Coding Influencer and Engagement Analysis

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ABSTRACT: With the rapid growth of social media platforms, coding influencers play a crucial role in disseminating programming knowledge, promoting tools, and shaping the learning behavior of aspiring developers. This paper presents an analytical study of coding influencers by examining their follower growth, engagement patterns, and content effectiveness across social media platforms. Using metrics such as likes, comments, shares, views, and engagement rate, the study identifies key factors that influence audience interaction. The analysis helps understand how content type, posting frequency, and platform choice impact engagement. The results provide insights for educators, developers, and marketers to optimize content strategies and enhance digital learning outreach.This research aims to conceptualize, develop, and validate a specific instrument for measuring the engagement of followers towards influencers on social media, and more specifically, in this first research, on Instagram.

We surveyed (in-depth interviews, and questionnaires) 32 marketing experts and 1170 Instagram followers.Based on the applications of factor analysis and structural equation modelling, we determined 21 valid items. The scale assesses the cognitive, affective, and behavioral characteristics of follower's engagement across five dimensions. The results provide insight into the interactive, personal, and social aspects of this type of virtual engagement. It is the first scale to measure this engagement in a multidimensional framework, which advances future research. Additionally, it will help managers identify the strongest dimensions of their influencers' engagement and thus be able to adjust marketing communication strategies to foster multidimensional follower engagement and subsequent partnerships.

KEYWORDS: Coding Influencers, Social Media Analytics, Engagement Rate, Follower Growth, Data Analysis, Digital Learning.

I. INTRODUCTION

In recent decades, researchers and marketers have examined the nature and dynamics of the relationship between brands and consumers, which are construed as acting as partners. Research has found that the interactive capabilities of social media (SM) can provide a conceptual parallel to the conversational nature underlying the concept of engagement. For example, SM users' interactions with specific brands are concrete manifestations of engagement marked by varying degrees of affective and/or cognitive and/or behavioural investment. By providing access to online content and facilitating communication, SMs greatly bring consumers closer to organizations. As a result, online platforms have led companies to adapt their influence strategies to build strong relationships with users and thus increase their engagement rate. Social media has become a powerful medium for learning programming concepts and sharing technical knowledge.

Coding influencers on platforms such as YouTube, Instagram, X (Twitter), LinkedIn, and GitHub attract millions of followers by creating educational and problem-solving content. Understanding follower behavior and engagement trends is essential for evaluating the impact of these influencers. This paper focuses on analyzing coding influencers' social media presence to identify engagement patterns and growth trends using data-driven techniques.

II. LITERATURE REVIEW

The conceptual foundations of consumer engagement build on relationship marketing theory. For a company, a relationship orientation typically creates a competitive advantage, which in turn exerts a positive impact on its performance. However, in addition to myriad types of engagement described in the marketing literature (e.g., brand engagement in self-concept, customer brand engagement or consumer brand engagement), definitions of engagement also abound. Hollebeek (2011) construes engagement as the consumer's level of motivation relative to the brand and their contextdependent state of mind, characterized by specific levels of cognitive, emotional, and behavioural activities. Brodie et al. (2011) define engagement as a psychological state induced by consumer's interactivity and co-creative experiences with the object. Although some definitions have aspects in common, scientific support on the nature of the concept of engagement in marketing is scant. There is also a lack of consensus on the dimensionality of engagement. Views diverge over the combination and number of dimensions and sub-dimensions involved in the process.

III. PROBLEM STATEMENT

Although coding influencers have a significant impact on learners, there is a lack of structured analysis of their follower growth and engagement behavior. Existing metrics often fail to capture how technical content influences user interaction and learning motivation. This study aims to bridge this gap through systematic engagement analysis.

IV. RESEARCH METHODOLOGY

1. Research Design
This study adopts a **quantitative, descriptive, and analytical research design** to evaluate coding influencers based on follower growth and engagement metrics across social media platforms. The research is non-experimental in nature and relies on observational data collected from publicly available sources.

Coding influencers are individuals who have established themselves as authorities, thought leaders, or experts within the coding and programming community. They often have a significant following on social media platforms, coding forums, developer communities, or blogging platforms, where they share valuable content, insights, tutorials, and resources related to coding, programming languages, software development, and technology in general.

2. Data Sources
The data used in this research is obtained from **public profiles of coding influencers** across multiple social media platforms:
- **YouTube**
- **Instagram**
- **LinkedIn**
- **Twitter (X)**
- **GitHub**

Only publicly accessible metrics are considered to ensure ethical data usage and compliance with platform policies.

3. Sample Selection
A purposive sampling technique is used to select coding influencers based on the following criteria:
- Primary content related to programming, software development, or coding education
- Minimum follower threshold (e.g., 10,000 followers)
- Active posting history within the last six months
- Public availability of engagement data

A representative sample of influencers from different platforms is selected to ensure diversity in content style and audience size.

4. Data Collection Parameters

The following metrics are collected for each influencer:

Category	Metrics
Follower Metrics	Total followers, growth rate
Engagement Metrics	Likes, comments, shares, views
Content Metrics	Post type, posting frequency
Platform Metrics	Platform-specific interaction features

Data is collected manually and through platform-supported analytics tools where available.

5. Data Preprocessing

Before analysis, the collected data undergoes preprocessing:
- Removal of duplicate entries
- Handling missing or inconsistent values
- Normalization of engagement metrics across platforms
- Conversion of categorical data into numerical format where necessary

This ensures data consistency and accuracy for analysis.

6. Engagement Rate Calculation

Engagement rate is computed using the following standard formula:

$$Engagement\ Rate(\%) = \frac{Likes + Comments + Shares}{Total\ Followers} \times 100$$

For video-based platforms, views are also considered as an additional metric.

V. CONCLUSION

In influencer BW and TT Instagram, it clearly explains to us that both of them are actively using code mixing. They have their own reasons about why and when they use code mixing. So, there are some points that can be concluded from the data found : (1) The influencers use code mixing because they want Indonesian people to develop themselves by mastering English language. English has become one of international language that is always used for communication among people from different countries, and so many also use it for business. They want to give example to people, especially their followers that English can be fun and everyone can speak English.

This reason is in line with one of Chukwuere's research findings that social media can lead to change in social and personal lifestyle both academically and off-academic (Chukwuere and Chuckwuere (2017); (2) The influencers use code mixing because it has been a habit for them. The habit is because they grow up with family and friends who speaks English or they went to international school and college. Because of this habit, they find difficulty when they have to speak completely in Bahasa Indonesia so they decide to speak it out in English; (3) The influencers use code mixing because some sponsors and brands that endorse them want them to post in fully English or mix Indonesia English; and (4) The Influencers post in certain time because that is active time for them and their followers online in Instagram. If they post in certain time, the followers will more actively give feedback to their post. It can be concluded that the use of code-mixing by the influencers arouse the followers' motivation to study English language and through social media, it can be the way to practice English for the followers.

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