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Evidence of Impact from a National Digital Entrepreneurship Apprenticeship Program in Malaysia

Mohd Zaidi Abd Rozan

Information Systems, Universiti Teknologi Malaysia

Corresponding Author: Mohd Zaidi Abd Rozan; Email: mdzaidi@utm.my

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ABSTRACT

Impact Digital Entrepreneurship Apprenticeship Program (IDEA@KPT) at Ministry of Higher Education Malaysia 2021 is a comprehensive nationwide six-month program. Forty-three teams consist of 43 Academic Supervisors, 129 institutes of Higher Learning students, and 43 Micro & Small Enterprises (MSE) owners conducted by Universiti Teknologi Malaysia. The program is aimed to develop capable students in maneuvering the digital business world. Students underwent an online Business and Digital Training, with apprenticeship and formal reportings. This article aims to present the impact of IDEA@KPT activities by analyzing 43 case studies produced in the program. A pre-codification scheme that concentrates on the study goals was the method for data collection. Before the program, all the teams were informed of the required components to ensure uniformity of the report. The evidence of significant gain and impact on the MSEs businesses was drawn from the components. Other than the components, analytics hindsight, visual appeal, persuasion ability, perception on paid ads, posting timing, and synergies beyond the digital world activities were gathered, providing richer information and insights that increase business value. Such lessons are beneficial to all parties as all businesses are demanded to utilize digital platforms nowadays.

INTRODUCTION

The unemployment rate for the graduating students from the Institute of Higher Learning in Malaysia is worrying. From the data published by PENJANA (Pelan Jana Semula Ekonomi Negara) in June 2020 (BERNAMA, 2020), unemployment in Malaysia is expected to increase to 5.5% or more than 860,000 jobless in 2020. Furthermore, the Ministry of Higher Education (MOHE) added that 75,000 graduates from the Institute of Higher learning would be unemployed due to the Covid-19 pandemic (Amir, 2020).

On the other hand, there is a significant increase in Internet usage and online expenses by consumers. (Media Baharu, 2020) digital news reported only in the first six months in 2020, 72,274 Small Medium Enterprises (SMEs) recorded an increase in digital engagement, which goes more than the targeted 50,000 SMEs by the government.

Also, there was an increase of 39.3% in e-Commerce activities in May 2020 from May 2019.

Looking at the opportunity in digital businesses and the likelihood of solving the unemployment issue, the Malaysia Ministry of Higher Education has developed a program called IDEA@KPT (UTM, 2021). IDEA@KPT or Impact Digital Entrepreneurship Apprenticeship Program at Ministry of Higher Education Malaysia 2021 is a comprehensive six-month program. Forty-three teams consist of 43 Academic Supervisors, 129 students from the institutes of Higher Learning, and 43 Micro & Small Enterprises (MSE) all over Malaysia. The program aimed to develop students to maneuver the digital business world by becoming an apprentice to business owners. This, in a way, will increase their intention to become entrepreneurs equipped with practical digital marketing knowledge and skills.

The IDEA@KPT program utilizes the apprenticeship principle because of the strength it brings, and it has been known to many. The primary purpose of the apprenticeship is to provide knowledge transfer or skillset from one expertise to another party. The ultimate goal is to achieve a mutually beneficial relationship (Ryan & Tom, 2018) between the parties involved. It becomes very demanding when digital skills are taken into account. This is due to the flow of knowledge that could be traditionally running from a more elderly and wiser to a young and less mature person. One must be open to the flow of knowledge from both sides of the parties that could benefit both. Why is this for sure? The digital efficacy from the younger generations could provide new input and ideas to the organizations or businesses owned by a more senior person. Plus, business knowledge is being transferred to the young generations, which shows a higher percentage of youth entering into an apprenticeship program (Nicholas, 2014). In this program, both the apprentice (students) and the business owners (Micro Small Enterprise owners) develop symbiotic relationships. Specifically, in IDEA@KPT, students reported a substantial increase in MSE performance even during the Covid-19 pandemic, plus the rise of students' business knowledge.

This article aims to present the impact of IDEA@KPT by extracting the essence of 43 case studies provided to the author. The case studies hold significant insights and lessons learned, particularly on the challenges, solutions, and impact recorded throughout the 6-months program.

Table 1. Type of Reports and Contents

Digital Business Planning Report	Digital Poster	Digital Video Story	Case Study
MSE Business Background	Name of member and academic supervisor	Introduction to the project	Name of Academic Supervisor & Team members
Problems, Solution	MSE Business Background	Challenges and barriers faced by MSEs	MSE Owner Background
Current Situation, What Marketing Tools used	Problems and Challenges	Digital Marketing Strategy developed	MSE Business Background
Type of Digital Marketing opted	Solution implemented	Impact of Effectiveness	Problems and Challenges
Sample of Copywriting posted as Teasers, Soft-sell & Hard-sell	Impact of Effectiveness	The positive impact to MSEs and Apprentice	Solution implemented

IDEA@KPT program is a three phases program that runs in 6-months. The First Phase was focused on recruiting students through interviews and identifying MSE as partners. The discussions and identification of MSE are performed independently by every Institute of Higher Learnings (IHL). The Second Phase consists of training sessions and apprenticeship. The training covers Online Business Strategy, Business Model, and Digital Marketing. Here, the contents in the IDEA@KPT program are a subset of the very long list of 229 unique Digital marketing courses stated by (Langan, Cowley, & Nguyen, 2019). As this program requires short duration but critical content, IDEA@KPT, with the advice of the Subject Matter Expert (SME) of top trainers in Malaysia (<https://ideakpt.my/trainers-profile/>), decided to choose the most appropriate content. The content must be suitable for students and business owners, who are Micro and Small businesses. The specific contents are Bookkeeping, Sales/Expenses Reporting, Logbook, Activities, Digital Business Planning, Copywriting, Creative Content, Instagram for Business, Facebook Marketing & E-Marketplace.

The Third Phase is mainly related to reporting. The team, consisting of one academic supervisor, three students, and one MSE owner, produced four types of reports: Digital Business Planning Report, Single Page A1 Sized Digital Poster, Five Minutes duration of Digital Video & eight pages A4 infographic Case Study document. The content of each report is shown in Table 1.

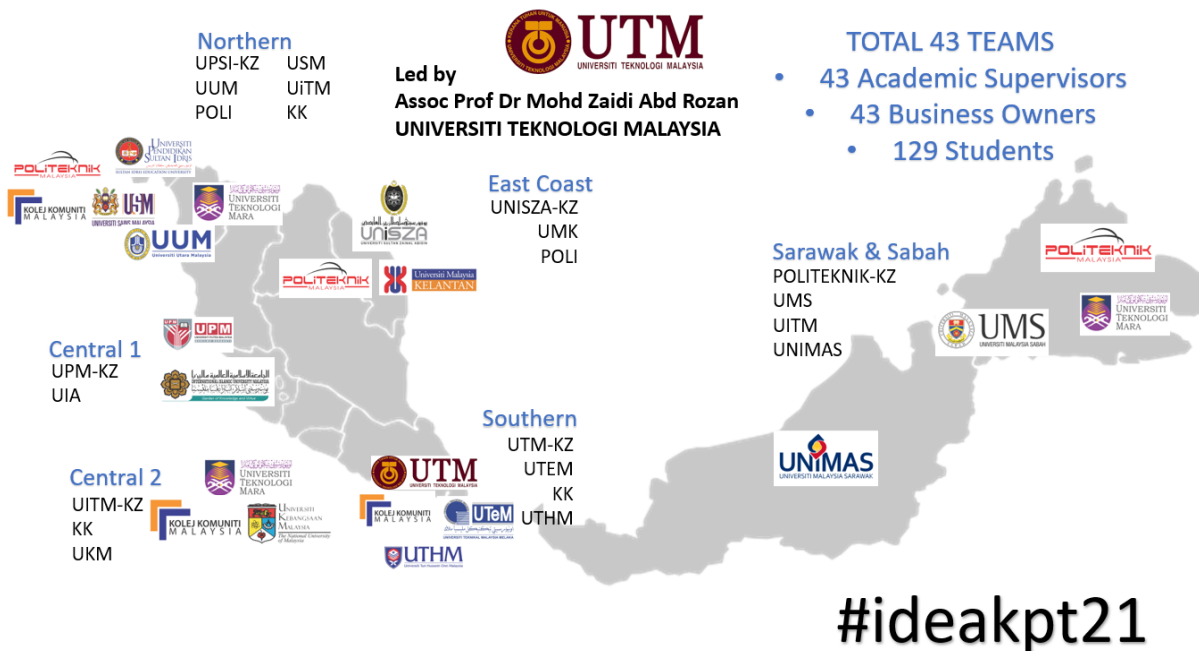
Data Analysis of Likes, Reach, Share	Conclusion & Recommendations	Other interesting points to be shared	Impact of Effectiveness (Before and After)
Sales and Expenses Report			Conclusion & Recommendations
Conclusion & Recommendation			
Team member's reflections			

The last part after the third phase is for all the participants to attend an IDEA@KPT Summit, which will be held in 2022 with the honorable Malaysia Higher Education Minister present. The purpose of the summit is to allow the participants to showcase their findings and present their Digital Posters for the audience to learn and grasp their

experience. This phase is also where the group winner will be provided with prizes and recognition for a job very well done.

Figure 1 shows all the Institutions of Higher Learnings (IHLs) involved in the 6-months Malaysia Ministry of Higher Education (MOHE) Flagship program.

Figure 1. Institutions of Higher Learning Involved throughout Malaysia



As with many programs, IDEA@KPT also faced several challenges. The first was related to the effect of the Covid-19 pandemic. This is specifically on the virtual and physical mode for the apprenticeship. The main challenge for a long-duration program is to maintain its control. Students must attend 24 hours of Business Strategy, Business Model, and Digital Marketing training within a month. After the successful completion, they are required to attach to a Micro Small Enterprise for a total of 40 hours within a spread of 2 months. The 40 hours apprenticeship was designed to be a physical session. However, three changes occurred related to this matter. So, the program must have the

flexibility to ensure that the program is still successful with all the changes.

The first version was designed to be a 40-hour physical Face-to-Face apprenticeship, where the students are required to be present physically in the MSE premise/factory/site. However, due to the Movement Control Order (MCO) that was still in place and not uniformly implemented throughout Malaysia, the apprenticeship session was shifted to 60% Physical and 40% Virtual. In this case, 24 hours should be a physically present attendance and the balance of 16 hours are virtual. However, this setup was not helpful as operating in a mixed-mode is even more challenging. Finally, with the advice

from several parties, IDEA@KPT 40 hours apprenticeship is decided to be entirely virtual.

Studies have shown that an entirely virtual apprenticeship, internship, or industrial training will save time and expenditure, increase the working experience while the student is still in their own house, learn the communications in a newly accepted working style during pandemic and post-pandemic (Chloe, 2021). However, there are drawbacks, firstly, in learning to understand the communication style and expressions from the business owners to the students and between the students themselves. The second is the lack of experience gained from the business's environment. The students will not feel the fast pace and hectic atmosphere, which would impact their feeling towards being an entrepreneur themselves.

The second challenge was the attempt to optimize the experience through virtual apprenticeships. (Pretti, Etmanski, & Durston, 2020) stated that students should also associate with productivity, meaningful work, and socialization when working remotely or virtually. From the point of productivity, this plays an essential role in the success of the IDEA@KPT program. The 40 effective hours are logged through the students' reporting and verified by their academic supervisors. Information systems modules were developed to support this feature and several other reporting tools (<https://ideakpt.my/book-keeping-and-log-book-system/>). This reporting is done individually to provide a self-direction to the students to plan their day, set their schedule, and complete their tasks.

Meaningful work is measured by how the task provided affects or impacts the business owner's perspectives. Although the ultimate purpose of performing Digital Marketing for a business is to make maximum profit, in IDEA@KPT, the journey is considered short for the students when they focus more on the indicators measured as digital impact. This is commonly shown in reporting insights from tools like Facebook Likes, Reach, and Engagements.

The third main challenge was gathering first-hand information from business owners. Socialization involves formal and informal communication between several parties, the students and the business owners. They may be minimal opportunities to be observing and interact with many in the work setting. Thus, this might be a

big challenge for both parties. For example, the known challenge found is the bottleneck of information given by the businessperson. What does it mean? When there are opportunities to experience the work setting and environment, students usually will extract and provide insights using their senses. However, in such a limited setting, students entirely depend on the business owners or staff to provide the necessary information regarding the running of the business. Secondary information would help students gather information about the company through the Internet, social media, and other available sources. These are critical to acquiring; unfortunately, they are often not adequate and updated. Primary information is still essential due to the crucial, up-to-date, and latest strategy are drawn from the business owner. With such dependencies, owners will often be overwhelmed by the students' questions and inquiries. It has shown that many MSEs could not accommodate much information timely to the students. This issue is reported based on the delays in responding to ongoing requests by the apprentice.

METHODS

The paper aims to present the impact of IDEA@KPT activities by analyzing 43 case studies produced in the program. The case studies hold significant insights and lessons learned, particularly on the type of business, challenges, solution, and impact recorded throughout the 6-months program.

All the submitted cases were thoroughly studied and arranged based on their impact or implications to determine each case's contribution and gather insights to improve future programs (Leedy and Ormrod, 2001). This is in line with the research cycle and problem-solving cycle that are highly suggested by McKay & Marshall (2001).

The authors recommended a pre-codification scheme that concentrates on the study goals (Wasana, Miskon, and Fielt, 2011). This involves capturing the definitions and objectives. The definitions are intended to sense an agreement of shared understanding of the phenomena (Wasana, Miskon, and Fielt, 2011), while the objectives are meant to convey the focus of the activities (Miskon *et al.*, 2010). In the setting of this study, all 43 cases have a pre-determined codification scheme. Before the program, a list of required components is provided to all the teams to ensure uniformity of the

report. Somehow, several cases were written with more information and insights, thus increasing their richness and value.

The standard components were provided as a guideline to focus mainly on the i) background of the business, ii) challenges and problems faced particularly from the aspect of digital marketing, iii) solution proposed and implemented, iv) impact, and v) conclusion and recommendations. Therefore, these written reports are accepted as formal written documents that manifest the writer's situation.

Finally, the author focuses on the conclusion and recommendations to highlight and extract vital information mainly related to the unique situation faced by the team. This is compiled as insights and lessons learned at the end of the results and discussion section.

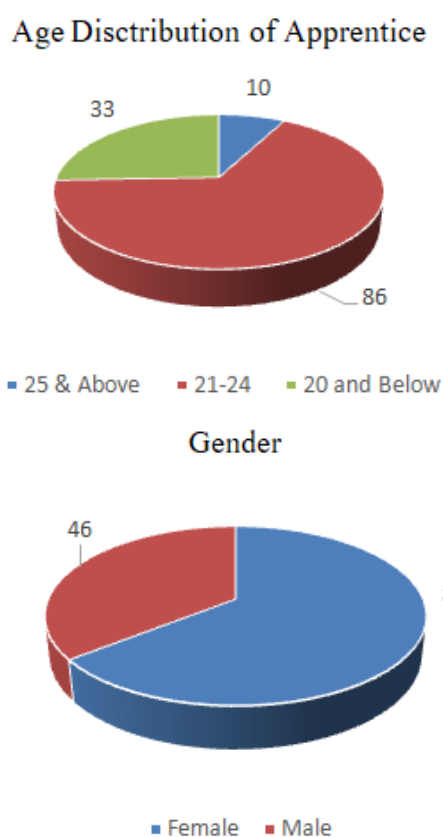
RESULTS AND DISCUSSION

The programs' expectations have been communicated to all participants before the program commence. These are the Digital marketing indicators such as the likes, reach, engagements (Tiago & Veríssimo, 2014). These indicators are critical and are accepted as the source of insights for most digital marketing programs and initiatives. The ultimate measure has always been the sales and profit it brings to the business. However, a new measurement of Return on Investment (ROI) is often proposed almost as quickly as a new social media platform appears (Fisher, 2009). This is a challenge as the reporting of sales and expenses is not based on the apprentice's sales of products/services but the business, they are attached to. Although there are sales reported through the IDEA@KPT programs, the numbers are only reported if the owner trusts them. In addition, several other pieces of evidence are practically viable to be captured, such as the changes on the posts in the businesses' social media.

Demographic Information

The IDEA@KPT program consists of 43 Academic Supervisors from 17 Public Institute of Higher Learning, 43 Micro Small Enterprises business owners, and 129 students as an apprentice. A total of 129 students were involved in the six-month program. There were 33 students ages 20 and below, 86 with age 21-24 and 10 who are age 25 and above. More than 63% of the apprentice are female. Figure 2 presents both the age distribution and gender.

Figure 2. Age Distribution and Gender of Apprentice



The type of business categories among the 43 MSEs are shown in Table 2. The highest categories fell under food, followed by Clothes/Fashion/Beauty, which is 27.9%. The rest are Construction, Car Sales & Services and as listed.

Table 2: Type of Business Categories

Business Product/Services Categories	Number	Percentage (%)
Food	17	39.5
Clothes/Fashion/Attire/Beauty	12	27.9
Information Technology	1	2.32
Construction/Landscape/Wood Products/Furniture	3	6.98
Printing	2	4.65

Car Sales & Services	2	4.65
Plants	1	2.32
Children Products	1	2.32
House Services (Aircon, etc)	1	2.32
Bicycle Shop	1	2.32
Training & Delivery	1	2.32
Advertising	1	2.32
	43	100

Evidence of Impact from all 43 cases

Table 3 shows the business type, problems, and impacts recorded to every business.

Table 3. Business Problem & Impact

Case No.	Business Type	Problem	Impact*
1.	Food	No Marketplace, No structure (menu) for products, inquiries & feedbacks	Increased from 0 to 124 Instagram followers and 1159 to 1179 followers on Facebook.
2.	Food	Inconsistent Sales of Brownies, entirely operated by owner & husband	Increased post engagement FB 174700%, People Reached 81507% & increased sales in July & August.
3.	PC Retail	Not attractive promotional material, does not use social media optimally, only two workers who focus on technical aspect (technician)	Increase to 5 Star in Google Review, 114% increase in Facebook access, 14.5% increased Instagram followers. Opportunity to share the business experience with 2000 students for the WUS101 Entrepreneurship course.
4.	Children Product	Customers are not familiar with buying products online. Lack of workers	3,731 interactions from 29,768 posting in FB resulted from RM400 paid ads.
5.	Food	No sales as no dine-in allowed	Increased Instagram Impression 29.1% to 29,549, Profile visit increased 72.5% to 1,541, sales increase 50% (RM9035) and 110 new customer databases from online training.
6.	Training	Lack of focus on training business, convert to delivery.	Sales of services increased, and branding is now become known by online customers.
7.	Food	The owner is not familiar with DM, Content is not satisfying, not an expansion to a global setting.	The use of new design and branding for product promotion. Increased awareness of PITROYKITCHEN brand
8.	Construction	Lack of Brand awareness, Low engagement in FB (only 3)	Increased 4135 people and 82 engagements on 24th September 2021. Increased Product sales.
9.	Beauty	Salon & spa closed. Business not focusing on Digital medium.	1200% increase in Instagram Access, 74.26% FB access. Sales of RM2500 in the month of August.
10.	Clothes	Closed physical shop, no income	Contents of posting are more attractive and increase in customer base and sales.

11.	Food	Not attractive logo and branding, low SM (social media) usage	New Logo and branding. 100% acceptance from 75 customers surveyed.
12.	Aircon	Not consistent in marketing, too much hard sell.	Proper posting schedule for social media. Increase the Soft-selling technique to develop more trust among digital customers.
13.	Furniture	Not a strong or convincing content for SM	Better visual and graphics for posting and increased sales for July until October of RM17, 953.
14.	Fashion	Lacking creativity for brand awareness and not being familiar with DM, images of bags are identical that carries no emotion	Increased 93% view in TikTok, plus 20% followers in TikTok dan increase 66.7% sales (RM1,600/month)
15.	Bicycle	Closed shop after ten months operation. Reopened after three months, no copywriting, no marketing plan, no selling through digital	600% Instagram Reach and 14,900% Content Interaction
16.	Printing	Lack of business, decreased revenue, low employee productivity.	Better known branding and attracting new customers.
17.	Printing	Not using SM effectively, focusing on FB only	Instagram content interaction increased 2800% dan access to Instagram profile increased 2480%
18.	Food	Difficulty to market product. The owner, not having the time to develop copywriting.	Paid access increased 100%, Increased access to Facebook page 609.8% dan increased sales through e-marketplace-Shopee
19.	Food	No café before located in Mawar Campus	Customers can remain in their room to make orders and purchases without coming to the physical café.
20.	Clothes	No marketing medium	Increase Post Reach in Facebook 8600% and Post engagements 3800%
21.	Advertising	Lack of prospects, less proficient closing technique, unfamiliar with SM Algorithm	Increase FB Like to 40% and Followers by 38.7%. Increase Instagram followers by 47% and Shopee by 36%
22.	Beauty	FB Hacked and owner lost control, 1st August 2021 shop closed due to pandemic	Increase 60% visibility of business by the community. In addition, increase the number of customer base after implementing paid ads. New customers come from three different states: Selangor, Kedah, and Johor.
23.	Food	Poor management of social media	Better division of social media tasks and management by the staff.
24.	Plants	Stop supply from China, Delivery issues.	Explored a new variety of products/ services using the concept of Plant Hotel and Plant Care Services

25.	Food	Less market exposure, non-attractive marketing tools	RM50,724 increased after implementing Digital Marketing.
26.	Beauty	No sales record, no active social media, Limited movement due to pandemic	Followers become 822 from 449. Sales increased beyond RM1000/month after the program. Increased perfume sales and grew more than 100% number of followers in Instagram.
27.	Food	Not strong branding, no digital presence for marketing. A long journey of part-time, broken business and change opportunity	New Image for the Digital Presence, Logo, Packaging and Branding. Use of systematic Financial System.
28.	Clothes	Stock not moving, the price dropped	Stock moves and is no longer stagnant. More customers are coming from different locations.
29.	Beauty	The new product is lack of brand awareness, Rely on Agents, Focus on the online platform only	Increased in sales for the month of September 21.3% to RM12,570. Increased 46% FB post Engagement.
30.	Food	Not familiar with DM, Focus on Hard Selling only, Low-quality video	Followers from only 6 to 673 in Instagram. Increased in sales for August and September around 7-13%.
31.	Food	Owner not familiar with BMC and not knowing the DM	Increase Instagram followers and online sales.
32.	Beauty	Lack of followers, lack of sales through digital marketing	Increase Instagram & Facebook followers.
33.	Beauty	Lack of DM Knowledge	Popularity increased to 887 viewers, 508 likes and 99 share
34.	Food	Lack of E-Commerce and DM expertise	Able to gain new dealer from other states such as Sarawak, Johor, Negeri Sembilan dan Melaka.
35.	Food	Online orders by 3rd party apps through WhatsApp incur high cost, unscheduled time posting, monotonous post design	Implemented Order through WhatsApp Application, increased effectiveness, and efficiency for ordering before arriving and store management.
36.	Food	No followers, No expertise in photo editing and other graphic and design tools.	Registered in e-Marketplace Shopee, the first time since running the business from the year 2010.
37.	Car Sales	Converting visitors to paying customers	It has increased 75% Organic traffic to the website through Facebook Marketing.
38.	Food	Lack of Digital Marketing Skills. Only one staff to entertain customers during peak hours, no sales record, lack of space in the shop, weak in arrangements, only uses FB & WhatsApp	More attractive design and posting on social media. Increased SM engagements, more sales. Better position among many competitors.
39.	Clothes	The customer is in SM but does not know how to monetize	Increased 2.6K in social media followers from 97.3K-99.9K.

40.	Construction	No structure in Social Media Post, Lack of product information, Mixed of Personal and business information	Increased access of 7977%, 5046% for Post engagement & more than 20 quotations were requested.
41.	Beauty	Focus on the North Malaysia market only. No dedicated website to deliver stories on their platform.	RM10,458 sales from the month of June to July. Increased sales of RM28,102 from July to August.
42.	Car Beauty	Closed during pandemic	FB increased 210 like and 2068 access through paid FB ads.
43.	Food	No mass event, so no business	Increased 11,100 Instagram followers. Story dan Reel IG has average of 40 viewers and increased 50% viewers for TikTok dan YouTube Video.

*The impact was reported through case studies submitted in early November 2021 to the author.

Table 3 has generally shown impact to the MSE businesses from the perspective of social media analytics, the increase of sales, better branding, and even the marketing structure of the organization.

Several insights and lessons learned can be extracted from the 43 cases other than the items reported the Table 3. First, the need to understand the analytics that is provided automatically by the platform used. This is often an excellent input for entrepreneurs to gain insights and make sound business decisions (Johnson, E. 2021).

Second, the visual appeal of postings (teaser, soft-sell & hard-sell) contributed significantly to customer engagements. The flow of words and the blend of colors are commonly the best way to lure visitors to their platform. This has strong persuasion ability (Youjiae, Y, 1990).

Third, soft-selling copywriting would also increase customers' trust towards the online seller. This is because, in a soft-selling, the author will focus on delivering knowledge of the products/services, which would increase the positive perception of viewers and incline them to believe that the author is an expert in the creation of products and services. Thus, the qualities of copywriters demanded are a good command of the language use and their imagination (Dandeswar, B., Preeti, Y., Utpal, B., 2015).

Fourth, there was also a misperception of organic ads versus paid ads. Organic ads have their limitation with the low penetration towards targeted customers, their time, and interest compared to paid ads. However, paid ads should be set to function as

what is intended by the digital marketer. Unable to do this will waste the investment and lose the targeted prospects.

Fifth, a posting should be done in a particular schedule. It is proven that social media users' purchasing behavior patterns are related to their time. A general rule for posting is around 1-2 pm, and the best time to get likes and engagements will be approximately 5 pm.

Sixth, any Digital Marketing initiatives are not limited to online activities alone. There are high opportunities for strategic collaboration with the community and institute of higher learnings as offline programs also contribute to community engagements and better trust between all players. This benefits the MSE owners, student apprentices, and academic supervisors.

Finally, the most critical element for the success of IDEA@KPT or any digital marketing apprentice program is the trust amongst all the participants. The business is searching for a change to be highly visible, liked, engaged, and becomes profitable online. With the tweaking performed by the apprentice on the marketing element, the MSE owners must be prepared to take over the role and become digitally transformed. This is critical to sustaining business as it is deemed that higher success can be realized, particularly during and after the Covid-19 pandemic. Which is one of the most important aspects of a business.

CONCLUSION

With the very dynamic nature of conducting such programs, particularly during the Covid-19

pandemic, flexibility between the organizers/secretariat and the participants are deemed to be crucial. Furthermore, the support provided by the administration throughout the six months programs must be top-notch to get the motivation going throughout the period.

The most challenging lesson learned was the development of trust among the three parties – the MSE owners, the student apprentice, and the academic supervisors. In the future, establishing trust between these parties will be an area of investigation as they are several aspects of trust that may demand further efforts in such a limited-time relationship among them.

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