A SOCIAL MEDIA ANALYTICS FRAMEWORK TO INCREASE PROSPECTIVE STUDENTS' INTERESTS IN STEM AND TVET EDUCATION

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Purpose & Methodology

Goal #1

This paper aims to propose a framework to increase prospective students' interest in STEM and TVET using social media and big data analytics

The framework is proposed by following the theory synthesis methodology, by integration of multiple methods namely social media, role model/mentoring, MOOC and data analytics

Introduction

Social media as the solution

Recently, the promotion of Science, Technology, Engineering and Mathematics (STEM) education has become the highlight due to the shortage in the STEM workforce (He, Murphy, & Luo, 2016).

Furthermore, the enrolment rates in STEM degrees are still reported to be low in many European countries (Achilleos et al., 2019).

Researchers and students used social media for communication, meetings and increasing visibility (Birkholz, Seeber, & Holmberg, 2015).

Consequently, the social media has become part of the daily life of university students, teaching and learning activities and integrated with Learning Management System (LMS) (Kasuma, Saleh, Akhiar, & Ismail, 2018).

The rise of social media also has changed the marketing strategies of the institutions (Irfan, Rasli, Sami, & Liaquat, 2017).

Promotion

Researchers highly suggested that higher education institutions and ministry of education should aggressively use social media to promote education (Irfan et al., 2017).

Interests

increase the students' interests and awareness on STEM and Technical and Vocational Education and Training (TVET).

Facebook

22 million Malaysian users in 2018

Facebook has been used for an educational purpose that can accommodate communications, interaction with peers, collaborations and classroom exercises (Toker & Baturay, 2019)

Twitter

Twitter is one of the most popular microblogging platforms and social networking

Recently, Twitter was regarded as one of the most important channels for information about personal and public events

Instagram

more than 72% of the users are between 13 years old to 17 years old

Instagram has served the purpose of marketing and branding, communications, building connections and entertainment

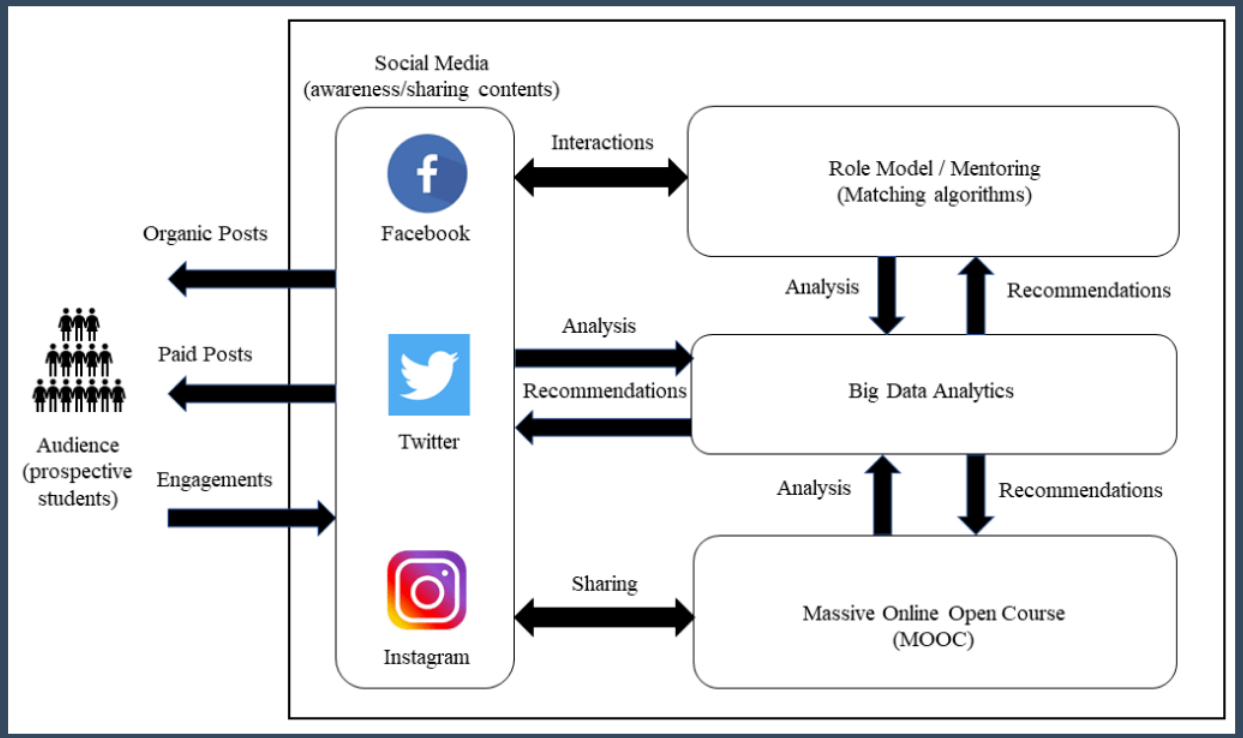
Social Media Analytics

The field of social media analytics aims to analyze social media data to gain useful information and knowledge (Stieglitz, Mirbabaie, Ross, & Neuberger, 2018).

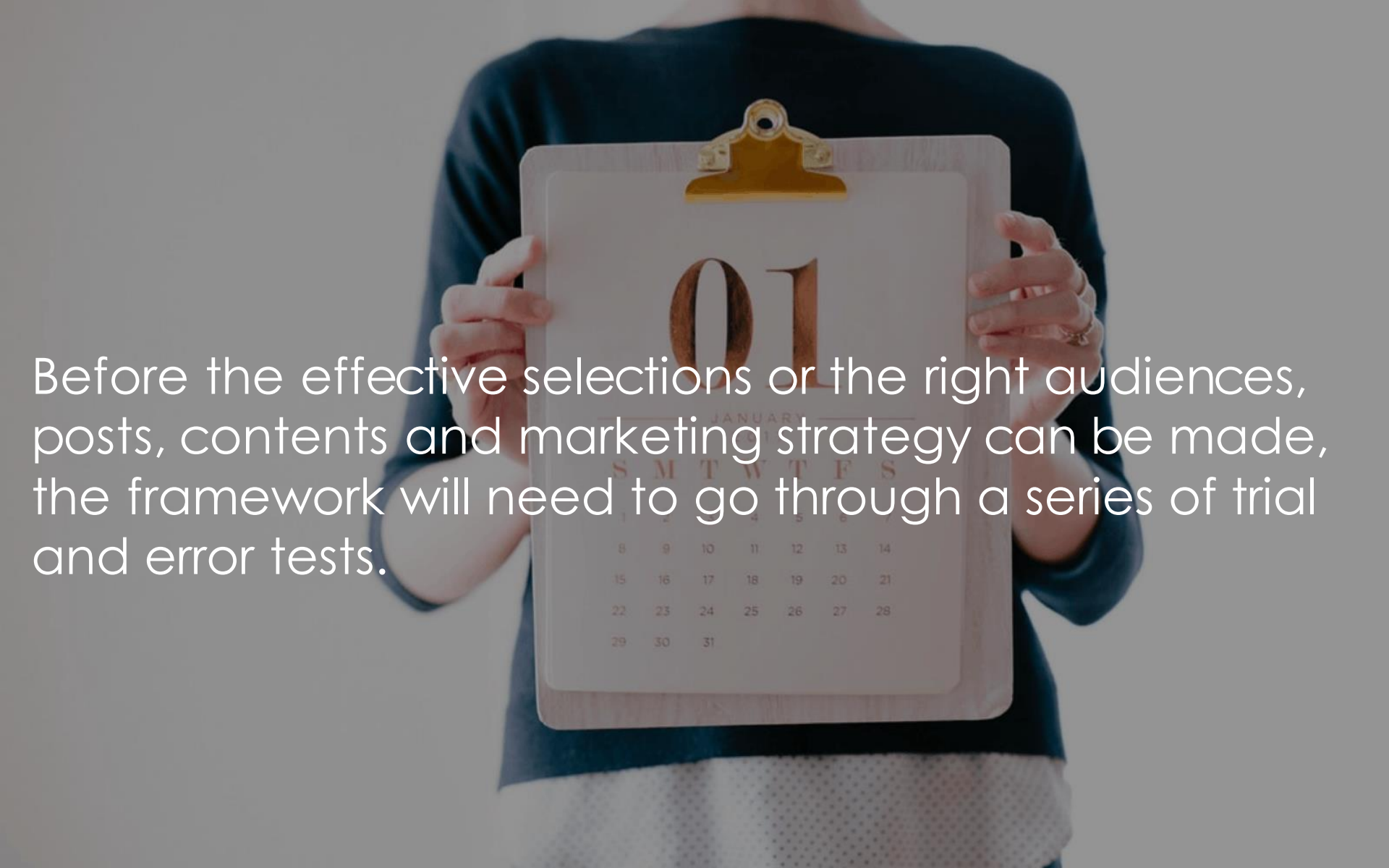
For instance, the big data from social media were applied for analytics, trend identifications, opinion mining and sentiment analysis (Katal, Wazid, & Goudar, 2013).

The higher education institutions in Malaysia have not leveraged social media and analytics effectively to increase the students' interests and awareness of STEM and TVET disciplines.

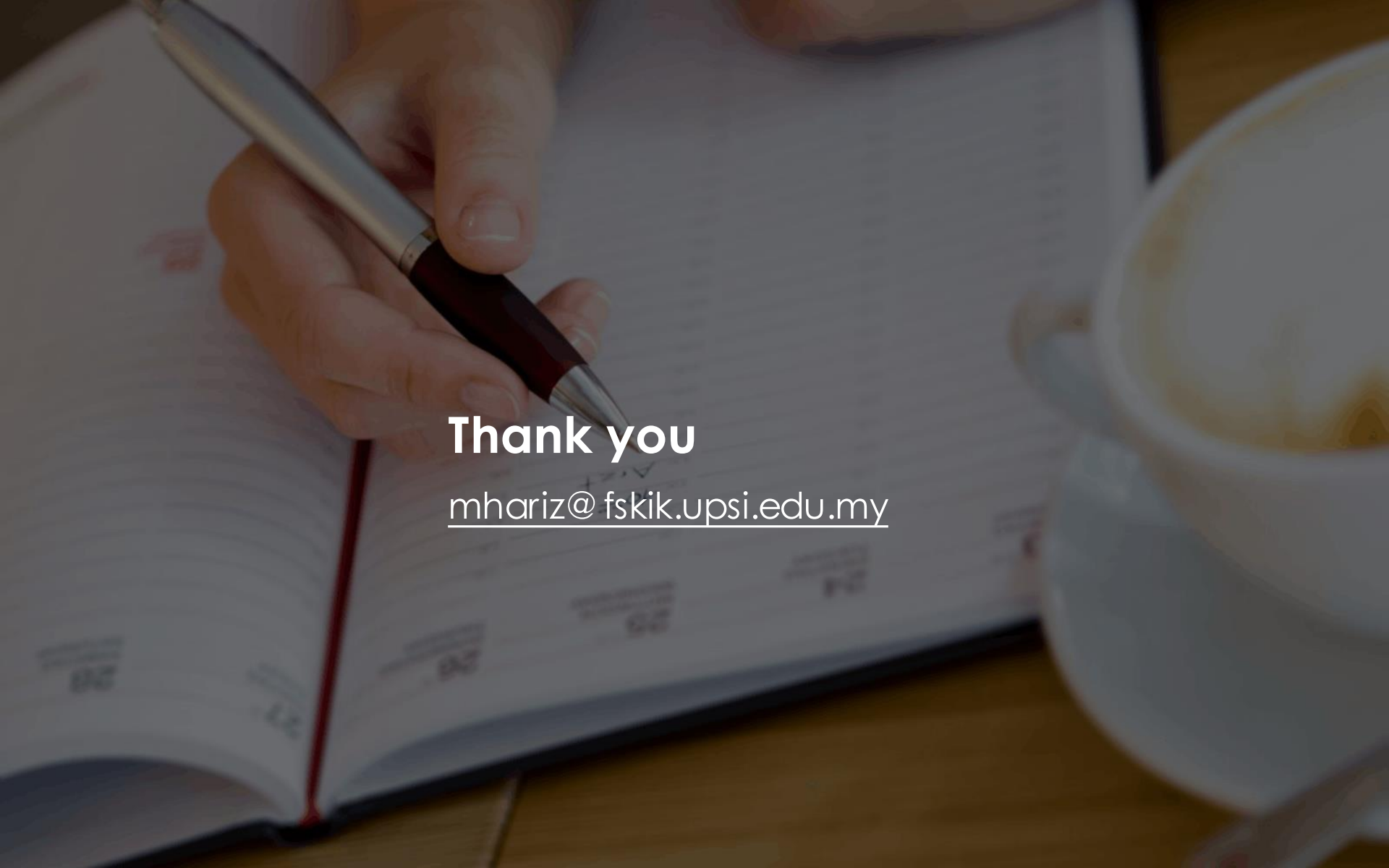
Proposed social media analytics framework to increase student interests' in STEM and TVET education.



	Descriptions
Social Media	Facebook, Instagram, Twitter
Role Model/Mentoring	The importance of social media for connecting with peers in professional networks. Eg: Twitter and LinkedIn
MOOC	Through MOOCs and social media platforms, users can share, track, and search for information on their specific interests
Big Data Analytics	Recommend: 1) suitable posting, type of contents to the target audiences and marketing strategy; 2) suitable role model or mentor of the prospective students; and 3) type of courses suitable to the prospective students based on their personal information or behavior.



Before the effective selections or the right audiences, posts, contents and marketing strategy can be made, the framework will need to go through a series of trial and error tests.



Thank you

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