relevant stakeholders, and thrive in the dynamic digital era.

This study aims to answer the general question: What makes a post go viral? Specifically, it attempts to address the following research questions:

1. What are the factors that drive the virality of online content on social media?

2. What are the interactions and relationships among the drivers that contribute to the viral dissemination of online content on social media?
3. What model can be developed to understand the factors driving the virality of online content on social media?

Objectives of the Study

This study aims to investigate the determinants of viral content, specifically focusing on the factors that contribute to the widespread dissemination of posts on social media platforms.

In pursuit of this goal, the study seeks to fulfill the following specific research objectives:

1. Identify the drivers of online content virality on social media.
2. Explore and understand the interactions and relationships among these drivers that collectively contribute to content virality.
3. Develop a predictive model of the factors that drive online content virality.

Significance of the Study

The study, centered on identifying factors contributing to the viral dissemination of online content on social media, is of substantial significance in the field of Development Communication. It addresses the critical need for understanding the dynamics driving the viral spread of information, as exemplified by the UPOU MODeL 2023 MOOC Calendar.

In the context of Development Communication, this study provides invaluable insights into the interplay of external, intrapersonal, and interpersonal factors fostering massive enrollment in educational programs. These insights can inform the development of more effective communication strategies, ultimately improving outreach to underserved communities and learners.

Without a nuanced understanding of the factors that propel online content to go viral, resources may be misallocated. This study guides targeted investments in content creation and dissemination, maximizing returns in terms of increased engagement and achieving desired outcomes.

The findings contribute significantly to comprehending how information circulates within online communities, not only for educational content but also for other development-related information. Neglecting this aspect may lead to missed opportunities for knowledge sharing and capacity building.

In the absence of this study, educational institutions and other development-driven organizations may face challenges sustaining their initiatives due to a lack of effective strategies for attracting and retaining learners and stakeholders. The insights from this research contribute to the development of sustainable, long-term educational and developmental initiatives.

Ultimately, the success of development programs like MOOCs contributes to the development of individuals, communities, and societies. Failing to conduct this

study could impede the progress and growth of communities and regions that rely on social causes, such as accessible education, for their development.

Understanding the precursors of virality is crucial for developing effective social media strategies. This research emphasizes the connections between content and creators. The findings aim to inspire researchers to build upon this knowledge, working collectively toward a comprehensive understanding of virality.

In summary, this study has illuminated the factors driving the viral dissemination of online content, particularly focusing on the UPOU MODeL 2023 MOOC Calendar within the field of Development Communication. Understanding these dynamics enables organizations to enhance their communication strategies, maximize resource allocation, and engage underserved communities more effectively. This research underscores the importance of continued exploration into content virality, offering valuable opportunities to leverage social media for educational and developmental goals, ultimately benefiting individuals, communities, and societies at large.

Scope and Limitations of the Study

This study focused on understanding the factors contributing to the widespread dissemination of the UPOU MODeL MOOC Calendar, using it as a case study to explore the determinants of viral content on social media platforms. Grounded in Botha's (2014) theoretical framework on the factors driving online

content sharing, the core objective of the research is to identify the specific contributors to the viral diffusion of online content.

Data collection predominantly centered around UPOU MODeL users and their interactions with the MOOC Calendar through the UPOU MODeL Facebook Page. The analysis focused on investigating the interplay and connections among extrapersonal, intrapersonal, and interpersonal drivers that collectively contributed to the viral dissemination of the UPOU MODeL MOOC Calendar.

The study recognizes certain limitations. It focused on UPOU MODeL users who registered during the enrollment surge period from January 19, 2023, when the MOOC Calendar was posted on the official UPOU MODeL Facebook Page, to March 2, 2023, when the surge subsided. The MOOC Calendar contains the course offerings for the whole year of 2023. The list of respondents was obtained from the UPOU MODeL website administrators. Users who registered outside this specified timeframe were excluded from the study. Moreover, the accuracy of the results depends on the respondents' honesty and willingness to answer the questions truthfully. Additionally, external factors and impacts on non-participating users are beyond the study's scope.

The survey research design had limitations in terms of the amount of information that could be gathered due to its use of predetermined answers. For instance, the Likert-type scale limited attitudinal beliefs to a five-point range, potentially failing to capture the full spectrum of participants' attitudes.

The findings of this study are context-specific to the virality of the UPOU MODeL MOOC Calendar but serve as a case study for understanding and predicting the virality of development initiatives on social media. While the insights offer a valuable understanding of online content virality on social media, they may not be universally applicable to all development initiatives across different platforms and channels.

Recognizing these boundaries and limitations, this research provides valuable insights into effective viral communication strategies and mechanisms for reaching a broader audience, particularly within the context of educational outreach and other development initiatives.

Chapter II

REVIEW OF RELATED LITERATURE

In today's densely connected world, social media platforms such as blogs, Facebook, Instagram, Reddit, YouTube, and Twitter are driving the diffusion of online content. This exponential growth in social media usage has resulted in an overwhelming abundance of digital material. Consequently, cutting through this digital clutter to achieve visibility and resonance has become crucial for effective communication on these platforms.

A widely known but little-understood phenomenon on social media is content "going viral." Although there is no universal definition, it generally refers to the rapid and extensive spread of a social media post that quickly reaches an unusually large audience as users share it within their social circles. Understanding the factors that initiate this viral spread—whether related to the content itself or the creator's identity—often occurs only after a piece of content has already gained viral traction.

Identifying content as viral is simple, but there is no universal consensus on how to measure it. The two aspects commonly acknowledged in defining virality are its extensive reach and the unusually rapid rate at which it spreads (Han et al., 2020).

Beginnings of Virality

The term “viral” is frequently associated with the field of life sciences, but in recent years, it has taken on a new meaning related to the rapid and widespread dissemination of online content. Unlike the medical definition of a virus, which involves exponential replication and transmission through physical or non-physical contact between hosts, a viral online phenomenon spreads through various means such as word-of-mouth, online platforms, and other channels. This spread is influenced by several factors as content is shared from one user to another.

The concept of virality dates back to the 1940s when Lazarsfeld et al. (1948) challenged the bullet theory, or hypodermic needle theory, which suggested that mass media directly and universally influenced audiences with their messages. Their findings demonstrated that individuals’ opinions and attitudes are more significantly shaped by their social circles than by direct media influence. They revealed that mass media influence audiences indirectly through a small group of influential people or opinion leaders who interpret and disseminate media messages within their social networks. This led to the establishment of the two-step flow theory, which acknowledges the role of interpersonal influence in mediating the effects of media (Lazarsfeld & Katz, 1955).

Subsequently, Lazarsfeld and Katz (1955) further explored the influence of personal connections on everyday shopping decisions. Their study revealed that interpersonal communication networks, including family, friends, and co-workers,

emerged as the most significant sources of influence in household purchase decisions (Túñez-López et al., 2011; Gunawan & Huarng, 2015).

Word-of-Mouth

Building upon Lazarsfeld's research, Merton (1968) introduced the term “word-of-mouth” to describe a process of personal influence that often surpasses the impact of direct mass media. This process involves various factors such as the credibility of the information source, the physical and emotional proximity between the source and the receiver, the intermediary role played by the source, and the screening of media messages. These factors collectively shape the impact of word-of-mouth communication on individuals (Merton, 1968). Formally, Westbrook (1987, p. 261) defined Word-of-Mouth (WOM) as “communicating information to other consumers regarding the ownership, utilization, or qualities of specific products and services, as well as their providers.” Word-of-mouth cascades are an important driver of reach (Zubcsek & Sarvary, 2011). In the digital era, this concept has evolved into what is now referred to as “word of mouse” (or e-WOM).

e-Word-of-Mouth

The advent of the Internet in the 1990s brought about a significant shift in the dynamics of personal influence, primarily due to its decentralized nature. Nodes and influential points on the Internet play a pivotal role in facilitating the flow of information (Arjona-Martín et al., 2020). Building on earlier studies of word-of-mouth (Sarmiento-Guede et al., 2017; Kozinets et al., 2010; Al-Rawi, 2019, as cited in

Arjona-Martín et al., 2020), a new term emerged to describe the rapid spread, replication, and contagious nature of messages transmitted through personal recommendations: “virality.” Douglas Rushkoff is widely acknowledged as the first to introduce and develop the concept of virality in his book *Media Virus: Hidden Agendas in Popular Culture*. In his 1994 study, Rushkoff examined the remarkable utilization of platforms providing free email services. He argued that if viral communication reaches a receptive user interested in the product, that user would be influenced by the message and could, in turn, influence other receptive users. As long as each infected user shares the email with more than one user, epidemiological findings -suggest that the number of infected users will grow exponentially (Rushkoff, 1994).

Viral Marketing

In July 1996, a significant demonstration of viral communication emerged through the launch of Hotmail, the renowned email service co-founded by Sabeer Bhatia and Jack Smith. The service's rapid growth was fueled by users who promoted Hotmail by including a postscript in their emails that encouraged others to “Get your free email account with Hotmail.” Remarkably, within just 18 months, Hotmail amassed an astonishing 12 million users. Drawing from this experience, Steve Jurvetson and Tim Draper, backers of Hotmail through their venture capital firm Draper Fisher Jurvetson, coined the more precise term “viral marketing.” They subsequently introduced this concept at various conferences in 1997 (Jenkins et al., 2013).

Several years later, efforts were made to organize the components and qualities of viral communication. Wilson (2000) outlined six key principles of viral marketing, again using Hotmail as a case study. Subsequently, Rosen (2001) laid the theoretical foundations of viral communication and identified its primary attributes:

- Simplicity in conveying the message
- Facilitated replication of the message
- Trust in the sender's recommendation
- Proximity of the sender to the recipient
- The speed at which the message propagates from its source

Finally, Carl Welker introduced the viral communication paradigm, defining it as a collection of “strategies that promote easier, accelerated, and cost-effective transmission of messages by creating conditions for self-replicating, exponentially expanding dissemination, popularization, and influence of the message” (Welker, 2002, p. 4). In his exploration of viral messages, Welker (2002) delineated a novel communication paradigm and outlined several foundational principles for a message to achieve virality: (a) the availability of a platform for disseminating content to a broad audience, such as social networking sites (SNS); (b) the presence of a perceived emotional incentive that motivates individuals to engage with and propagate the message; and (c) active endorsement of the message through specific online behaviors.

Importance of Viral Marketing

In contemporary digital landscapes, shaped by the attention economy paradigm (Botha et al., 2014), the concept of virality has emerged as a potent force. Achieving virality allows content to attain widespread exposure at minimal cost, underscoring its paramount importance for marketers (Tellis et al., 2019). Virality has become a sought-after goal for online marketers—including advertisers, journalists, and health communicators—who aim to craft messages with viral potential to increase awareness, engagement, and behavioral change within targeted populations (Alhabash et al., 2018). Recognized as a key determinant of successful marketing campaigns on social networking sites (SNSs), virality serves as a crucial indicator of online message effectiveness (Alhabash et al., 2018). The significance of understanding the dynamics of online behaviors contributing to message virality is underscored by the robust link between users' online actions and their offline behaviors. Research indicates that high message virality correlates with more favorable attitudes and purchase intentions towards advertised products, emphasizing the far-reaching implications of viral content in shaping consumer perceptions and behaviors (Eunsin & Huddleston, 2016; Alhabash et al., 2015).

Impact of Sharing Behavior on User Engagement and Behavioral Outcomes

Existing research consistently highlights the positive association between sharing behavior and subsequent intentions or behaviors. Notably, empirical evidence shows that the average number of shares on candidates' Facebook pages positively correlates with electoral outcomes, even when accounting for variables

such as the party's vote share in districts (Bene, 2018). Moreover, a study by Alhabash et al. (2015) underscores the predictive strength of intentions to like, share, and comment on Facebook, particularly concerning alcohol-related content, demonstrating their robust association with intentions to consume alcohol. These findings reinforce the significant role that sharing behavior plays in shaping subsequent behaviors and intentions. Additionally, research by Eunsin and Huddleston (2016) emphasizes the positive relationship between high message virality and more favorable attitudes and purchase intentions toward advertised products, further supporting the influential role of sharing behavior in guiding consumer responses and actions.

Summary of Key Significant Research Efforts Exploring Factors Contributing to Online Content Virality

A comprehensive review of the literature reveals that researchers have proposed various explanations for the success of viral marketing. These explanations can be categorized into three main groups: external, intrapersonal, and interpersonal or social factors influencing content virality.

External factors explore the various influences that impact the spread of content online. While these studies differ in their specific focus, the majority of them examine content-specific characteristics that play a significant role in driving virality.

Intrapersonal factors primarily involve the emotional responses that viral content elicits in viewers and the lasting impressions it creates. Scholars argue that

the key to virality lies in the emotional connection established between content and viewers, making it more likely to be shared online (Izawa, 2010), emphasizing the importance of this emotional bond (Dobele et al., 2007).

Social or interpersonal factors, on the other hand, center on the role of social networks in viral marketing. These factors suggest that sharing content online helps build social networks and social capital. It is seen as a contribution to society, and individuals often anticipate that sharing viral content will make others feel happy and appreciative, strengthening social connections (Izawa, 2010). Therefore, these factors consider the broader social implications of online content sharing.

Table 3 presents a chronological overview of significant research exploring the factors contributing to online content virality. These studies originate from the scholarly community focused on understanding why content goes viral.

Table 3
Summary of Key Significant Research Efforts Exploring Factors Contributing to Online Content Virality

Author	Year	External	Intrapersonal	Interpersonal
Phelps et al.	2004	The frequency with which one passes along email content (viral mavens vs. infrequent senders) influences numerous viral outcomes.		
Dobele et al.	2005	The message itself (engaging, imaginative, fun, intriguing), the product (unique, highly visible, and susceptible to WOM), and		

Author	Year	External	Intrapersonal	Interpersonal
		leveraging combinations of technology influence virality.		
Dobele et al.	2007		Emotions, gender, and culture influence virality.	
Halvey & Keane	2007	Tagging and textual descriptions play a key role in a video's popularity.		
Leskovec et al.	2007	Network dynamics influence the success of viral marketing, as do the product category, price, and time of the recommendation.		
Pousttchi & Wiedemann	2007	Success factors in mobile viral marketing include perceived usefulness by the recipient, reward for the communicator, perceived ease of use, free mobile viral content, initial contacts, first mover advantage, critical mass, and scalability.		
Wiedemann	2007	Factors like the motivation of the communicator, the persuasion technique, content type, network externalities, etc. influence virality.		
Bampo et al.	2008	The social structure of digital networks plays a key role in the spread of viral messages.		
Hargittai & Walejko	2008	Gender and age influence online sharing behavior.		
Huang et al.	2009	Message quality and message		Social capital and social cognitive

Author	Year	External	Intrapersonal	Interpersonal
		involvement influence pass-along email intentions.		factors influence pass-along email intentions.
Abedniya & Mahmouei	2010	It is the playfulness, number of members, community-driven orientation, and ease of use of the social network site itself that influences virality.		Peer pressure was also found to influence virality.
Brown et al.	2010	The use of comedic violence increases pass-along probability.		
Ho & Dempsey	2010			Investigate the motivations to forward online content: Need to (1) be part of a group, (2) express individuality, (3) act altruistically, and (4) pursue personal growth
Izawa	2010		Emotion, impression, and utility	Social ties also influence virality.
Yang et al.	2010	Using TAM, they showed that perceived ease of use and a positive attitude influence video sharing. Sharing behavior is also moderated by gender and influenced by WOM and mass media reports (which they refer to as interpersonal and external influence).		Social and interpersonal norms drive online video sharing.
Berger & Schwartz	2011		Emotional arousal increases the sharing of information.	
Camarero & José	2011	The frequency with which you receive viral messages	Positive attitude to viral messages	Social capital influences one's likelihood of

Author	Year	External	Intrapersonal	Interpersonal
				passing on a message.
Chu	2011			Self-status-seeking influences viral behavior.
Eckler & Bolls	2011		Positively valenced (pleasant) advertisements, compared to coactive (both pleasant and unpleasant) and negative (unpleasant) ones, have a better chance of getting viral in an experimental setting.	
Gruzd et al., 2011	2011		More positive than negative messages Positive messages are 3 times more likely to be forwarded.	
Guerini et al.	2011	“Virality is a phenomenon strictly connected to the nature of the content being spread.”	Negative comments were more predominant than positive comments.	
Hansen et al.	2011	The social medium itself influences the spread of content online.	Negative news content, and positive non-news content, are more likely to spread on Twitter.	
Jenkins	2011	Brand image influences virality.	Positive emotions influence virality.	
Kaplan & Haenlein	2011	Viral success depends on whether the content is spread to and by the right people, the message itself (memorable and interesting), and		

Author	Year	External	Intrapersonal	Interpersonal
		environmental conditions.		
Lagger et al.	2011			Motivations to share videos include: allowing others to laugh, showing interesting videos to a select group, informing people, and showing others what one has accomplished.
Nelson-Field et al.	2011		Positive and negative emotions spread equally. High-arousal emotions get shared more.	
Roy	2011			Motivations to share included: sharing happiness/joy, resentment, advocacy, and economic incentives.
Blomström et al.	2012	Personalization of content contributes to virality.		
Berger & Milkman through a big data analysis of the New York Times articles	2012		Positive content spreads faster than negative. Emotional arousal is key. Found that articles entailing intensive emotional tones (both pleasant and unpleasant), such as anger, anxiety, joy, and surprise, had a greater likelihood of being on the most shared list	

Author	Year	External	Intrapersonal	Interpersonal
Chakrabarti & Berthon	2012		Social emotions	Gift-giving drives online exchange.
Rodic et al.	2012		Positive content spreads faster.	
Vaish et al.	2012	Social network factors influence virality including share-count, appreciation, user rating, comment rate, and controversiality.		
Elliot	2013		Content that elicits positive emotions like joy, humor, and praise	Whether opinion leaders forwarded the message
Guadagno et al.	2013a	In-group vs. Out-group membership influences the type of content that one spreads.	Only content that generates stronger affective responses are likely to be spread online. Positive content is more likely to be spread than negative content.	
Guadagno et al.	2013b		Positive emotion-evoking content was more likely to spread than content that evokes negative emotions, and joy-evoking content (high arousal emotion) had the greatest likelihood of being spread online.	
Voltz & Grobe	2013	The authenticity of the video is the key driver of its success.		
Berger provides a comprehensive review of	2014	(c) information acquisition where individuals seek inputs from others	(b) emotion regulation where individuals manage their emotions	(a) impression management where individuals convey positive impressions of

Author	Year	External	Intrapersonal	Interpersonal
sharing motivations				themselves, (d) social bonding where individuals seek to connect with others, and (e) persuading others
Araujo, T., et al.	2015	Demonstrates that informational cues like product details and brand URL information drive retweets of commercial content on Twitter	Emotional cues reinforce informational cues to drive sharing.	
Eunsin & Huddleston	2016	Results show that high message virality leads to more favorable attitudes and purchase intentions toward the advertised products.		
Akpınar, E., & Berger, J. studied online ads	2017		Content with emotional appeal is shared more than content with informative appeal.	
Tellis, G. J., et al. The authors test five theoretically derived hypotheses about what drives video ad sharing across multiple social media platforms.	2019	Information-focused content is less likely to be shared. This result is likely due to the dryness of arguments and facts that constitute information.	Ads that evoke discrete positive emotions generate more shares. Ads evoking inspiration, warmth, amusement, and excitement have significantly higher shares. Emotional ads are shared more on general platforms (Facebook, Google+, Twitter)	However, the main effect of new products is positive and significant. Ads introducing new products are generally shared more often because they contain novel and interesting facts, the sharing of which may make sharers look like they are knowledgeable about the marketplace.
Borah et al.	2020		Improvised marketing	

Author	Year	External	Intrapersonal	Interpersonal
			interventions (IMIs) —social media actions that are composed and executed in real-time proximal to an external event—are furthered by humor and timeliness or unanticipation; the authors find evidence of these effects on both virality and firm value across five multimethod studies.	
Han et al.	2020	Readers are more inclined to share an image or video tweet from an individual they perceive as a source of original content. This logic follows, as visually engaging content that appears original is more likely to capture the interest of readers, prompting them to share it.		Defining virality as a binary variable, we observed that incorporating interactions significantly enhances both the goodness of fit (by 20%) and the predictive validity (by 12%).
Chatterjee & Panmand exploring how the contents of the social media posts and the article can be used to explain and predict social media posts and the virality of click-bait	2022	Language formality, readability, sentiment scores, and proper noun usage of social media posts and various parts of the target article play differential and important roles in click-baitiness and click-bait virality.		
Mukherjee, P., Dutta, S., & De	2022	Indicates that clickbait usage may cause the		Clickbait may be counterproductive,

Author	Year	External	Intrapersonal	Interpersonal
Bruyn, A.		publisher to be derogated in the eyes of the reader, leading to a lowered intention to share		especially if a publisher relies on it to increase its reach via sharing. Thus, clickbait as a headline-framing treatment represents a tradeoff. While it may enhance direct readership (several headline-optimizing services confirm that clickbait headlines are clicked more), it also impedes organic reach via likes and sharing.
Wold content analysis of viral Facebook posts published by common people in Norway, and of the news coverage they received	2023	Most of the viral posts got news coverage, which in most cases focused more on the popularity cues and the virality of the post, and less on the topic the post addressed.	The posts are personal in their mode of address, often with an emotional appeal for civic engagement.	

The “oldest” study by Phelps et al. (2004) showed that research on viral content is relatively young (Bortha et al., 2014). A chronological review of the table shows that initial studies started with more traditional approaches to spreading content online, using diffusion of innovation principles and Technology Acceptance models to try and establish why some content goes viral while others do not. Initial studies also typically focus on content-specific factors contributing to virality, such as message quality, and this trend continues to persist. More recent research, however,

has shifted focus to the popularity and virality of posts themselves, often adopting a personal and emotionally engaging style that encourages civic engagement (Wold, 2023).

Table 3 provides a clear overview of the existing literature on viral communication, revealing significant variations in the factors believed to drive content virality. Authors often explore a wide range of subjects, and even when investigating similar areas, their findings may differ. Whether they delve into the content itself, the communication channels, the emotional reactions it triggers, the overall sentiment, or the motivations for sharing, it is evident that there is no consensus among researchers regarding the primary drivers of viral success. Hence, these inconsistencies within the existing body of literature underscore the necessity to provide answers to the fundamental research question at the core of this study:

"What are the factors that propel the virality of online content?"

Research Gap

The review of the related literature in this context highlights several key research gaps within the field of viral communication:

Diverse and Contradictory Factors

Existing viral marketing research has grown significantly, introducing a multitude of factors that authors suggest can influence the spread of online content. Notably, these factors often vary and sometimes even contradict each other, making it challenging to pinpoint the primary drivers of virality (Guadagno et al., 2013a; Nelson-Field et al., 2011).

Isolated Examination

Many studies tend to focus on specific contributing factors in isolation. They explore external, intrapersonal, or interpersonal reasons for content dissemination, with very few examining how these factors interact with one another. As a result, no comprehensive model currently exists that provides a holistic understanding of why content goes viral.

Lack of Empirical Evidence

Despite the various factors proposed as drivers of viral content, there is a significant lack of empirical evidence to substantiate these claims. Some researchers have emphasized the limited empirical support for these factors and the general lack of understanding regarding the motivations, attitudes, and behaviors of individuals involved in sharing content (Phelps et al., 2004).

Theory Development Gap

Another critical gap in the viral marketing literature is the underdevelopment of theory. Although numerous studies examine the phenomenon from a micro perspective, there is a significant lack of comprehensive theoretical frameworks that provide a macro-level understanding of the drivers behind viral content.

In an attempt to address these gaps and provide a more comprehensive understanding of the factors contributing to the virality of online content, Botha et al. (2014) introduced a model for the spread of content online. However, it is worth noting that this framework remains untested. Given its comprehensive nature and macro perspective on the factors influencing online content virality, this framework is proposed to investigate the factors that led to the viral success of the MODeL MOOC Calendar and the subsequent surge in massive enrollment.

Theoretical Framework

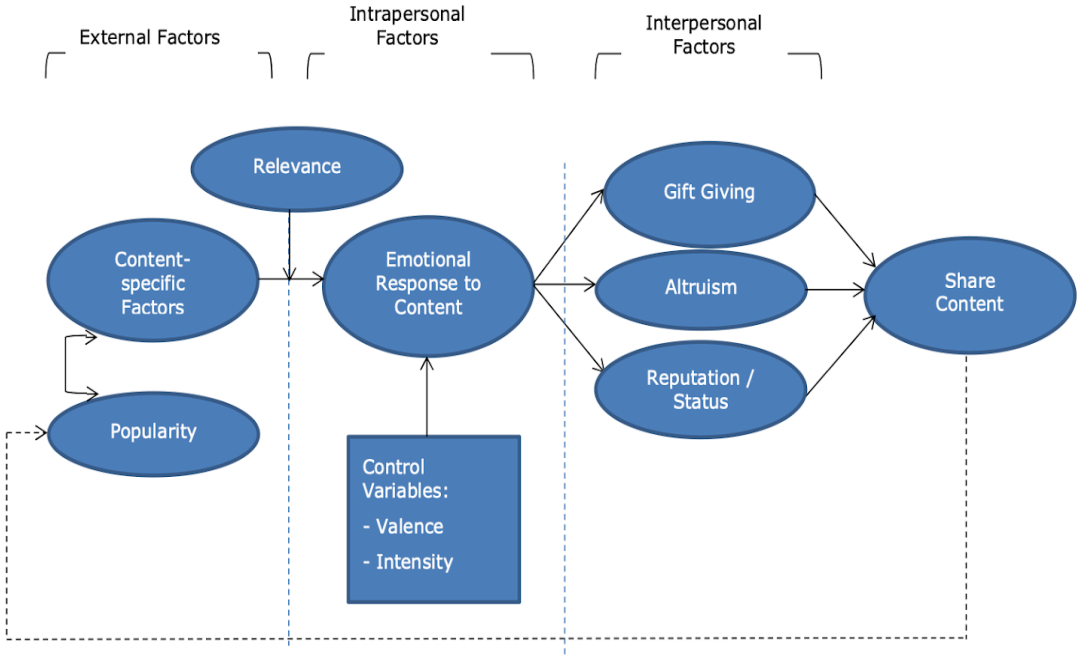
The model proposed by Botha et al. (2014) posits that the online sharing of content begins with external drivers, where the content's inherent qualities and popularity stimulate consumption and social sharing. Previous research highlights the role of content-related aspects in driving virality. Notably, popularity, fueled by word-of-mouth (WOM) and mainstream media, plays a pivotal role in content consumption.

The next phase involves the emotional response elicited by the content, with relevance moderating the content-emotion relationship. The valence and intensity of emotional responses are crucial factors influencing content virality. However, the model contends that, before directly linking emotion to content spread, interpersonal and social considerations must be addressed. Participants may, despite experiencing intense emotions, refrain from sharing content due to social factors. Constructs related to social sharing are incorporated, recognizing the social network aspect as the final stage.

Interpersonal and social factors also influence content sharing, including viewing it as a form of gift-giving, engaging in altruistic behavior for causes, and pursuing online reputation and status. According to Botha et. al (2014), these factors emerge as primary drivers of online content sharing.

Finally, the model adapts the dependent variable to include a broader range of sharing behaviors. Botha et al. (2014) revealed that individuals not only share content online but also engage in offline sharing, emphasizing the enduring role of word-of-mouth. This sharing chain contributes to the content's increased popularity, forming a cyclical interaction with content-specific factors and emotional responses, ultimately propagating a social sharing chain. The model of the factors that drive the sharing of content is presented in Figure 7.

Figure 7
Model of the factors that drive the sharing of content as proposed by Botha et al. (2014)



Socio-demographic Characteristics

Socio-demographic characteristics significantly influence online content-sharing behavior. Hargittai and Walejko (2008) identify gender and age as key factors affecting how individuals engage in online sharing activities. Yang et al. (2010) further suggest that gender not only has a direct impact on sharing behavior but also moderates it, influencing the dynamics of sharing. Furthermore, Yang et al. propose that sharing behavior is influenced by word-of-mouth (WOM) and mass media reports, categorizing these as interpersonal and external influences, respectively. This implies that both individual characteristics (such as gender and

age) and external factors (such as WOM and mass media) collectively contribute to the complexities of online sharing behavior.

External Factors

External factors encompass diverse influences beyond the individual's immediate control that impact content virality. These include content-specific traits like popularity and relevance, which significantly affect the extent and resonance of viral content within online communities (Izawa, 2010).

Content-specific Factors

According to Botha et al. (2014), the inherent qualities and popularity of content stimulate consumption and social sharing. Previous research highlights the role of content-related aspects in driving virality.

The literature reviewed in this study emphasizes the significance of external factors and content-specific factors in understanding the virality of online content.

According to Guerini et al. (2011), virality is closely tied to the inherent nature of the content being disseminated. This implies that certain qualities or characteristics of the content play a crucial role in determining its potential for virality.

In a study by Tellis et al. (2019), five hypotheses were tested to explore the drivers of video ad sharing across various social media platforms. One notable

finding was that information-focused content is less likely to be shared. This result was attributed to the perceived dryness of arguments and facts typically associated with informational content. Therefore, the nature of the content, particularly its focus on information, influences its likelihood of being shared.

In summary, these findings underscore the dual impact of external factors, such as the inherent nature of the content, and content-specific factors, such as the informational focus, on shaping the dynamics of online content virality.

External factors influencing content virality include content-specific factors and popularity. Based on the literature reviewed, content-specific factors encompass the message itself, the brand image, the medium used, and the message quality.

Message

Blomström et al. (2012) highlight the significance of personalization in content virality, emphasizing that tailoring content to individual preferences enhances its potential to go viral. Similarly, Wold's (2023) content analysis of viral Facebook posts in Norway (2023) underscores the effectiveness of a "Call to Action." The analysis reveals that posts with a personal mode of address, combined with emotional appeals for civic engagement, are more likely to achieve virality. These findings suggest that the combination of personalized content and a compelling call to civic action plays a vital role in influencing the virality of online content.

Brand Image

Jenkins (2011) suggests that brand image plays a pivotal role in influencing virality. This implies that the perceived image of a brand significantly contributes to the likelihood of content being shared online. Additionally, Han et al. (2020) introduce the idea that readers are more inclined to share image or video tweets when they come from individuals perceived as sources of original content. Their findings suggest that visually engaging content that appears original tends to capture readers' interest, leading to higher sharing rates. This emphasizes the importance of both brand image and the perceived originality of content, particularly when it originates from original or expert creators.

Medium

The medium through which content is shared plays a crucial role in shaping online sharing dynamics. In the context of Facebook, the chosen platform for this study, several studies provide insights into this phenomenon. Phelps et al. (2004) highlight that the frequency of passing along email content influences various viral outcomes, suggesting that the act of sharing itself is a significant factor. Camarero and San Jose (2011) emphasize that the frequency of receiving viral messages indicates that user interaction with the medium contributes to content dissemination. Hansen et al. (2011) further assert that the social medium itself has a distinct impact on the spread of content online, aligning with the study's focus on Facebook as a specific social platform. Additionally, Bampo et al. (2008) delve into the role of the social structure of digital networks, emphasizing its pivotal role in the spread of viral

messages. This collective evidence reinforces the argument that the medium, particularly Facebook in this case, significantly influences the sharing dynamics of online content.

Message Quality

The literature reviewed strongly supports the notion that message quality is a critical factor influencing the sharing of online content. Various qualities contribute to the success of content virality, as proposed by different authors. Voltz and Grobe (2013) emphasize the authenticity of the video as a key driver of its success. Dobele et al. (2005) highlight the importance of engaging, imaginative, fun, and intriguing messages, as well as unique and highly visible products susceptible to word-of-mouth. Halvey and Keane (2007) point out the significance of tagging and textual descriptions in a video's popularity.

Leskovec et al. (2007) argue that network dynamics, product category, price, and time of recommendation play crucial roles in viral marketing success. Pousttchi and Wiedemann (2007) identify additional success factors for mobile viral marketing, including perceived usefulness, rewards for communicators, ease of use, free content, initial contacts, first-mover advantage, critical mass, and scalability. Wiedemann (2007) adds that motivators, persuasion techniques, content type, and network externalities also influence virality.

Huang et al. (2009) stress that message quality and user involvement influence pass-along email intentions. Abedniya and Mahmouei (2010) point out that

playfulness, the number of members, community-driven orientation, and ease of use of the social network site influence virality. Highfield (2015) connects humor to the online diffusion of posts. Borah et al. (2020) find that improvised marketing interventions (IMIs), especially those with humor and timeliness, impact both virality and firm value.

Brown et al. (2010) discovered that the use of comedic violence increases pass-along probability. Yang et al. (2010) use the Technology Acceptance Model (TAM) to show that perceived ease of use and a positive attitude influence video sharing. Kaplan and Haenlein (2011) assert that viral success depends on spreading content to and by the right people, having memorable and interesting messages, and considering environmental conditions.

Berger (2014) provides a comprehensive review of sharing motivations, including information acquisition where individuals seek inputs from others. Chatterjee and Panmand (2022) explore language formality, readability, sentiment scores, and proper noun usage, revealing their differential and important roles in click-baitiness and click-bait virality.

Popularity

Botha et al. (2014) highlighted how viral content spreads through both online and offline channels, noting that individuals often share content by telling friends about it or physically showing it to them. This dual-sharing method significantly

boosts the content's popularity, creating a self-reinforcing cycle that contributes to the rapid, exponential growth commonly associated with viral content.

Their argument centered on the concept that popularity fuels further popularity. Study participants frequently discovered viral content through offline conversations and WOM. When online, the content's existing popularity—measured by metrics like views and likes—motivated individuals to engage with it. Essentially, this initial popularity acted as a catalyst for content consumption. In this context, popularity had two facets: its online presence, gauged by metrics such as views and likes on specific social platforms, and its offline reach, determined by whether people had heard about the viral content from their social circles.

The proposed model emphasized that popularity serves as the genesis of the entire process. Popularity and content interact symbiotically; content-specific elements, like novelty, bolster popularity, which, in turn, attracts viewership. However, the content's popularity alone couldn't directly influence the emotional responses it evoked.

Moreover, the study introduced a chain of propagation for online content dissemination, where online sharing and word-of-mouth, stemming from this process, further amplified the content's popularity. Mainstream media also contributed to propagating this popularity. Ultimately, this popularity loop initiated a cycle where more individuals engaged with the videos, experienced emotional reactions, and then shared the content themselves, perpetuating the spread of the content.

The literature strongly supports the argument that popularity plays a significant role in the sharing of online content, validating the concept that“popularity begets popularity” is well-founded. Eunsin and Huddleston (2016) reveal that high message virality leads to more favorable attitudes and purchase intentions toward advertised products. This demonstrates a clear link between the popularity of content and positive consumer perceptions and behaviors.

Wold's (2023) content analysis of viral Facebook posts further supports the idea that popularity cues strongly influence content dissemination. The study found that most viral posts received news coverage, focusing primarily on the post's popularity and virality rather than the specific topic it addressed. This suggests that a post’s popularity significantly contributes to its coverage and attention, reinforcing the notion that popularity itself becomes a driving force in the sharing and dissemination of online content.

Relevance

In the context of viral communication on social media, relevance plays a critical role in determining whether content will resonate with users and gain widespread traction. According to Pousttchi and Wiedemann (2007), relevance is the perceived usefulness or value of information to the recipient. On social media, this perception is influenced by how well the content aligns with the user's interests, current trends, and the social or cultural moment.

When content is deemed relevant by users, it is more likely to be shared, liked, commented on, and recommended, contributing to its viral potential. The algorithms of social media platforms also prioritize relevant content, boosting its visibility in users' feeds and amplifying its reach. For content creators, understanding what is relevant to their target audience is crucial for crafting messages that not only engage but also encourage users to spread the content within their networks, thereby enhancing its chances of going viral.

Relevance in social media is dynamic and can shift rapidly based on emerging trends, news, or events. Therefore, for content to go viral, it must be not only relevant at the time of its creation but also adaptable to the changing landscape of user interests and social discourse. This adaptability makes relevance a key factor in the success of viral campaigns and social media communication strategies.

Intrapersonal Factors

Intrapersonal factors encompass an individual's internal reactions and impressions upon encountering viral content. These factors involve the emotional response to the content, a pivotal determinant in shaping how individuals interact with and respond to the material. Specifically, the valence and intensity of these emotional reactions play a crucial role in influencing the virality of content, as elucidated by Izawa (2010).

Emotional Response to Content

The literature review provides significant insights into intrapersonal factors, particularly the role of emotional responses to content in driving the sharing of online content. Aaker and Smith (2010) stress the criticality of capturing individuals' emotions for effective social media engagement, challenging the conventional view that social exchanges are solely driven by monetary incentives. Akpınar and Berger's (2017) study supports this by indicating that content evoking emotional responses tends to be shared more extensively than content offering mere information. Dobele et al. (2007) expand on this idea by highlighting the influence of emotions, gender, and cultural aspects on content virality. Berger (2014) delves deeper into sharing motivations, pointing out emotion regulation as a significant factor where individuals actively manage their emotions during the sharing process. Additionally, Izawa's (2010) exploration of emotion, impression, and utility suggests a potential connection between emotions and the perceived usefulness of content. Collectively, these findings underscore the profound impact of emotions on content-sharing behavior, emphasizing the necessity of emotional appeal in driving content virality and user engagement across social media platforms.

The literature review also reveals compelling insights regarding the controlled variables—valence and intensity of emotional responses—underpinning the virality of content, as proposed by Botha et al (2014).

Valence

Numerous studies (Berger & Milkman, 2011; Camarero & San Jose, 2011; Gruzd et al., 2011; Rodic & Koivisto, 2012; Elliot, 2013; Jenkins, 2011; Tellis et al., 2019) collectively emphasize that positive content tends to spread faster and wider than negative content. Content eliciting positive emotions such as joy, humor, and praise not only garners more shares but also positively influences brand image and virality. Ads evoking discrete positive emotions like inspiration, warmth, amusement, and excitement tend to generate significantly higher shares. However, Guerini et al. (2011) noted a prevalence of negative comments, while Hansen et al. (2011) found that negative news content and positive non-news content had higher dissemination on Twitter.

Intensity

Studies conducted by Berger & Schwartz (2011), Nelson-Field et al. (2011), and Guadagno et al. (2013b) support the impact of emotional intensity on content sharing. They highlight that emotional arousal, whether positive or negative, plays a crucial role in increasing the likelihood of content being shared. High arousal emotions, especially joy, evoke a greater tendency for content to spread across online platforms.

These findings collectively underscore the critical influence of both valence (the positive or negative nature of emotions) and intensity (the level of emotional arousal) in driving content virality. Positive content, particularly that which elicits

high-arousal emotions, emerges as a key driver for widespread sharing. However, the prevalence of negative content in comments and its impact on specific platforms should not be overlooked.

Interpersonal Factors

The examined literature highlights the significant impact of interpersonal factors on content sharing, aligning closely with Botha et al.'s (2014) framework. Studies by Huang et al. (2009) and Camarero and San Jose (2011) underscore the influence of social capital and social cognitive factors in motivating individuals to share content within their networks. Abedniya and Mahmouei (2010) and Izawa (2010) emphasize the role of peer pressure and social ties in influencing content virality, highlighting the sway of interpersonal connections on sharing decisions. Yang et al. (2010) further elaborate on how social and interpersonal norms shape behaviors related to online video sharing. Furthermore, Han et al. (2020) note that incorporating interactions significantly enhances the understanding and prediction of virality, reinforcing the pivotal role of interpersonal dynamics in driving content dissemination. Collectively, these findings underscore the substantial influence of social capital, peer pressure, social ties, norms, and interactions within networks as key drivers shaping individuals' decisions to share content across various online platforms.

The examined literature offers valuable insights into the multifaceted aspects of interpersonal factors driving content sharing, aligning with Botha et al.'s (2014) framework.

Gift-Giving

Berking (1999) highlights the multifocal and social nature of gift-giving, encompassing expressions of self and material exchanges. Prendergast and Stole (2001) underscore the economic significance of gifts, often extending beyond monetary value to reflect the giver's identity, especially in the context of online social media. Studies by Lagger et al. (2011), Roy (2011), and Chakrabarti & Berthon (2012) reveal various motivations for sharing videos, including showcasing achievements, informing others, sharing emotions like joy or resentment, and fostering social connections akin to the spirit of gift-giving.

Altruism

Ho and Dempsey (2010) identify motivations for forwarding online content, encompassing the need for group inclusion, individualism, altruism, and personal growth. This altruistic inclination suggests a desire to contribute to groups, express individuality, and foster personal development through content sharing.

Reputation/Status

Chu (2011) demonstrates how seeking self-status influences viral behavior. Berger's (2014) comprehensive review of sharing motivations highlights impression management, social bonding, and persuasion as drivers. Tellis et al. (2019) find that emotional ads are shared more on general platforms, emphasizing the impact of

emotional content. Additionally, ads introducing new products garner significant sharing due to their novelty and perceived knowledgeability about the marketplace, enhancing the sharer's status.

Collectively, these findings illuminate the diverse facets of interpersonal factors driving content-sharing behavior. Motivations encompass aspects of gift-giving, altruism, and the pursuit of reputation or status, reflecting individuals' desires for connection, self-expression, and enhancing their social presence within online communities.

Content Sharing Behavior

Sharing behavior is the dependent variable of the model, covering a wider range of sharing activities. Botha et al. (2014) highlighted that people not only share content in online spaces but also engage in offline sharing, underscoring the lasting influence of word-of-mouth interactions. This sharing loop enhances the content's growing popularity, creating an ongoing interplay between content-related elements and emotional reactions, thereby fostering an interconnected social sharing process.

Conceptual Framework

The study is grounded on Botha et al.'s (2014) model, which explores the drivers behind online content sharing. The aim is to understand the factors influencing the virality of the UPOU MODeL MOOC Calendar and its impact on mass enrollment. Specifically, the focus is on the communication phenomenon of the

Facebook post's virality. Botha et al.'s (2014) model suggests that a combination of external, intrapersonal, and interpersonal drivers collectively explains the intricacies of online content sharing. By applying this model, the research seeks to understand the dynamics contributing to the widespread dissemination of the UPOU MODeL MOOC Calendar and its effects on enrollment.

The model proposed by Botha et al. (2014) posits that the online sharing of content begins with external drivers, where the content's inherent qualities and popularity stimulate consumption and social sharing (Izawa, 2010). In this study, the external drivers are content-specific factors and popularity.

Content-specific factors refer to the distinct elements or characteristics within a post that contribute to its widespread dissemination and engagement, resulting in viral popularity (Botha et al., 2014). In this study, the specific content-related factors are the message, brand image, medium, and message quality.

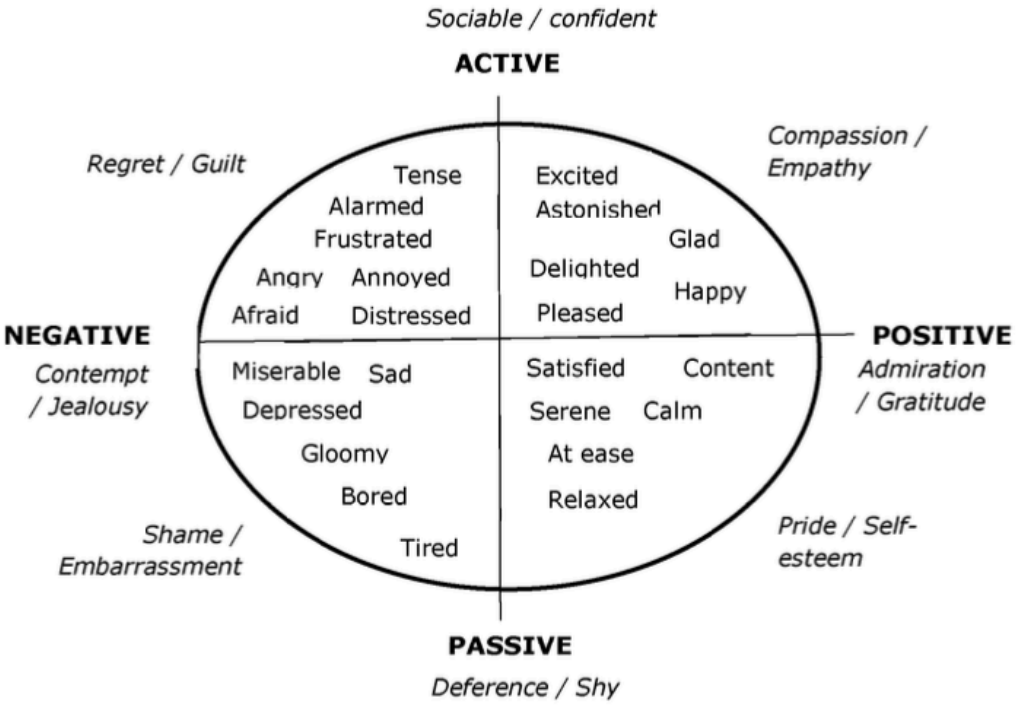
The term "Message" in this context refers to the specific content within the caption of the MOOC Calendar that elicited an emotional response from the respondents. "Brand image" pertains to the perceived image of UPOU as a reputable educational institution, coupled with the belief that UPOU excels as an expert creator of MOOCs. "Medium" denotes the channel through which the content was distributed, with Facebook being the specific focus. This term explores whether the nature and structure of respondents' digital network on Facebook, coupled with their frequent use of the social media platform, facilitated the sharing of the UPOU

MODeL 2023 MOOC Calendar. Lastly, "Message quality" refers to the inherent attributes of the message that influenced respondents' decisions to share the post.

Popularity, as a driver, refers to the perception that users shared the post due to its high level of engagement, widespread virality, and recognition through word of mouth (WOM) and mainstream media reports. This concept encompasses the idea that individuals were influenced to engage with and share the MOOC Calendar content because they perceived it as a trending and widely recognized topic within their offline social network or online community. This perception is often driven by recommendations and discussions from others (WOM) and media coverage.

The next phase involves intrapersonal factors, particularly the emotional response elicited by the content. The study employs the Circumplex of Personal and Social Emotions (see Figure 8) adapted from Russell (1980) and Chakrabarti and Berthon (2012), as cited in Botha et al. (2014), to quantify emotional responses to the UPOU MODeL 2023 MOOC Calendar.

Figure 8
Circumplex of personal and social emotions adapted from Russell (1980) and Chakrabarti and Berthon (2012), as cited in Botha et al. (2014)



Relevance refers to the perceived usefulness of the content to the recipient (Pousttchi & Wiedemann, 2007). In the context of the content-emotion relationship, relevance functions as a moderator: the higher the perceived relevance of the content to the audience, the greater its emotional impact and the likelihood of it being shared. Consequently, if the audience perceives the UPOU MODeL 2023 MOOC Calendar as useful, their emotional response to the content is likely to be more profound.

The valence and intensity of emotional responses are crucial, significantly influencing the virality of content. Valence pertains to the discernible emotional tone or sentiment conveyed through specific elements within a post, categorized as either positive or negative (Botha et. al, 2014). This concept involves a structured

evaluation of emotional expressions within the UPOU MODeL 2023 MOOC Calendar to ascertain whether it predominantly portrays positive or negative emotions. Meanwhile, intensity signifies the magnitude of emotional impact experienced by individuals upon engaging with specific content elements within a post (Botha et. al, 2014). This concept aims to quantify the depth or strength of emotional responses evoked by the UPOU MODeL 2023 MOOC Calendar, providing insight into the profound influence of the post's emotional content on its virality and audience engagement.

However, before directly linking emotion to content spread, the model posits that interpersonal and social factors must be considered. Even if participants experience intense emotions, they may refrain from sharing content due to social factors. Therefore, it is imperative to determine the interpersonal factors influencing content sharing.

Constructs related to social sharing were incorporated, recognizing the social network aspect as the final stage. Interpersonal factors revolve around the social network dynamics inherent in viral marketing. Sharing content online contributes to the establishment and augmentation of social networks and social capital, holding significance for societal interactions. Individuals anticipate that sharing viral content will evoke feelings of happiness and gratitude from others (Izawa, 2010). Interpersonal and social factors influence content sharing, including viewing it as a form of gift-giving, engaging in altruistic behavior for causes, and pursuing online reputation and status.

Gift-giving refers to users sharing or promoting the UPOU MODeL 2023 MOOC Calendar as an act of generosity or goodwill. This gesture is often driven by a desire to contribute to the educational community, enhance the learning experience of others, or forward content to specific individuals who are believed to appreciate and enjoy it, thereby making them feel better. Altruism refers to the selfless and generous behavior exhibited by individuals when sharing the UPOU MODeL 2023 MOOC Calendar, with the primary intention of benefiting others rather than seeking personal gain. This concept involves individuals promoting the MOOC Calendar on social media out of a genuine desire to provide educational value or support to their friends, family, or the online community. Reputation/Status refers to how interactions with the UPOU MODeL 2023 MOOC Calendar influence users' perceived standing or influence within their social network or online community. According to Botha et. al (2014), these factors emerge as primary drivers of online content sharing.

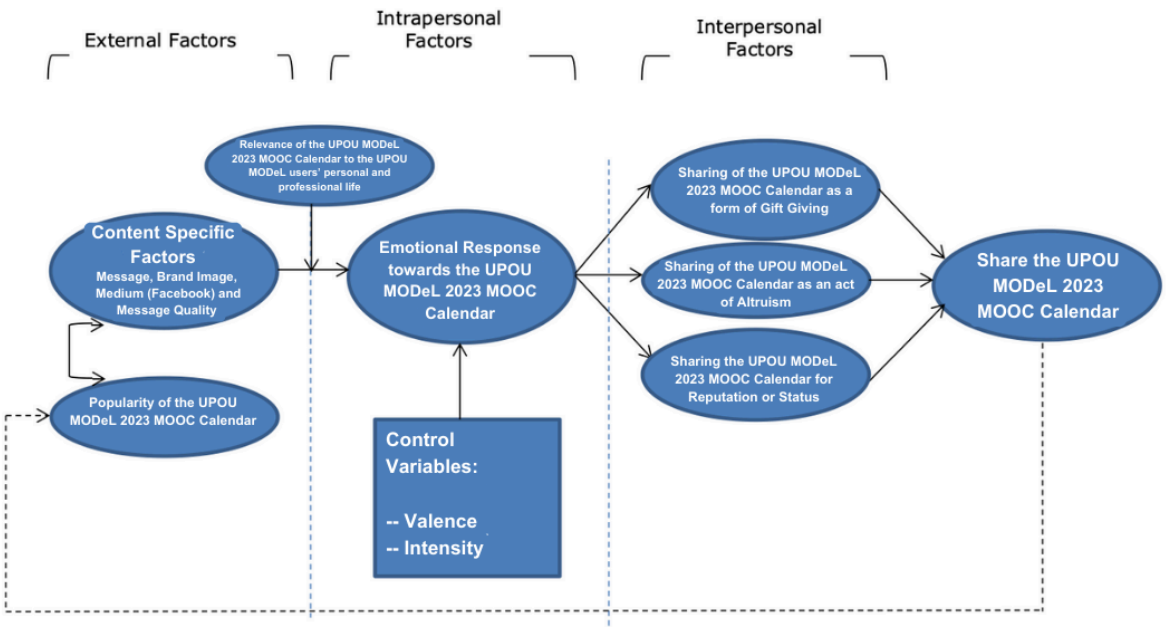
Finally, the model adapts the dependent variable—sharing the UPOU MODeL 2023 MOOC Calendar—to encompass a broader spectrum of sharing behaviors. Botha et al. (2014) revealed that individuals not only share content online but also engage in offline sharing, emphasizing the enduring role of word-of-mouth. This sharing chain contributes to the content's increased popularity, forming a cyclical interaction between content-specific factors and emotional responses, ultimately propagating a social sharing chain.

This conceptual framework provides a comprehensive understanding of the factors influencing the virality of the UPOU MODeL MOOC Calendar, incorporating external, intrapersonal, and interpersonal drivers. By adopting Botha et al.'s (2014)

model, the study aims to understand the dynamics behind online content sharing and its impact on the surge in enrollment.

The relationship between and/or among these variables may be seen in the following framework (Figure 9).

Figure 9
Conceptual framework of the study, adapted from the model of factors driving content sharing proposed by Botha et al. (2014)



Operational Definition of Terms

Altruism	refers to the selfless and generous behavior exhibited by the respondents when sharing the UPOU MODeL 2023 MOOC Calendar with the primary intention of benefiting others rather than seeking personal gain. This concept involves individuals promoting the MOOC Calendar content on social media out of a genuine desire to provide educational value or support to their friends, family, or online community. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Content-specific Factors	refers to the message itself, brand image, medium, and quality of the message that elicited an emotional response from the respondents when they encountered the UPOU MODeL 2023 MOOC Calendar post. Responses are rated through a checklist to determine the specific message of the caption that elicits an emotional response to them and influences their sharing behavior. Responses are also rated on a scale of 1 to 5, with higher numbers indicating a more positive response. The overall weighted average of the Likert-scale responses is categorized into degrees of

	agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Emotional Response to Content	pertains to measurable and observable reactions, including actions such as likes, shares, comments, and user interactions, evoked by specific elements within a post. These elements often carry emotional appeal, resonance, or relatability, which enhances audience engagement and contributes to the post's virality. The emotional response is influenced by the emotional valence (positive/negative) of the content, as identified by Guerini et al. (2011) and Jenkins (2011), as well as the intensity of emotions experienced, as indicated by Guadagno et al. (2013a). In this study, Emotional Response to Content encompasses quantifiable reactions like likes, shares, comments, and user interactions evoked by specific content elements. Additionally, it refers to the personal emotions experienced by respondents, adapted from the circumplex of personal and social emotions established by Russell (1980) and Chakrabarti and Berthon (2012).
External Factors	concentrates on examining possible extrinsic influencing factors, specifically Content-specific Factors and Popularity, that contribute to the virality of the UPOU MODeL 2023 MOOC Calendar post
Gift-giving	refers to the respondents' engagement with sharing of the UPOU MODeL 2023 MOOC Calendar driven by goodwill, aiming to benefit the educational

	community or specific individuals, ultimately impacting their perceived sense of control over the process. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Intensity	refers to the respondents' evaluation of the strength of emotional reactions prompted by the UPOU MODeL 2023 MOOC Calendar. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Interpersonal Factors	refers to the respondents' engagement with the social aspects of viral content sharing, emphasizing the role of social networks, social capital, and the anticipation of positive emotions from others as motivations for sharing the UPOU MODeL 2023 MOOC Calendar.
Intrapersonal Factors	center on the emotional reaction that viewers have after consuming the UPOU MODeL 2023 MOOC Calendar, as well as the impression that it leaves on viewers

Popularity	refers to the perception that users shared the post due to its high level of engagement, widespread virality, and recognition through word of mouth (WOM) and mainstream media reports about the UPOU MODeL 2023 MOOC Calendar post. This concept encompasses the idea that individuals were influenced to engage with and share the MOOC Calendar content because they recognized it as a trending and widely recognized topic within their offline social network or online community, often driven by recommendations and discussions from others (WOM) and media coverage. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Relevance	denotes how respondents perceive the practicality and applicability of the content to their personal or professional lives. It reflects the extent to which the content is deemed pertinent and valuable to their specific circumstances, potentially influencing their emotional response and subsequent sharing behavior. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree

	nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Reputation/Status	refers to the idea that sharing or engaging with the UPOU MODeL 2023 MOOC Calendar content enhances an individual's reputation or status, as others may view them as a valuable source of information, a trendsetter, or a respected member of the online community. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).
Share Content	refers to whether UPOU MODeL users have shared the UPOU MODeL MOOC Calendar on Facebook, measured through a binary (yes or no) response to a specific question.
Sharing Behavior	refers to the act of posting or reposting the calendar on the user's personal Facebook profile or sharing it with their Facebook friends and connections through the following: ● Posting the UPOU MODeL MOOC Calendar as a status update on Facebook ● Sharing a link to the UPOU MODeL MOOC Calendar post on the UPOU MODeL Facebook Page ● Reposting the UPOU MODeL MOOC Calendar post from the UPOU MODeL

	Facebook Page to the user's timeline ● Tagging friends or mentioning them in a comment along with the UPOU MODeL MOOC Calendar post to draw their attention to it ● Sending a direct message or private message to specific Facebook friends, sharing the UPOU MODeL MOOC Calendar, and encouraging them to check it out
Socio-demographic Characteristics	refer to age, sex, civil status, highest educational attainment, profession/field, location, Facebook communication behavior, and experience (lack thereof) in enrolling in MOOCs
Valence	refers to the systematic assessment of emotional tone within the UPOU MODeL 2023 MOOC Calendar to determine its predominant emotional orientation. Responses are rated on a scale of 1 to 5, with higher numbers indicating a more positive self-efficacy and controllability. The overall weighted average of the Likert-scale responses is categorized into degrees of agreement: Strongly Agree (4.2 - 5.0), Agree (3.4 - 4.1), Neither Agree nor Disagree (2.6 – 3.3), Disagree (1.8 – 2.5), and Strongly Disagree (1.0 – 1.7).

Chapter III

METHODOLOGY

This research used a quantitative method, employing a cross-sectional survey to explore factors impacting content spread, particularly focusing on the UPOU MODeL 2023 MOOC Calendar as a case study. It examined a surge in users from January 19 to March 2, 2023, mostly consisting of first-time MOOC participants.

Research Design

This study adopted a quantitative approach to examine the factors influencing the spread of content, focusing on the UPOU MODeL 2023 MOOC Calendar within the online community. A cross-sectional survey design was utilized to gather data. This approach is consistent with the methodology proposed by Baxter and Babbie (2004), who suggest that survey research can elicit information on respondents' cognitive beliefs or perceptions, affective feelings or emotional responses, and past, present, and intended future behaviors. By utilizing this survey research design, the study aimed to gather comprehensive data on the factors that shape individuals' decision-making processes related to sharing the UPOU MODeL 2023 MOOC Calendar and the resulting massive MOOC enrollment.

Respondents of the Study

The respondents of the study were UPOU MODeL users who registered and enrolled in MOOCs during the surge in users from January 19 to March 2, 2023.

Most of the respondents (94.9%) were first-time enrollees in MOOCs. Among them, 60% learned about UPOU MODeL via the social media platform Facebook. They cited self-development, interest in the learning content, and free access to UPOU MOOCs as their primary motivations for enrolling in MODeL.

Sampling Procedure

During the surge in enrollment, two MOOCs were made available for registration: Principles of Graphic Design (February 13 to March 27, 2023) and Gender Sensitivity Training (February 13 to March 10, 2023). The enrollment figures for these courses were substantial, with 21,463 new users enrolling in Principles of Graphic Design and 16,067 new users enrolling in Gender Sensitivity Training. Moreover, 7,007 individuals enrolled in both MOOCs simultaneously.

The initial step involved obtaining the registration list of all UPOU MODeL users from the website administrators. The list initially identified 30,292 users who registered and enrolled during the specified period. To thoroughly examine this phenomenon, the study employed simple random sampling.

Accurate sample size determination is crucial for the reliability and generalizability of research findings. In this study, the sample size was calculated using Cochran's Formula. The standard formula (see Figure 10) for sample size computation was used to determine the number of samples needed for this study. In the formula, n is the calculated sample size, n_o is Cochran's sample size value, and N is the total population (30,292). Furthermore, Z_α is the confidence level, e is the

margin of error, and p is the population proportion used to calculate the population's variance under binomial distribution.

Figure 10
Cochran's Formula

$$n = \frac{n_0}{1 + \frac{n_0}{N}} \quad where \quad n_0 = \left(\frac{Z_{\alpha/2}}{e}\right)^2 p(1-p)$$

After applying Cochran's Formula with a total population of 30,292, the computed sample size (n) was determined to be 380. This sample size is optimal for achieving a 95% confidence level with a 5% margin of error. The choice of 380 participants was influenced by practical considerations, including the limited number of survey proponents and the constrained timeline for contacting and convincing respondents. The parameters were selected to balance precision with practical constraints. Subsequently, the sample was chosen using simple random sampling, where respondents were randomly selected from the population.

Research Instrument

Data were collected using an online survey questionnaire. The research instrument was pretested with MODeL users to gather feedback on its content. The survey questionnaire is structured into six parts, as presented in Appendix A.

Part A: Socio-Demographic Characteristics - This section focused on obtaining background information from respondents. Questions covered a range of demographic details such as age, sex, civil status, highest educational attainment, industry/sector, average income, location, frequency of communication on Facebook, and experience with enrolling in MOOCs.

Part B: External Factors - This section delved into external factors influencing content sharing, specifically content-specific factors, brand image, medium, message quality, and popularity. Respondents were asked to provide insights into their motivations related to these external factors. They were also asked to rate the popularity of the UPOU MODeL 2023 MOOC Calendar to assess the influence of online and offline popularity, word-of-mouth recommendations, and mainstream media reports on their decision to share the MOOC Calendar.

Part C: Intrapersonal Factors - This section focused on the emotional response of individuals to the content. Questions covered the range of emotions experienced, the emotional tone of the post (valence), and the intensity of emotional responses.

Part D: Interpersonal Factors - This section explored the interpersonal dynamics influencing content sharing, including gift-giving, altruism, and reputation/status. Respondents provided insights into their motivations related to these interpersonal factors.

Part E: Sharing Content - This section gathered information on the actual act of sharing. Respondents indicated whether they shared the UPOU MODeL MOOC Calendar and specified the methods used for sharing, including online platforms, direct messages, face-to-face conversations, physical distribution, messaging apps, reposting on forums, or other methods.

Part F: Motivation for Enrolling in MOOCs - This final section delved into the main motivations of the respondents for enrolling in UPOU MOOCs.

Data Gathering Procedures

Data was gathered by first obtaining permission from the UPOU MODeL Team. To collect the necessary data for the study, a letter of introduction was distributed along with a survey questionnaire to the identified participants. The survey questionnaire was administered online via Google Forms, a free, web-based survey tool included in the Google Docs Editors suite. This online survey method was chosen to efficiently and effectively collect data from a large sample size while minimizing errors associated with manual data entry. Participants were given a two-week window to complete the survey questionnaire. To encourage timely and complete responses, follow-up emails were sent to the respondents.

Data Analysis

Both descriptive and inferential statistics were used in the data analysis for this research. The variables of the study are external, intrapersonal, and

interpersonal factors driving the sharing of the 2023 UPOU MODeL MOOC Calendar. The data gathered were analyzed using descriptive statistics, such as frequency counts, mean, and percentages. A five-point Likert scale was used to measure the respondents' external, intrapersonal, and interpersonal factors in sharing the 2023 UPOU MODeL MOOC Calendar. Respondents were asked to select the choice that best reflected their opinion regarding the statements, ranging from Strongly Agree (5), Agree (4), Neither Agree nor Disagree (3), Disagree (2), to Strongly Disagree (1).

The overall weighted means of the responses to the Likert-scale questions were computed. The adjectival ratings were assigned as follows:

Strongly Agree	1.0 – 1.7
Agree	1.8 – 2.5
Neither agree nor disagree	2.6 – 3.3
Disagree	3.4 - 4.1
Strongly Disagree	4.2 - 5.0

Data Processing

Before conducting the analysis, data preprocessing was performed depending on the characteristics of each attribute. This involved re-coding and negating the data under each factor or category to ensure that the respondents' ratings were aligned, making it suitable for the analysis of categorical variables in the software.

To measure the performance of the regression model, a confusion matrix was constructed to compute accuracy, sensitivity, and specificity. Sensitivity is the proportion of actual positives—respondents who shared the MOOC calendar— that are correctly identified, while specificity is the proportion of actual negatives that are correctly identified as such.

Lastly, the model was subjected to a ten-fold cross-validation to assess its utility and evaluate its predictive ability. This validation method significantly reduces bias by using most of the data for fitting and reduces variance by also using most of the data in the validation set.

Statistical Tools

After data processing, a descriptive analysis of the demographic characteristics of the respondents was performed to explore and describe the respondents of the study. Tables and graphs were generated using the chosen statistical software of the proponent of this study. Initial correlation analyses were performed to determine the significant variables that were considered as the regressors of the model as well as to determine the strength of relationship of each factor in the study. Specifically, Pearson's Product-Moment Correlation was used to determine the correlation between quantitative variables. Spearman's Rank-Order Correlation was used to test the relationship between qualitative variables and quantitative variables such as variables that were measured to be at ordinal and continuous scale, respectively. The formulas for the two correlations are shown

below, where ρ is the correlation coefficient, d_i is the difference between two ranks, and n is the number of observations.

Figure 11
Formula of Pearson's Product-Moment Correlation Coefficient

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Figure 12
Formula of Spearman's Rank-Order Correlation Coefficient

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Furthermore, point-biserial and rank-biserial correlations were used when the characteristic or variable of interest had two or more levels, and the other variable was on a continuous scale. The formulas for these correlations are shown below.

Figure 13
Formula of Point-Biserial Correlation Coefficient

$$r_{pb} = \frac{(\bar{y}_1 - \bar{y}_2).\sqrt{pq}}{s_y}$$

where, p = proportion for which nominal value is 1,
q = proportion for which nominal value is 0,
$\bar{y}_1$ = conditional mean of the quantitative or numerical variable y when the nominal score is 1,
$\bar{y}_2$ = conditional mean of the quantitative or numerical variable y when the nominal score is 0, and
s_y = standard deviation of the numerical feature.

Figure 14
Formula of Rank-Biserial Correlation Coefficient

$$r_{rb} = 2\left(\frac{Y_1 - Y_0}{n}\right)$$

Where, n = number of data pairs in the sample
Y_0 = Y score means for data pairs with x = 0
Y_1 = Y score means for data pairs with x = 1

Model Creation and Validation

A binary logistic regression model was used to predict the dichotomous outcome of either sharing the UPOU MODeL MOOC Calendar or not. In selecting the regression model, the backward elimination procedure was performed wherein all the independent variables were initially included in the model, and variables that were found to be non-significant were eliminated one by one until only significant variables remained. Variables removed during this process could be reintroduced into the model if deemed necessary based on past literature.

After constructing a model, the assumptions underlying the binary logistic regression model were further examined to check the aptness of the model. The Durbin-Watson Test for Autocorrelation was used to verify the assumption on the independence of the residuals while the Chi Square Test was used for the goodness of fit test. Lastly, the assumption for the multicollinearity was checked using the detection tolerance and the Variance Inflation Factor (VIF) of the explanatory variables.

Different metrics were used to measure the performance of the regression model for validation. These metrics are Adjusted R-squared, Root Mean Squared Error (RMSE), and Akaike's Information Criteria (AIC).

In summary, this study used a quantitative approach, focusing on the UPOU MODeL 2023 MOOC Calendar to understand factors influencing online content spread and virality. To achieve this research goal, a cross-sectional survey was conducted among UPOU MODeL users during a surge in enrollment. Findings revealed motivations for enrollment, predominantly via Facebook, and employed simple random sampling for data collection. By employing binary logistic regression, the research predicts sharing behavior and evaluates model assumptions, leading to a thorough understanding of the factors influencing the virality of online content and illustrating their interrelationships. Moreover, it culminates in the development of a predictive model for these factors, offering valuable insights to guide the creation of effective communication strategies within educational outreach and development initiatives.

Chapter IV

RESULTS AND DISCUSSION

Socio-demographic Characteristics

The study targeted users who enrolled during a significant surge between January 19 and March 2, 2023. Demographically, the respondents were predominantly single females living in Luzon. A notable portion of the participants held at least a Bachelor's Degree, comprising approximately 58% of the respondents. The high proportion of individuals with at least a Bachelor's Degree suggests a potential interest among more educated individuals in furthering their learning through online platforms like MOOCs.

Additionally, the majority of participants were employed in either the Education or Government sectors. The prevalence of respondents working in these two sectors suggests potential opportunities for collaboration and partnerships between educational institutions and government agencies to promote and facilitate access to online learning opportunities.

Table 4 presents the socio-demographic profile of the respondents.

Table 4
Profile of Respondents (n=380)

Variables	Proportion (%)	95% Confidence Interval	
		LL	UL
Sex			
Female	62.63%	62.42%	62.84%
Male	37.37%	37.16%	37.58%
Civil Status			
Single	63.16%	62.95%	63.37%
Married	34.74%	34.53%	34.94%
Others	2.11%	2.04%	2.17%
Highest Educational Attainment			
High School Diploma or equivalent	12.11%	11.96%	12.25%
Associate's Degree	3.95%	3.86%	4.03%
Bachelor's Degree	57.63%	57.42%	57.85%
Master's Degree	18.16%	17.99%	18.32%
Doctorate or Higher	2.63%	2.56%	2.70%
Others	5.53%	5.43%	5.63%
Industry			
Education Sector	32.37%	32.17%	32.57%
Government/Public Service Sector	19.21%	19.04%	19.38%
Technology/IT Sector	8.16%	8.04%	8.28%
Business/Management Sector	7.11%	6.99%	7.22%
Healthcare Sector	6.58%	6.47%	6.69%
Arts/Entertainment Sector	3.42%	3.34%	3.50%
Finance/Banking Sector	2.89%	2.82%	2.97%
Others	20.26%	20.09%	20.44%

Variables	Proportion (%)	95% Confidence Interval	
		LL	UL
Location			
Luzon	75.79%	75.60%	75.97%
Visayas	11.84%	11.70%	11.98%
Mindanao	8.42%	8.30%	8.54%
Overseas	3.95%	3.86%	4.03%

The mean age and median income of respondents, as presented in Table 5, provide insights into the age and income diversity among the surveyed respondents. The age range is quite broad, with the youngest respondent being 17 years old and the oldest 69 years old. The mean age of approximately 33 years suggests a relatively balanced distribution across different age groups. These findings underscore the importance of considering age diversity when designing educational initiatives like MOOCs. Different age groups may have distinct preferences and needs, requiring tailored approaches to ensure inclusivity and effectiveness.

Regarding monthly income, there was an outlier, with one respondent reporting an income of 50 million Philippine pesos (PhP). To provide a more accurate representation of typical income levels, the median monthly income of 24,000 PhP was calculated. This median indicates that half of the respondents earn less than 24,000 PhP monthly. These insights can inform the development of educational programs that cater to the diverse demographic characteristics and socioeconomic backgrounds of potential participants.

Table 5
Mean Age and Median Income of Respondents (n=380)

	Average	Minimum	Maximum
Age	33.30 ± 0.48	17	69
Monthly Income	24,000	0	50,000,000

Based on Figure 15, a significant majority (83.4%) of respondents are frequent users of Facebook, accessing the platform multiple times a day. This suggests that Facebook is a highly utilized and potentially influential platform for this demographic.

Figure 15
Distribution of respondents regarding their frequency of communication on Facebook

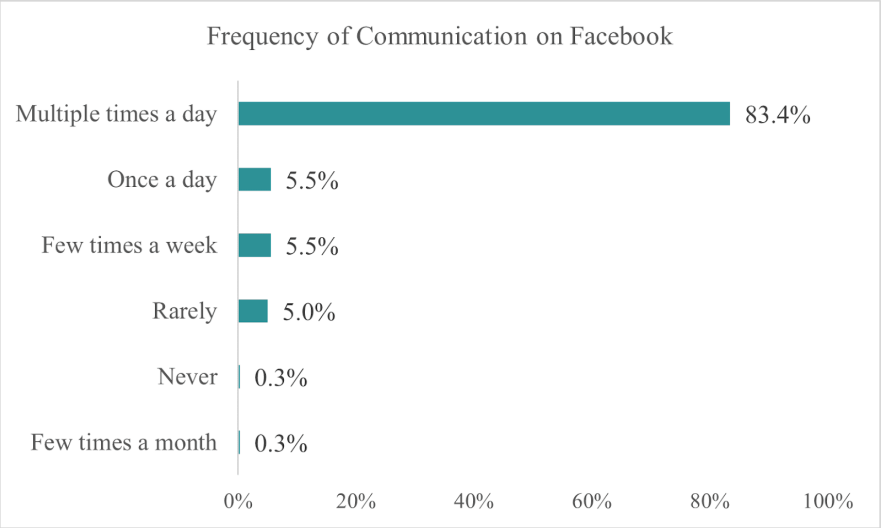
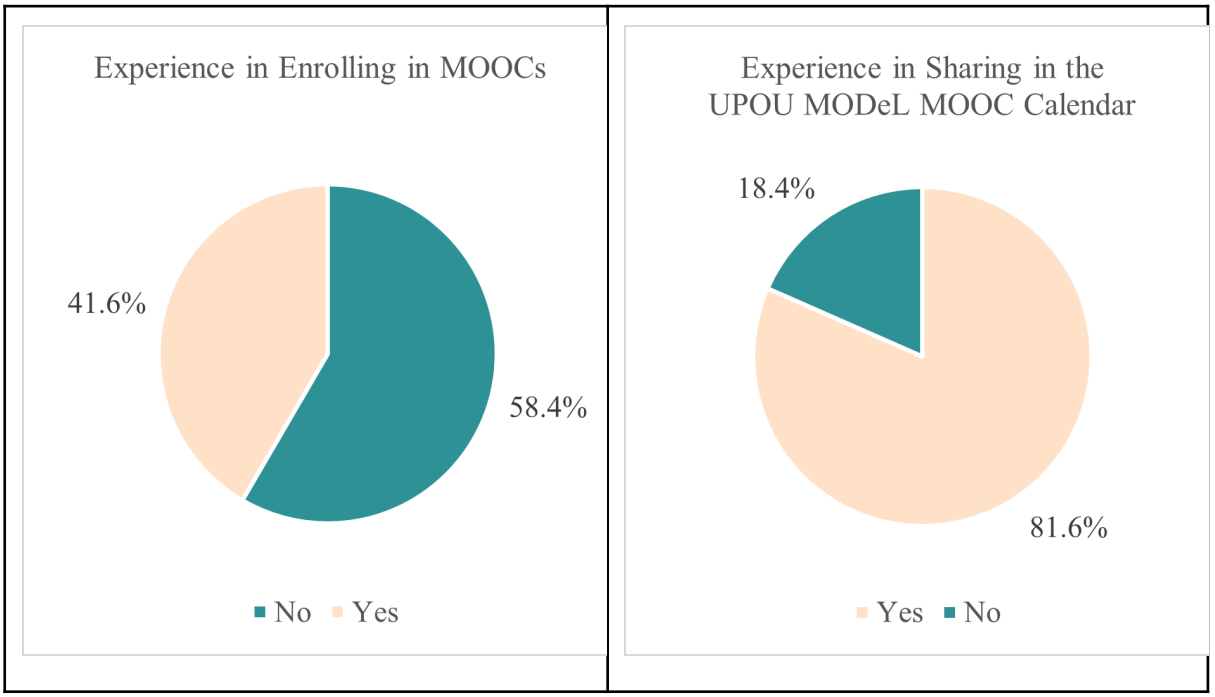


Figure 16 reveals that despite the high frequency of Facebook use, more than half of the respondents have not previously enrolled in MOOCs. However, an interesting finding is that approximately 82% of respondents have shared the UPOU MODeL MOOC Calendar. This indicates a willingness among users to engage with

and disseminate information about MOOCs, even if they have not enrolled in them themselves.

Figure 16
Distribution of respondents who experienced enrolling and sharing about MOOCs

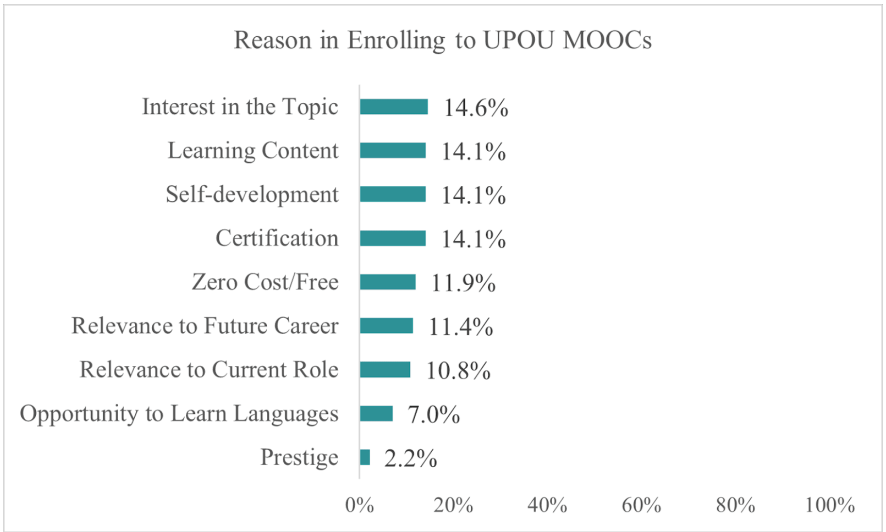


These findings emphasize the significance of leveraging social media platforms like Facebook to connect with and engage potential MOOC participants, given the high usage among the target demographic. Additionally, users' readiness to share information about MOOCs suggests a promising avenue for boosting awareness and engagement through peer recommendations and word-of-mouth promotion.

Among the respondents who enrolled in UPOU MOOCs (41.6%), the primary motivations included interest in the topic, learning content, self-development, and certification. Factors such as the opportunity to learn English and other languages,

as well as prestige, were deemed less important. These findings, as shown in Figure 17, suggest that learners place a strong emphasis on personal and professional development goals, highlighting the need for course offerings that align closely with their interests and provide tangible benefits, such as skill development and certification opportunities.

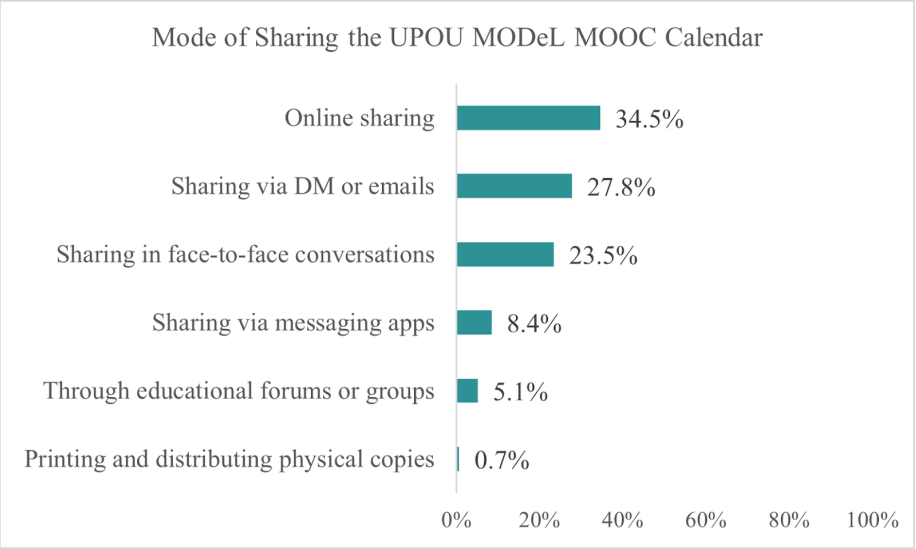
Figure 17
Factors that influenced respondents to enroll in UPOU MOOCs



Respondents mostly share the MOOC Calendar online through social media platforms like Facebook, Twitter, or LinkedIn, with most using Facebook for communication (Figure 18). Less than 1% use physical copies to share the calendar. This highlights the dominant role of social media platforms, particularly Facebook, as the primary channel for online dissemination of the MOOC Calendar. Conversely, the minimal use of physical copies proves the diminishing reliance on traditional offline methods for communication and dissemination. These findings suggest that MOOC providers should prioritize online channels, especially social media platforms, for

sharing course information and engaging with potential participants to reach a wider audience.

Figure 18
Respondents' mode of sharing the MOOC Calendar



In summary, the socio-demographic characteristics of the respondents provide valuable insights for developing targeted marketing strategies, course development, and partnerships to enhance the accessibility and effectiveness of MOOCs. The high usage of social media platforms like Facebook among the target demographic emphasizes their importance in reaching and engaging potential participants. Additionally, respondents' willingness to share information suggests opportunities for peer-to-peer recommendations and word-of-mouth dissemination. Research by Hargittai and Walejko (2008) and Yang et al. (2010) also highlights the influence of gender and age on online sharing activities. Given the observed diversity in age and gender demographics, it is imperative to consider these factors in educational initiatives like MOOCs to ensure inclusivity and effectiveness. Prioritizing online channels, particularly social media platforms, for sharing course information

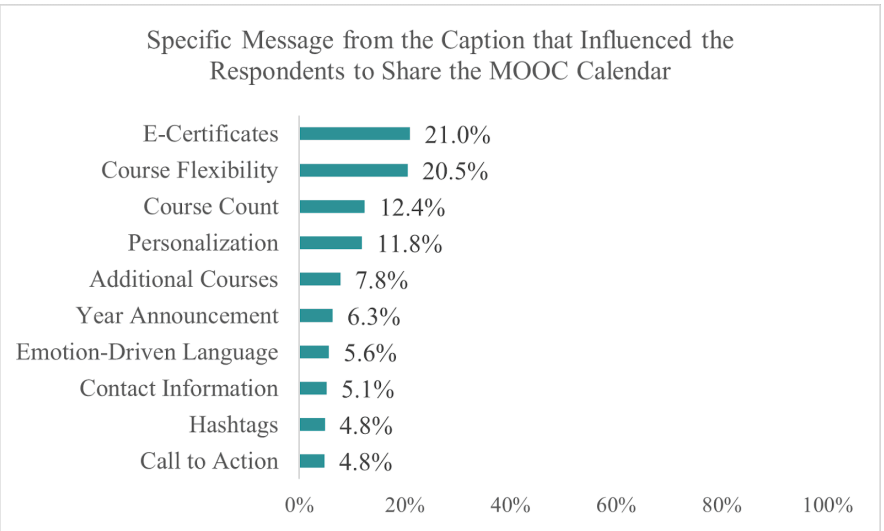
can maximize reach and engagement, ultimately increasing awareness and participation in MOOCs.

External Factors that Influenced Respondents to Share the MOOC Calendar

Message

The most prevalent messages from the captions prompting respondents to share the UPOU MODeL 2023 MOOC Calendar highlight the appeal of e-certificates for resume enhancement and the flexibility of self-paced courses (Figure 19). In contrast, messages related to hashtags and calls to action are less frequently observed. This finding contradicts Wold's (2023) content analysis of viral Facebook posts in Norway, which emphasizes the significance of a "Call to Action." The study reveals that respondents prefer content emphasizing tangible benefits, such as certification and flexible learning options, over social media engagement tactics.

Figure 19
The most prevalent message that influenced respondents to share the MOOC Calendar



Regarding other external factors, respondents on average indicate a tendency to share the MOOC calendar based on brand image, medium, quality, and relevance.

Brand Image

These findings align with Jenkins (2011), who suggests that brand image significantly influences virality. Additionally, users are more likely to share online content when it originates from an individual perceived as a source of original content (Han et al., 2020). This inclination may be attributed to UPOU's reputation as a forefront institution in the knowledge society, particularly in open learning, distance education, and MOOCs.

Medium

Respondents strongly agreed that their frequent use of Facebook and the ease of sharing within their digital network were key reasons for sharing the UPOU MODeL 2023 MOOC Calendar. Hansen et al. (2011) support these findings by highlighting the distinct impact of social media platforms, particularly Facebook, on content spread. Moreover, Bampo et al. (2008) emphasize the critical role of social structures within digital networks in propagating viral messages. This reinforces the argument that the medium, especially Facebook in this context, significantly influences the dynamics of online content sharing.

Message Quality

The results also indicate that message quality was a significant factor in prompting respondents to share the MOOC calendar. The literature reviewed strongly supports this notion. The message conveyed by the MOOC Calendar was perceived as high-quality and reputable, originating from a recognized academic institution without resorting to click-bait tactics for virality. Chatterjee and Panmand (2022) emphasize the importance of language formality, readability, sentiment scores, and proper noun usage, each playing distinct and vital roles in enhancing virality. Additionally, Dobele et al. (2005) highlight the significance of engaging, imaginative, fun, and intriguing messages, as well as unique and highly visible products. These qualities were evident in the MOOC calendar, which extensively advertised the course offerings for the whole year of 2023 in an engaging and enjoyable manner.

Relevance

Lastly, relevance—the perceived usefulness of the MOOC Calendar—also influenced the sharing behavior of the respondents. Individuals were more likely to share the calendar if they believed it provided valuable information or benefits pertinent to their interests or needs.

In essence, the perceived reputation of the MOOC provider, the effectiveness of the communication medium used to share the calendar, the message quality of

the calendar content, and its relevance to the recipients are critical determinants influencing the decision to share. These findings are summarized in Table 6.

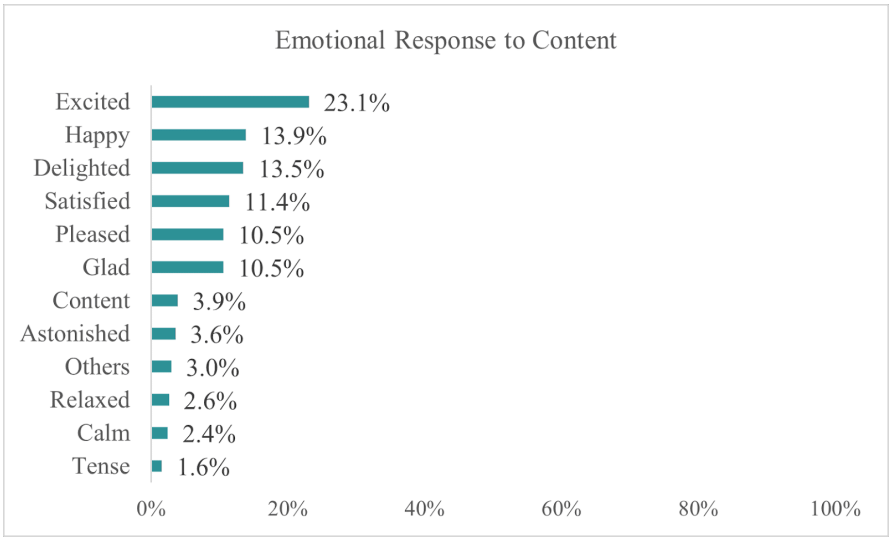
Table 6
The Median Level of Agreement for Sharing the UPOU MODeL 2023 MOOC Calendar based on Different External Factors

Factors	Median	Rating
Brand Image	5	Strongly Agree
Medium	5	Strongly Agree
Message Quality	5	Strongly Agree
Online Popularity	4	Agree
Offline Popularity	4	Agree
Relevance	5	Strongly Agree

In summary, external factors stimulate the consumption and social sharing of online content. Respondents show a clear preference for content highlighting tangible benefits like certification and flexible learning options. Therefore, it is crucial for providers to prioritize messaging that emphasizes these benefits to effectively engage potential learners. Moreover, they demonstrated an inclination to share the MOOC calendar based on brand image, medium, quality, and relevance. By focusing on improving these aspects, providers can increase the likelihood of their online content being shared, thereby expanding their reach and impact within the target audience.

Intrapersonal Factors that Influenced Respondents to Share the MOOC Calendar

Figure 20
Distribution of emotional response of respondents to content



Intrapersonal factors involve an individual's internal responses and perceptions when encountering viral content, including emotional reactions, which significantly influence their interaction with and response to the material.

As depicted in Figure 20, respondents commonly experience positive emotions, such as excitement, happiness, and delight, when encountering the MOOC calendar. Negative emotions are rare among participants, signaling an overall positive reception of the calendar. This suggests that emotional stimulation indeed drives sharing behaviors. This finding is supported by several studies indicating that content eliciting emotional responses tends to be shared more widely than content providing mere information (Aaker & Smith, 2010; Akpınar & Berger, 2017; Berger, 2014).

Furthermore, respondents consistently report a very positive feeling when encountering the MOOC calendar, reflecting the heightened intensity of positive emotions they experienced as mentioned above. The content of MOOC calendar social media posts effectively elicits strong emotional responses, with respondents experiencing high levels of excitement, happiness, and delight. The median ratings of the UPOU MODeL 2023 MOOC Calendar concerning intrapersonal factors are provided in Table 7.

Table 7
The Median Ratings of the UPOU MODeL 2023 MOOC Calendar in terms of Intrapersonal Factors

Factors	Median	Rating
Valence	5	Very Positive
Intensity	4	High

Given that valence and intensity are key components of emotional response, the combination of very positive feelings and high intensity of positive emotions significantly influenced how individuals responded to and interacted with the material, contributing to its virality.

These findings affirm that users are more inclined to share content that elicits intensely positive emotions within their social networks. Numerous studies (Berger & Milkman, 2011; Camarero & San Jose, 2011; Gruzd et al., 2011; Rodic & Koivisto, 2012; Elliot, 2013; Jenkins, 2011; Tellis et al., 2019) collectively emphasize that positive content tends to spread faster and more widely than negative content. Furthermore, high-arousal emotions, particularly joy, increase the likelihood of

content spreading across online platforms (Berger & Schwartz, 2011; Nelson-Field et al., 2011; Guadagno et al., 2013a). This heightened emotional engagement can significantly enhance the visibility and reach of the MOOC calendar, thereby increasing its impact and effectiveness in promoting educational initiatives.

In summary, content evoking highly positive and intense emotions is more likely to be shared widely, as these emotional responses significantly influence how individuals interact with the material.

Interpersonal Factors that Influenced Respondents to Share the MOOC Calendar

On average, respondents share the MOOC calendar primarily due to interpersonal factors, with gift-giving and altruism being the most influential, as shown in Table 8.

Table 8
The Median Level of Agreement for Sharing the UPOU MODeL 2023 MOOC Calendar based on Different Interpersonal Factors

Factors	Median	Rating
Gift-Giving	5	Strongly Agree
Altruism	5	Strongly Agree
Reputation	4	Agree

This indicates that respondents are predominantly altruistic, motivated by the desire to benefit others rather than seeking personal gain. They share the MOOC calendar content on social media with the genuine intent of providing educational

value or support to their friends, family, or online community. This aligns with Ho and Dempsey's (2010) findings, which suggest that an altruistic inclination reflects a desire to contribute to groups, express individuality, and promote personal development through content sharing.

Furthermore, respondents are driven by a desire to give gifts and spread goodwill, intending to benefit the educational community or specific individuals. This discovery supports Prendergast and Stole's (2001) research, emphasizing the economic significance of gifts, which often extend beyond monetary value to represent the giver's identity, particularly in online social media contexts. These findings also resonate with the works of Berking (1999), Lagger et al. (2011), Roy (2011), and Chakrabarti and Berthon (2012), which explore motivations for sharing videos, including showcasing achievements, providing information, expressing emotions such as joy or resentment, and fostering social connections akin to the spirit of gift-giving.

These findings imply and prove that content shared for altruistic and gift-giving reasons is more likely to resonate with others and be passed along within social networks. Therefore, by leveraging these motives in content creation and promotion strategies, organizations can enhance the virality of their online content. This can help them reach a wider audience and achieve a greater impact in promoting developmental and educational initiatives.

Pearson's Product-Moment Correlation of the Factors affecting Viral Success of UPOU MOOC Calendar

To explore the connections and interrelations among the factors that collectively influence the virality of online content, initial correlation analyses were conducted. These analyses were also done to identify the significant variables to be included as regressors in the model and to gauge the strength of the relationships between each factor in the study. Specifically, Pearson's Product-Moment Correlation was utilized to ascertain the correlation between quantitative variables.

As presented in Table 9, the correlation matrix analysis reveals several key findings regarding the factors influencing the viral success of the UPOU MOOC Calendar. Notably, monthly income exhibits a moderate positive correlation with age ($r = 0.399$, $p < 0.001$), indicating that older individuals tend to have higher incomes, while a weak positive correlation with sex ($r = 0.146$, $p = 0.004$) suggests that higher income earners may skew towards male. Additionally, content-specific factors display weak positive correlations with both age ($r = 0.116$, $p = 0.023$) and monthly income ($r = 0.126$, $p = 0.014$), suggesting that older individuals and those with higher incomes may be more influenced by the specific content of the MOOC calendar. However, popularity shows no significant correlation with demographic factors but exhibits a strong positive correlation with intra-personal ($r = 0.635$, $p < 0.001$) and interpersonal factors ($r = 0.597$, $p < 0.001$), indicating that individuals influenced by these factors perceive the MOOC calendar as more popular. These findings underscore the complexity of factors contributing to content virality and emphasize the importance of understanding these nuanced relationships. Moreover, they offer

valuable insights that can inform targeted strategies for enhancing the reach and impact of the UPOU MOOC Calendar, ultimately optimizing its effectiveness in educational outreach and development initiatives.

For instance, based on the correlation analysis findings, UPOU can implement targeted advertising campaigns aimed at older individuals with higher incomes, diversify content offerings to appeal to a broader demographic, engage with opinion leaders to amplify the perceived popularity of the MOOC calendar, develop interactive content formats to foster user engagement and sharing, and establish feedback mechanisms to continuously refine and optimize promotional strategies. These strategies leverage insights from the correlation analysis to enhance the effectiveness of promotional efforts and maximize the virality and impact of the MOOC calendar.

Table 9
*Correlation Matrix for Factors affecting Viral Success of UPOU MOOC Calendar (*p-value < 0.05)*

	Age	Monthly Income	Sex	Content-Specific	Popularity	Intra-Personal	Inter-Personal
Age	—						
p-value	—						
Monthly Income	0.399*	—					
p-value	< .001	—					
Sex	0.140*	0.146*	—				
p-value	0.006	0.004	—				
Content-	0.116*	0.126*	-0.024	—			

	Age	Monthly Income	Sex	Content-Specific	Popularity	Intra-Personal	Inter-Personal
Specific							
p-value	0.023	0.014	0.638	—			
Popularity	-0.02	0.101*	0.005	0.635*	—		
p-value	0.697	0.049	0.923	< .001	—		
Intrapersonal	0.018	0.099	0.003	0.560*	0.531*	—	
p-value	0.727	0.055	0.958	< .001	< .001	—	
Interpersonal	0.089	0.087	0.042	0.596*	0.597*	0.636*	—
p-value	0.084	0.092	0.412	< .001	< .001	< .001	—

Spearman's Rho Correlation of the Factors affecting Sharing of MOOC Calendar

To gain further insights into the interactions and relationships among the drivers contributing to the virality of online content, Spearman's Rank-Order Correlation was used. This statistical method tested the relationship between qualitative variables, measured on an ordinal scale, and quantitative variables, measured on a continuous scale.

The Spearman's Rho correlation matrix reveals several significant findings regarding the factors affecting the sharing of the UPOU MODeL MOOC Calendar. Positive correlations were observed between sharing behavior and factors such as brand image, medium, message quality, online popularity, offline popularity, relevance, integrity, gift-giving, and altruism. These findings highlight key determinants of content virality. Notably, gift-giving displays the strongest positive

correlation with sharing behavior, indicating that individuals who perceive sharing as a form of gift-giving are more inclined to share the MOOC calendar. Conversely, valence and reputation show weaker correlations with sharing behavior, suggesting that the emotional tone of the content and perceptions of reputation have less influence on sharing decisions.

These findings presented in Table 10 underscore the importance of various qualitative and quantitative factors in driving sharing behavior. Understanding these relationships can inform strategic decisions to enhance the reach and impact of the MOOC calendar and similar online content. For instance, leveraging positive brand image and message quality, cultivating online and offline popularity, ensuring content relevance and integrity, and fostering perceptions of gift-giving and altruism can all contribute to increased sharing and virality. Additionally, the weaker correlations of valence and reputation with sharing behavior suggest that while emotional tone and perceptions of reputation may have some influence, other factors play a more significant role. Overall, these findings underscore the multifaceted nature of content virality and emphasize the importance of considering various factors in driving sharing behavior and maximizing the virality of online content.

Table 10
Spearman's Rho Correlation Matrix of Factors affecting Sharing of MOOC Calendar

Variable	Shared MOOC (Yes/No)	P-value
Brand Image	0.151*	*0.003*
Medium	0.152*	*0.003*
Message Quality	0.153*	*0.003*

Online Popularity	0.163*	*0.001*
Offline Popularity	0.183*	*<.001*
Relevance	0.154*	*0.003*
Valence	0.093	*0.07*
Intensity	0.151*	*0.003*
Gift-Giving	0.231*	*<.001*
Altruism	0.175*	*<.001*
Reputation	0.075	*0.143*

Binary Logistic Regression Model

A binary logistic regression model was employed to forecast the binary outcome of whether individuals shared the UPOU MODeL MOOC Calendar or not. Multicollinearity was assessed by examining the tolerance and Variance Inflation Factor (VIF) of the explanatory variables. The purpose of checking for multicollinearity is to assess the degree to which independent variables in a regression model are linearly related. Multicollinearity occurs when two or more independent variables in a regression model are highly correlated, which can cause problems in interpreting the regression coefficients. Addressing multicollinearity helps improve the interpretability, precision, stability, and validity of regression models, allowing for more reliable inferences about the relationships between independent and dependent variables. As shown in Table 11, none of the variables exhibit multicollinearity.

Table 11
Collinearity Statistics of the Independent Variables

Independent Variables	VIF	Tolerance
Age	1.06	0.947
Sex	1.06	0.944
Enrolled in MOOC	1.03	0.971
Content Specific	1.96	0.510
Popularity	2.26	0.443
Gift-giving	3.39	0.295
Altruism	2.81	0.355
Reputation	1.67	0.597
Valence	1.92	0.52
Intensity	1.92	0.52

While it was previously mentioned that the variables are correlated, correlation does not necessarily indicate multicollinearity. Correlation refers to the degree to which two variables are linearly related to each other, measuring the strength and direction of their relationship. However, this does not imply multicollinearity. Multicollinearity occurs when two or more independent variables in a regression model are highly correlated with each other. It indicates redundancy or overlap in the information provided by the independent variables, which can lead to problems in the estimation and interpretation of regression coefficients.

Thus, while variables may be correlated, multicollinearity arises when the correlation between variables is so high that it interferes with the estimation of the regression coefficients. However, if the correlations between variables are moderate and not excessively high, multicollinearity may not be present, allowing the

regression model to produce reliable estimates. Therefore, it is essential to assess multicollinearity separately from correlation when building regression models.

In the context of the factors affecting the sharing of the MOOC calendar, the correlation matrix revealed that certain variables are positively correlated, indicating that they tend to vary together in a predictable manner. For instance, "Online Popularity" and "Offline Popularity" may exhibit a positive correlation, suggesting that when the MOOC calendar is popular online, it is also likely to be popular offline. While such correlations exist, multicollinearity would only be an issue if the correlations between multiple pairs of variables are extremely high (close to 1 or -1). High multicollinearity could potentially lead to problems in the regression model, such as inflated standard errors or unstable coefficient estimates.

Fitted Model

Based on Table 12, the odds of an individual sharing the MOOC calendar decrease by 0.003% for each additional year of age, assuming all other variables are held constant. Meanwhile, under the same conditions, the odds of sharing increase by 44.5% if the individual is female compared to male, and by more than 100% if the individual is enrolled in a MOOC compared to not being enrolled. Furthermore, for each unit increase in their ratings for Content-Specific and Popularity questions, the odds of sharing the MOOC calendar increase by 7.2% and 32.1%, respectively. On the other hand, regarding their ratings on personality-related questions, the model indicates that for every unit increase in ratings related to Gift-giving and Valence, the odds of sharing the MOOC calendar increase by more than 100% and 10.6%,

respectively, assuming all other variables remain constant. Lastly, for every unit increase in ratings for Altruism, Reputation, and Intensity, the odds of an individual sharing the MOOC calendar decrease by 9%, 16.7%, and 12.1%, respectively.

Table 12
Final Fitted Model with the Estimates, SE, p-value, and Odds Ratio of each Variable

Predictor	Estimate	SE	p-value	Odds Ratio
Age	-0.00262	0.0151	0.863	0.997
Sex:				
Female – Male	0.36831	0.2903	0.205	1.445
MOOC_Enrolled:				
Yes – No	0.73143	0.3049	0.016	2.078
Content-Specific	0.07118	0.2285	0.755	1.072
Popularity	0.27826	0.1898	0.143	1.321
Gift-Giving	0.77005	0.3119	0.114	2.16
Altruism	-0.09416	0.2884	0.744	0.91
Reputation	-0.18065	0.1324	0.173	0.835
Valence	0.10091	0.2605	0.698	1.106
Intensity	-0.12893	0.2425	0.595	0.879

The implications of these findings are significant. For instance, as individuals age the likelihood of sharing the MOOC calendar decreases slightly, while being female significantly increases the odds of sharing compared to being male. Enrolling in the MOOC also substantially boosts the likelihood of sharing compared to not

being enrolled. Moreover, higher ratings in Content-Specific and Popularity questions are associated with increased odds of sharing the MOOC calendar. Conversely, higher ratings in Gift-giving and Valence questions significantly elevate the odds of sharing, while higher ratings in Altruism, Reputation, and Intensity questions decrease these odds. These insights shed light on the nuanced effects of various factors on sharing behavior, providing valuable guidance for optimizing strategies to enhance the dissemination and virality of the MOOC calendar.

Assessment of the Fitted Binary Logistic Regression Model

The fitted binary logistic model was assessed for overall fit and significance. Based on the Likelihood Ratio Test, the model fits significantly better than an empty model (p-value = 0.002). This indicates that the identified predictors are crucial for predicting participants who will share MOOC content. However, the McFadden R^2 coefficient of 0.1510 shows a very weak relationship between the predictors and the predicted values. This suggests that while the model is statistically significant, its predictive power may be limited. Further exploration and refinement of the model may be necessary to enhance its predictive accuracy and utility. A summary of these assessment results is shown in Table 13.

Table 13
Assessment of the Fitted Binary Logistic Regression Model

	Coefficient	P-value
Likelihood Ratio Test	34.4	<0.001
McFadden R^2	0.1510	-

Confusion Matrix for the Classification of Sharing MOOC Content

The fitted model was also evaluated for classification accuracy using a separate testing dataset unseen by the trained model. Table 14 shows a summary of the classification results predicted by the logistic model.

Table 14
Confusion Matrix for the Classification of Sharing MOOC Content

		Predicted Values		
		Shared - No	Shared - Yes	%Correct
Actual Values	Shared - No	6	15	28.56
	Shared - Yes	3	90	96.77

The matrix above shows that out of 114 testing observations, 96 were correctly classified, while 18 were misclassified, resulting in an accuracy rate of approximately 84.2%. Additionally, the model exhibits a sensitivity of about 96.8% and a specificity of around 28.6%. This shows that the model is more sensitive than specific, which is preferable in this context. Since the objective of the model is to predict which members of the target population will share MOOC content, a high type II error, or a high number of false negatives, is not advisable. Although it is a good sign that the accuracy and sensitivity of the model are high, testing on larger sample sizes should be implemented to further validate these results.

Validating Model Performance using New Data through Cross-validation of the Fitted Model

The cross-validation results, summarized in Table 15, show that the model can perform well in predicting new data, with a test accuracy of approximately 88%. This is slightly higher than the accuracy rate observed in the classification results from the testing dataset. Additionally, Cohen's Kappa value of about 85% shows a strong agreement between the predicted values and the actual values from the data.

Table 15
Results of the Ten-fold Cross-validation Procedure

Qualitative Measure	Values
Accuracy	0.8832
Cohen's Kappa	0.8466

This suggests that the model effectively captures the underlying relationships between the predictor variables and the virality of online content. Overall, these results underscore the reliability and predictive power of the developed model in forecasting content virality, thus contributing to the advancement of understanding in this domain.

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study sought to explore the determinants of viral content, specifically focusing on the factors contributing to the widespread dissemination of posts on social media platforms. Understanding these factors is crucial for institutions seeking to communicate social causes to a broader audience, including educational institutions like UPOU. Hence, the study examined the viral spread of information, using the UPOU MODeL 2023 MOOC Calendar as a case example. Specifically, the study aimed to: 1) identify the drivers of online content virality on social media; 2) explore and understand the interactions and relationships among these drivers that collectively contribute to online content virality; and 3) develop a predictive model of the factors that drive the online content virality.

This study was guided by various literature reviews and the model of the factors that drive the sharing of content proposed by Botha et al. (2014). The model posits three key factors that drive the consumption and sharing of online content: 1) external factors, like content quality and popularity; 2) intrapersonal factors, including emotional responses to content, moderated by relevance, which also influence virality; and 3) interpersonal or social factors, including altruism and reputation-building. Moreover, offline sharing plays a significant role, perpetuating content popularity through word-of-mouth. This cyclical interaction between content, emotions, and social sharing facilitates the widespread dissemination of online content.

The study adopted a quantitative methodology, conducting a cross-sectional survey with 380 randomly selected respondents who had registered for UPOU MOOCs during a user surge from January 19 to March 2, 2023. Data collection was carried out using an online survey questionnaire administered from March 20 to April 19, 2024.

The variables of the study are external, intrapersonal, and interpersonal factors driving the sharing of the 2023 UPOU MODeL MOOC Calendar. The data gathered were analyzed using descriptive statistics, such as frequency counts, means, and percentages. Statistical analyses, including descriptive statistics and correlation analyses (using Pearson's Product-Moment and Spearman's Rank-Order Correlation coefficients), were conducted to explore the relationships between variables. Binary logistic regression was then used to predict sharing behavior and evaluate the model's assumptions. The findings shed light on the motivations for enrollment, predominantly via Facebook, and provided insights into the factors influencing content spread. Furthermore, the study developed a predictive model for these factors, offering valuable insights for creating effective communication strategies in educational outreach and development initiatives. Highlights of the study are the following:

Demographically, the surveyed users were predominantly single females residing in Luzon. Approximately 58% of respondents held at least a Bachelor's Degree, indicating a strong interest in online learning. Many participants were from the Education or Government sectors, suggesting potential opportunities for

collaboration. The mean age of respondents was 33, with ages ranging from 17 to 69, emphasizing significant age diversity. The median monthly income was 24,000 PhP, highlighting socioeconomic diversity among the participants.

Facebook emerged as a highly utilized platform, with 83.4% of respondents accessing it multiple times daily. Although over half of the respondents had not enrolled in MOOCs, 82% had shared the UPOU MODeL MOOC Calendar, showcasing readiness to engage with and disseminate information. These findings underscore the potential of leveraging social media, particularly Facebook, to connect with potential MOOC participants and boost awareness through peer recommendations.

Motivations for enrollment included interest in topics, learning content, self-development, and certification, emphasizing the emphasis on personal and professional development goals among learners. Most respondents shared the MOOC calendar online via social media platforms, primarily Facebook, indicating the importance of prioritizing online channels for sharing course information and engaging potential participants.

The study highlights significant external factors influencing the sharing of the MOOC calendar, particularly message, brand image, medium, quality, and relevance. Specifically, messages emphasizing e-certificates and flexible learning were found to prompt sharing. Additionally, respondents prioritized sharing based on brand image, medium, quality, and relevance. These findings underscore the critical role of effective messaging, medium usage, brand reputation, content quality, and

relevance in driving online content sharing. It emphasizes the importance for providers to focus on these aspects to enhance engagement and reach among potential learners and stakeholders.

The study also revealed the intrapersonal factors shaping individual responses to the MOOC calendar. Respondents predominantly felt positive emotions like excitement, happiness, and delight, indicating an overall positive reception. These emotions drive sharing behaviors, supported by research showing that emotionally resonant content tends to spread widely. Moreover, respondents consistently reported very positive and intense emotions, affirming a tendency to share content that evokes strong emotional responses. High-arousal emotions boost the spread of content across online platforms, thereby enhancing the visibility of the MOOC calendar and effectively promoting educational initiatives.

Respondents predominantly share the MOOC calendar due to interpersonal factors, particularly gift-giving and altruism. This reflects an altruistic inclination, with individuals motivated by a desire to benefit others rather than seeking personal gain. Moreover, respondents are motivated by the desire to give gifts and spread goodwill, echoing the economic significance of gifts in online social contexts. These motivations resonate with prior studies exploring motivations for sharing content, suggesting that altruistic and gift-giving reasons significantly enhance content resonance within social networks. By incorporating these motives into content creation and promotion strategies, organizations can boost content virality, reach a wider audience, and more effectively promote developmental and educational initiatives.

The study also explored the interactions and relationships among the drivers that collectively contribute to the virality of online content. Initial correlation analyses, utilizing Pearson's Product-Moment Correlation, were conducted to understand these relationships. Notably, monthly income shows a moderate positive correlation with age, suggesting that older individuals tend to have higher incomes. Content-specific factors exhibit weak positive correlations with both age and monthly income, indicating that older individuals and those with higher incomes may be somewhat more influenced by the specific content of the calendar. Interestingly, popularity demonstrates a strong positive correlation with intrapersonal and interpersonal factors but not with demographic factors. For example, if an individual perceives the MOOC calendar as highly relevant to their personal interests (an intrapersonal factor) and notices that many of their friends and acquaintances are sharing it on social media (an interpersonal factor), they are likely to view the calendar as more popular and feel more inclined to share it themselves. This suggests that personal relevance and social influence play significant roles in shaping individuals' likelihood to share content.

The Spearman's Rho correlation matrix delves further into the factors influencing the sharing of the UPOU MODeL MOOC Calendar, shedding light on crucial determinants of content virality. Key findings include positive correlations between factors like brand image, message quality, online and offline popularity, relevance, integrity, gift-giving, and altruism with the likelihood of sharing the calendar. Among these, gift-giving emerges as the strongest driver of sharing behavior, indicating that individuals who perceive sharing as a form of gift-giving are

more inclined to share the calendar. Conversely, valence and reputation exhibit weaker correlations with sharing behavior, suggesting they have a lesser influence on sharing decisions. These insights underscore the significance of factors such as brand image, message quality, and altruism in fostering sharing behavior. They offer strategic implications for maximizing the virality and impact of online content like the MOOC calendar. Leveraging a positive brand image, cultivating popularity, ensuring content relevance, and fostering perceptions of gift-giving and altruism can significantly enhance sharing and virality.

Lastly, the study developed a predictive model for the factors that drive the virality of online content. The model revealed nuanced effects of various factors on sharing behavior. For instance, age was associated with a slight decrease in the likelihood of sharing, while being female significantly increased the odds. Enrolling in the MOOC substantially boosted the likelihood of sharing. Higher ratings in Content-Specific and Popularity questions were linked to increased sharing likelihood. Conversely, higher ratings in Gift-giving and Valence questions significantly elevated sharing odds, while ratings in Altruism, Reputation, and Intensity questions were associated with a decrease in sharing likelihood.

According to the Likelihood Ratio Test, the predictors identified in the model are significant in predicting which participants will share MOOC content. This implies that external, intrapersonal, and interpersonal factors influence sharing behavior. However, despite the significance of these factors, the McFadden R^2 coefficient of 0.1140 indicates a very weak relationship between the predictors and the predicted values. This implies that while examining individual factors in isolation may offer

limited insights into the determinants of sharing behavior concerning the MOOC calendar, their collective analysis presents a more comprehensive understanding. Therefore, although each factor may contribute only partially to the understanding of sharing behavior, their combined analysis offers a clearer and more nuanced depiction of the mechanisms driving the viral dissemination of content online.

The cross-validation results confirm the model's effectiveness in predicting outcomes with new data. A test accuracy rate of around 88%, slightly higher than the classification accuracy on the testing dataset, demonstrates its reliability. Moreover, with Cohen's Kappa value at approximately 85%, there is strong agreement between the predicted and actual values, further affirming the model's accuracy. Overall, these results highlight the model's predictive power and contribute to advancements in understanding and forecasting online content virality.

Conclusion

The results of the study provide valuable insights into the multifaceted nature of content virality, highlighting the importance of considering various factors in driving sharing behavior and maximizing the impact of online content dissemination.

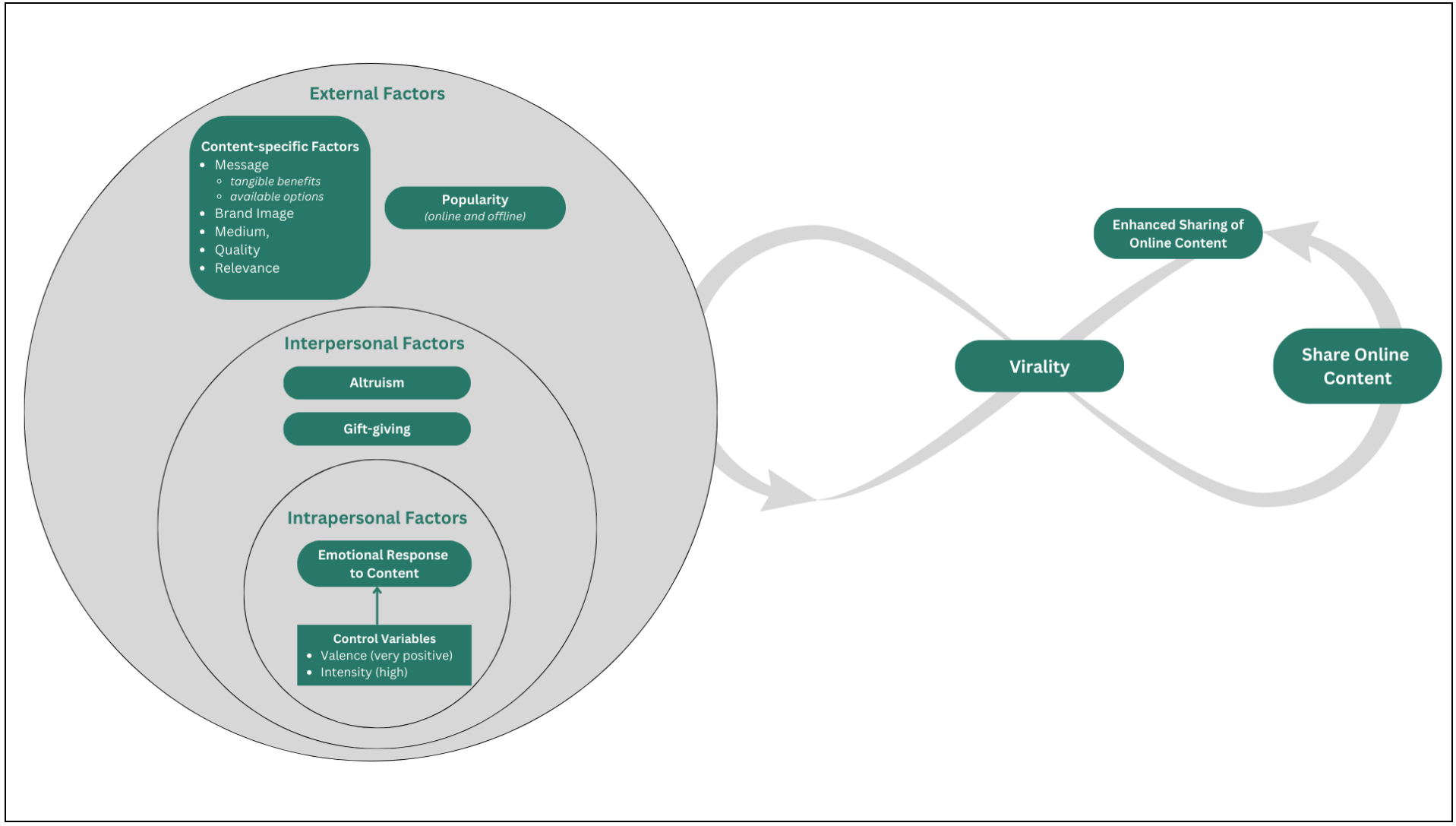
The study revealed significant findings about the demographic profile of users, emphasizing the potential for engagement across diverse backgrounds. Facebook emerged as a prominent platform for dissemination, indicating its importance in reaching potential participants. Motivations for enrollment varied, with learners prioritizing personal and professional development goals. The investigation into

sharing behavior identified several key drivers, including external factors like the message, brand image, medium, and quality; intrapersonal factors such as emotional responses; and interpersonal factors like gift-giving and altruism.

Correlation analyses further revealed the relationships between these factors, highlighting their interconnectedness and influence on content virality. The Spearman's Rho correlation matrix underscored the importance of determinants such as brand image, message quality, and altruism in driving sharing behavior. Moreover, a predictive model was developed, revealing nuanced effects of various factors on sharing behavior.

However, although the identified predictors were significant in predicting sharing behavior, the overall relationship between these factors and their predicted values was weak, as indicated by the McFadden R^2 coefficient. The final result of this study is a predictive model of the factors that drive the virality of online content, as presented in Figure 21.

Figure 21
Predictive model of the factors that drive the virality of online content



This predictive model presents a comprehensive framework for understanding the dynamics of online content sharing. It underscores the interconnectedness and interplay of external, intrapersonal, and interpersonal factors in driving content sharing. By emphasizing the unified system in which these factors operate, rather than analyzing each factor in isolation, the model demonstrates how each factor is essential and interrelated to initiating and predicting content virality.

The model highlights the significance of external factors, such as content-specific attributes and popularity, in encouraging consumption and sharing across social networks. It identifies content-specific attributes as crucial determinants of content sharing, including effective messaging that highlights tangible benefits and options tailored to target stakeholders, suitable medium selection, brand reputation, content quality, and relevance. Additionally, the model acknowledges the substantial impact of both online and offline popularity, driven by word-of-mouth and mainstream media, on content consumption and sharing.

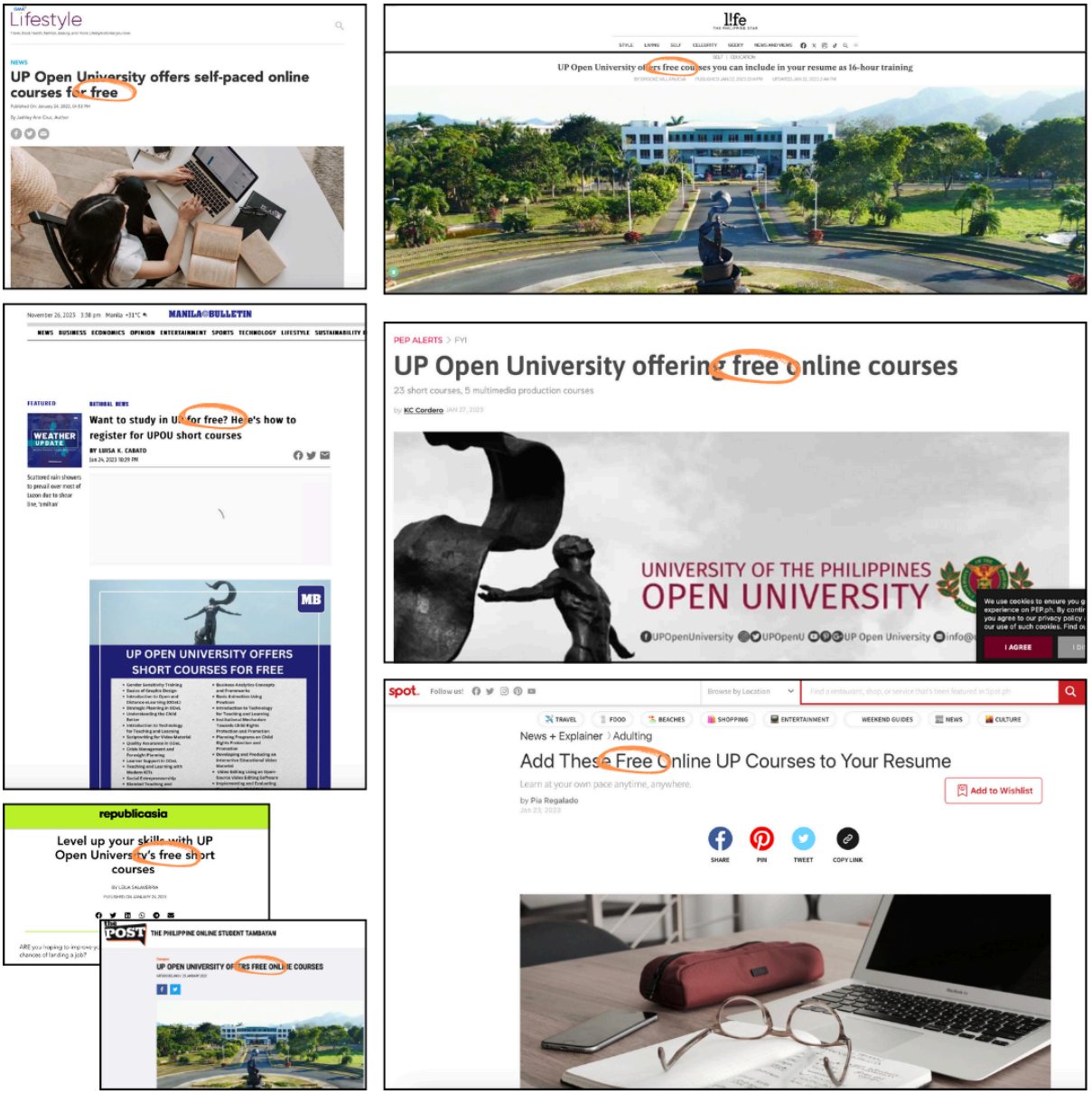
Furthermore, the model recognizes the role of intrapersonal factors, particularly emotional responses to content, in influencing its virality. Valence and intensity of emotions act as moderators in the content-emotion relationship, with highly positive and intense emotions enhancing content spread across online platforms.

Moreover, interpersonal or social elements also play a crucial role in online content sharing. Constructs related to social sharing, including altruism and gift-giving, emerged as key drivers of online content sharing.

In understanding the dynamics of online content sharing, certain factors play pivotal roles in influencing its dissemination and potential virality. Among these, gift-giving emerged as the most influential predictor, accounting for 53.39% of the variance in the data. This finding highlights how content portraying acts of generosity resonates deeply with audiences, compelling widespread sharing across digital platforms. For example, media organizations particularly highlighted the UPOU MOOCs as free of cost, as shown in Figure 22. Sharing this information online was perceived as a gesture similar to giving a gift within their social networks. This reflects an enhanced approach to sharing online content, where distributing the MOOC calendar not only involved sharing the calendar itself but also actively promoted its free access and self-paced nature.

Figure 22

Compilation of screenshots of news articles about the UPOU MOOCs being free as highlighted by various media organizations and agencies



Popularity, accounting for 19.27% of the prediction, underscores the impact of content endorsed or shared by influential individuals or entities, thereby amplifying its reach. As illustrated in Figure 22, the shared posts and articles consistently highlight UPOU as an institution offering free courses. This phenomenon can be attributed to UPOU's strong brand image and the widespread popularity of its calendar, which

prominently features the UPOU logo and name, significantly contributing to its viral spread.

Additionally, the emotional tone captured by Valence (6.98%) and the intensity of the content (8.93%) significantly enhance the appeal and engagement of shared material, influencing its potential for virality. Content-specific attributes (4.93%) and acts of Altruism (6.53%) also play crucial roles in shaping sharing behaviors. Content tailored to specific interests or motivated by altruism tends to resonate more deeply with audiences, prompting them to share it within their networks. When people reshare online content, they often highlight factors such as gift-giving, popularity, valence, intensity, content-specific attributes, and altruism. These elements are particularly influential in compelling others to share the content further across digital platforms.

Overall, the model posits that the interplay of external, intrapersonal, and interpersonal factors prompts and propels the sharing of online content. The model's dependent variable, which is the sharing of online content, covers a wide range of sharing behaviors, recognizing that individuals engage in both online and offline sharing, thus highlighting the enduring impact of word-of-mouth. This sharing chain contributes to the content's popularity, ultimately driving a social sharing loop.

In conclusion, this research offers valuable perspectives on the complex dynamics of content virality, highlighting the significance of diverse factors in influencing sharing behavior and optimizing the reach of online content distribution.

Recommendations

For UPOU

To maximize the impact of content dissemination efforts, UPOU should continue leveraging Facebook as a primary platform for outreach, given its prominence among users. This strategy can be complemented by incorporating the predictive model to improve engagement and sharing behavior among diverse learners. Furthermore, UPOU should diversify its outreach strategies to address the varied motivations of learners and tailor educational offerings accordingly.

For Future Researchers

For future researchers, it is important to delve deeper into the impact of specific content characteristics, such as format and tone, on sharing behavior, and to conduct longitudinal studies to track evolving trends in content virality. Additionally, exploring variables like cultural factors and platform features can further enrich the understanding of online engagement dynamics. To improve the study, expanding the scope and increasing the sample size could be beneficial, as a larger sample size could provide a broader perspective and yield more accurate results. Considering the outcomes of this study and related research, future investigations should also utilize diverse demographic groups and compare the resulting models to determine whether various factors have differing effects across diverse population subsets. Furthermore, incorporating qualitative methods, such as interviews or focus groups,

can complement quantitative analyses by providing a richer contextual understanding of users' motivations and behaviors.

For Development Communication Practitioners

Devcom practitioners are considered catalysts for planned social change. In this era of rapid change and disruption, catalyzing information dissemination is crucial. The predictive model of factors that drive the virality of online content can be highly beneficial in reaching a wider audience more quickly and efficiently, thereby facilitating planned social causes and change. By using the predictive model, Devcom practitioners can optimize outreach efforts and enhance the effectiveness of content dissemination.

Overall, this research underscores the multifaceted nature of content virality and highlights the importance of considering diverse factors in driving sharing behavior and optimizing the impact of online content distribution. By implementing the recommendations outlined, UPOU, future researchers, and development communication practitioners can enhance their efforts to engage audiences, foster learning communities, and promote knowledge exchange in the digital age.

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Appendices

APPENDIX A

Survey Instrument

SURVEY QUESTIONS

PART A. SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Age: _____

2. Sex
- Male
- Female

3. Civil Status:
- Single
- Married
- Divorced
- Widowed
- Other

4. Highest Educational Attainment:
- High School Diploma or equivalent
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Doctorate or higher

5. Industry
- Education Sector
- Healthcare Sector
- Technology/IT Sector
- Finance/Banking Sector
- Arts/Entertainment Sector
- Business/Management Sector
- Government/Public Service Sector
- Agriculture Sector
- Construction/Architecture Sector
- Hospitality/Tourism Sector
- Non-profit/NGO Sector

6. Average Income: _____

7. Location
- Northern Luzon
- Southern Luzon

- Eastern Visayas
- Western Visayas
- Mindanao
- Overseas (Please specify country)

8. Frequency of Communication on Facebook:

- Multiple times a day
- Once a day
- Few times a week
- Few times a month
- Rarely
- Never

9. Experience in Enrolling in MOOCs:

- Yes
- No

PART B. EXTERNAL FACTORS

Content-specific Factors

Message

10. What specific message from the caption of the MOOC Calendar influenced you to share the UPOU MODeL 2023 MOOC Calendar?

- Course Count
  The mention of "23 short courses" available in the MOOC Calendar can be considered a content-specific factor, as it highlights the variety and abundance of educational opportunities.
- Additional Products
  The reference to "5 additional multimedia production courses" being offered adds a unique and valuable aspect to the MOOC Calendar, making it a content-specific factor.
- Year Announcement
  The mention of "2023" as the year of availability can be considered a content-specific factor, signifying the current and up-to-date nature of the offerings.
- Course Flexibility
  The emphasis on courses being "FREE, SELF-PACED, and OPEN to everyone" can be identified as a content-specific factor, as it highlights the accessibility and convenience of the courses.
- E-Certificates
  The promise of "e-certificates" upon course completion that can be added to a resume as "16-hour training" may serve as a content-specific factor, as it presents a tangible benefit for potential learners.
- Call to Action

The encouragement to "Register now" serves as a content-specific factor, as it prompts immediate engagement and action from the audience.

- Emotion-Driven Language
  Phrases like "Exciting, right?" and "Happy learning!" incorporate emotional appeal into the caption, which can be considered a content-specific factor that enhances engagement.
- Hashtags
  The use of relevant hashtags such as #UPOUMODeL, #UPOpenUniversity, #MOOCs, and #elearning helps in categorizing and spreading the post, making it a content-specific factor for visibility.
- Personalization
  The phrase "find the courses that best suit and serve your personal and educational goals" tailors the content to the individual, making it a content-specific factor by addressing the audience's unique needs and interests.
- Contact Information
  The inclusion of the email address "model@upou.edu.ph" for more information provides a means for direct communication, serving as a content-specific factor that facilitates user engagement.

Brand Image

11. I shared the UPOU MODeL 2023 MOOC Calendar content due to the perceived brand image of UPOU as a reputable educational institution.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

12. I was more inclined to share the UPOU MODeL 2023 MOOC Calendar because I perceived UPOU as the expert creators of MOOCs.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Medium

13. I shared the UPOU MODeL 2023 MOOC Calendar because the nature and structure of my digital network on Facebook made it easy to share it.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

14. I shared the UPOU MODeL 2023 MOOC Calendar because I frequently used Facebook.

- Strongly Disagree
- Disagree

- Neither Agree nor Disagree
- Agree
- Strongly Agree

Message Quality

15. I shared the UPOU MODeL 2023 MOOC Calendar because I found the message quality:
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Popularity

Online Popularity

16. I shared the UPOU MODeL 2023 MOOC Calendar post because I believed it had gone viral and was widely recognized within my online community.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

17. I shared the MOOC Calendar post because of online recommendations or discussions within my social network which includes family, friends, colleagues, and my online community.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

18. I shared the MOOC Calendar post because mainstream media reports contributed significantly to its popularity within my social network or online community.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Offline Popularity

19. My decision to share the UPOU MODeL 2023 MOOC Calendar post online was significantly influenced by word-of-mouth (WOM) recommendations or discussions within my social network (family, friends, colleagues, online community).
- Strongly Disagree
- Disagree

- Neither Agree nor Disagree
- Agree
- Strongly Agree

20. The mainstream media coverage of the MOOC Calendar post significantly impacted its recognition and popularity within my social circle or community, prompting me to share it.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Relevance

21. I shared the UPOU MODeL 2023 MOOC Calendar because I perceived it as useful and practical to my personal or professional life.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

22. I shared the UPOU MODeL 2023 MOOC Calendar because its content was relevant to my specific circumstances, influencing my decision to share it.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

PART C. INTRAPERSONAL FACTORS

Emotional Response to Content

23. What emotions did you feel when you encountered the UPOU MODeL 2023 MOOC Calendar?

Active-Positive
- Excited
- Astonished
- Delighted
- Pleased
- Glad
- Happy

Positive-Passive
- Satisfied
- Serene

- Calm
- Content
- At ease
- Relaxed

Negative-Active

- Tense
- Alarmed
- Frustrated
- Angry
- Annoyed
- Afraid
- Distressed

Negative-Passive

- Miserable
- Sad
- Depressed
- Gloomy
- Bored
- Tired

Valence

24. How would you rate the emotional tone of the MOOC Calendar social media post that you encountered?

- Very negative
- Negative
- Neutral
- Positive
- Very positive

Intensity

25. How strongly did the content of the MOOC Calendar social media post elicit an emotional response from you?

- Very low
- Low
- Neutral
- High
- Very high

PART D. INTERPERSONAL FACTORS

Gift Giving

26. I felt like presenting a valuable gift to my online community by sharing the MOOC Calendar.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

27. I shared the MOOC Calendar post because I thought my friends and family would appreciate or enjoy the content.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Altruism

28. I shared the MOOC Calendar post on social media with the intention of providing educational value or support to my friends, family, or online community.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

29. I shared the MOOC Calendar post primarily to benefit others rather than for personal gain.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Reputation/Status

30. I shared the MOOC Calendar post to look good or important among my friends or online group.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

31. I shared the MOOC Calendar post because it made others see me as someone who knows things and an influential source of information.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

PART E. SHARING CONTENT

32. Did you share the UPOU MODeL MOOC Calendar?

- Yes
- No

PART F: MOTIVATIONS FOR ENROLLING IN MOOCS

33. How did you share the UPOU MODeL MOOC Calendar?

- Online sharing through social media platforms like Facebook, Twitter, or LinkedIn.
- Sharing via direct messages or emails to specific individuals or groups.
- Sharing by discussing or mentioning it in face-to-face conversations with friends, colleagues, or family.
- Printing and distributing physical copies.
- Sharing via messaging apps (WhatsApp, Telegram, etc.).
- Reposting or sharing on educational forums or groups.
- Other (Please specify): _____