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Masri bin Abdul Lasi, Nurun Najah bt Tarmidzi, Abu Bakar bin Abdul Hamid & Amer Hamzah bin Jantan

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## The Role of Integrated Marketing Communication (IMC) in The Context of The Fourth Industrial Revolution and The Need for Higher Education to Adapt to It

<sup>1</sup>Masri bin Abdul Lasi, <sup>2</sup>Nurun Najah bt Tarmidzi, <sup>3</sup>Abu Bakar bin Abdul Hamid & <sup>4</sup>Amer Hamzah bin Jantan

<sup>1,2,4</sup>City Graduate School, City University Malaysia & <sup>3</sup>Putra Business School

### Abstract

It is believed that marketing principles can help educational organizations fulfill their social mission. This qualitative research has been conducted in view of the integration of integrated marketing communication (IMC) and industrial revolution 4.0 as an adaptive step for City University Malaysia (City-U), a private university in Malaysia, in developing an integrated marketing communication strategy. The community needs a sensitive organization that uses the media to communicate the identity and values of Malaysia's tertiary institutions. From the viewpoint of private intuition, this study of IMC gives ideas on how to train customer-oriented employees and explains more on how IMC can be implemented in higher education institutions.

**Keywords:** IMC, Industrial Revolution 4.0, Higher Education, City-U, Qualitative

### Introduction

Organizations have been encouraged to keep moving forward by environmental changes, information disclosure, and the dynamics of consumer demand. A new paradigm states that organizations must possess agility, which is defined as a skill that is repeatedly developed for quick, effective, scheduled, and sustained change that responds in one day (Pluta-Olearnik, 2018). In other words, marketing is not automatically limited to the profitability orientation of an organization; rather, marketing focuses on creating, conveying, and communicating social values (Binter, 2019). Kotler et al (2022) confirm that marketing concepts can be used to solve social problems.

Recently, automation has become possible in almost every field thanks to technological advancements. The new technology will fundamentally alter how people live and interact with one another by fusing the physical, digital, and biotech worlds. The technological revolution's phase known as "Industry 4.0" transforms the scale, scope, complexity, and nature of human activity in comparison to earlier eras (Kim et al., 2021). The Fourth Industrial Revolution (Ir4.0) brought about numerous changes in daily life, fundamentally altered how people behaved, and had a significant impact on the workplace (Krafft et al., 2020). Although

the impact on employment was negative, the Industrial Revolution 4.0 had a positive impact on resource effectiveness and efficiency as well as production costs. In the world of Industry 4.0, digital literacy, technological literacy, and human literacy skills are vital to the workforce. City University provides a special kind of education by assisting students to develop useful knowledge, work habits, and attitudes so they can meet their own unique social, political, and economic needs. City-U strategies focus on market demands so that professional growth and improvement can be carried out in the field. Considering the arguments, few universities have the potential to address issues facing the industry. 4.0. The education system must be able to provide graduates with the learning systems, education units, students, educators, and education staff as an education provider through the revitalization of the chronosystem. (Abdul Lasi, 2021).

Traditionally, the use of marketing science is meant to encourage an organization's aggressiveness in achieving its primary objective of increasing profitability. In marketing management, profit becomes a quantifiable variable (Kotler et al., 2022). What if, however, marketing science was strategically employed to achieve organizational goals and values rather than with a profit-oriented focus? particularly in the context of higher education as a transformative and adaptive step in responding to environmental changes (Rehman et al., 2022). The integrated marketing communication strategy (IMC) that City-U developed and implemented as an adaptive measure in the fourth industrial revolution (era 4.0) will be the subject of a descriptive analysis in this study, along with how City-U evolved into a sensitive organization that meets community needs (customer-oriented). We can appreciate the legitimacy of this transformation by seeing how City-U uses the media to communicate its values and identity as a private university in Malaysia.

### **Conceptual Literature**

In achieving the vital social goals, organizations and companies must adopt several approaches of management techniques that can be typically used in the business world in dealing with the dynamics of shifting social conditions, rising competition, dwindling funding, challenges in effectively communicating ideas, and ideas that prevent them from fulfilling their mission. Because of the concepts and marketing strategies used to teach the organization how to understand consumers, marketing becomes essential (Lasi, 2020).

It is believed that to achieve effective integrated marketing objectives, very concise and clear goals need to be thoroughly communicated throughout the organization (Abdul Lasi, 2021). There are several questions that an organization needs to focus on before moving forward an integrated marketing communication strategy, such as brand awareness of the organization, ways to increase sales revenues and ways to develop and build good relationships and rapport with fellow customers (Abdul Lasi, 2021).

There are numerous channels that can be utilized to accomplish integrated marketing communication's general job in a company, which should be working with other related functions in the firm (Pluta-Olearnik, 2018).

According to Abdul Lasi, 2021, for an organization to grow tremendously and to constantly revolve and evolve, the organization must adapt and accept the reality of the world of information technology whereby innovative technology is changing customer behaviors daily and, for that, organizations must always keep up. One of the ways to uplift integrated marketing communication in an organization is to be involved in online marketing (Abdul Lasi, 2021).

There are three basic planes of integrated marketing communication that has been well studied (Pluta-Olearnik, 2018)

1. To manage integrated marketing communication for an organization in terms of branding, an organization must focus on planning, implementing, and controlling.
2. The process of integrated marketing communication may include a series of planned, coherent actions leading to conveying the message efficiently and maintaining relations with the recipients of the brand of the organization.
3. Tools in integrated marketing communication are used in selected channels of communication with the environment that include both formal and informal communication.

When using online marketing, it is possible to better measure an organization's reach out in detail, such as the number of emails received, the number of unique visitors, the number of pages viewed per visit, the number of minutes viewed per visitor, and even the behavior of each visitor (Abdul Lasi, 2021).

On the other hand, if a company didn't carefully define their target audience, combining channels like the internet and conventional in introducing brand or even in communicating integrated marketing for an organization's brand is nothing that goes beyond the present norms (Pluta-Olearnik, 2018).

Internet marketing is statistically influenced by integrated marketing communication as the idea of online marketing that integrated marketing communication play, it enhances the efficiency of the marketing plans and strategies (Arumugam, 2021). To add, many advocacy directors thinks that advertising might not have been the strongest role for integrated marketing communication, however, integrated marketing communication have played an important in giving and coping underlying attempts in organizing advertisement correspondence especially for online marketing (Arumugam, 2021).

In combining integrated marketing communication and industrial relations (era 4.0), the technologies have the capabilities and power to overcome difficulties between disciplines and create networking (Krafft, 2020). Furthermore, Krafft, 2020, added that in engaging researchers on marketing from other disciplines, there are types of boundaries to be aware of, such as syntactic, semantic, and pragmatic boundaries among communities and in goals and interests, respectively (Krafft, 2020).

### **Marketing Concept in The Organization**

Spreading missions and ideas is what marketing is all about. According to Drucker (1973), who makes the case in Kotler et al (2022), the goal of marketing is to precisely know and understand consumers so that a product or service is in line with the consumer and can be sold on its own. The goal of marketing is to recognize and satisfy social and psychological needs (Namin et al., 2020). Marketing is a social process in which people and groups fulfill their wants and needs by creating, providing, and openly exchanging goods and services with other people. This is how the concept of social marketing is justified. (Kotler & Keller, 2020). One of the practical methods for addressing social needs is through non-profit organizations. (Luo et al., 2019).

### **Integrated Marketing Communication (IMC)**

By assessing the strategic roles of various controls of communication such as public relations, sales promotions, general advertising, and direct response, (Pluta-Olearnik, 2018) defines integrated marketing communication as an element of a planning concept that recognizes a

value-added activity in a comprehensive plan. Then combine these various disciplines to offer communication that is clear, consistent, and has the greatest impact. IMC develops gradually, including the coordination of internal and external activities, according to (Arumugam et al 2021). This is manifested in the application of organizational strategies for resource allocation, financial integration, and management accountability.

IMC ensures that a company's character, messages, and brand positioning can be effectively conveyed through each component of communication that is put together using a consistent strategy. The IMC's implementation has been oriented in a thorough manner through the information system, which serves as the primary tool for tactical coordination up until the point of strategic integration and management's full backing guarantees (Rehman et al., 2022). In fact, most organizations only use two levels of coordination, namely tactical coordination. This is due, in part, to the fact that the implementation of IMC focuses primarily on the problem of advertising and promotion. IMC needs to be implemented at the strategic level, changing the previous understanding that IMC adoption was only possible at the tactical level (Tafesse & Kitchen, 2017). The IMC can only assist organizations in competing in a sustainable way by implementing conversions that are oriented at a strategic level (Khoa, 2021).

To make IMC more goal-oriented, the current study table below summarizes a review of the liaison between IMC and outcome measures with reference to marketing promotion. The researcher in this case tries to combine various studies about marketing outcomes for IMC into authoritative conclusions in the form of elements influencing the effectiveness of the organization. This would help future researchers develop the framework for their research.

Table 2.0

*Review of Liaison between IMC and Outcome Measures Develop for this research*

IMC Liaison/Variables	Outcome/Performance
Organizational alignment, benefits, psychosocial outcomes, business outcomes, reduced conflicts between departments, reduced transaction costs through collaboration, reduced duplication, communication strategies, clear alignment of brand positioning, and cost savings	Organizational Performance
Communication mix, message consistency, interactivity, perceptions of success on indirect campaign objectives relative to competitors, economic return on campaign investment, improved operational efficiency, message consistency, functional outcomes, customer loyalty, audience focus, and profitable relationship with audience	Operational Performance
Brand management, brand orientation, brand performance, brand messages, brand equity, customer-based brand equity, brand strategy and integration, brand associations, brand value chain, brand communication, measures of change in customer awareness, customer attitudes, customer attachments, customer experiences, return on touch point investment (ROTPI), ROI, brand and channel equity, and extensive brand communication	Brand Performance
Market orientation, market impact, and position; low price elasticity of customers; price premiums; sales and servicing costs, market penetration; share of wallet trend; market share position; relevancy to a new product; competitive advantage; and market performance	Brand Impression
EBIT (earnings before interest and taxes), cash flow stability and growth, ROI (return on investment) and ROBI (return on brand investment—current and future), EVA (economic value add), brand financial performance, MVA (market value add), market capitalization, share price, result-driven IMC, optimizing costs, overall profitability, economic and financial performance	Financial Assessment

IMC might be a more complex problem than coordination and performance when engaging in various activities. Instead, it is the art of fusing the intentions and objectives of the sender with the carefully chosen receiver's circumstances of pre-understanding and interpretation, developing an ideal strategy whenever the content and variety of the messages are appropriate, and perfecting the channel selection (Abdul Lasi & Rahim, 2021). IMC is now viewed as a strategic issue that calls for a strategy based on the traits of strategy and strategic decisions. Strategy considers a company's long-term objectives to make the best strategic decisions and get ready to outperform rival businesses in the market (Lasi & Salim, 2020).

Industry 4.0 is characterized by a rise in manufacturing that is driven by four factors: 1) an increase in data volume, computational power, and connectivity; 2) the development of analysis capabilities and business intelligence; 3) the appearance of new ways for humans and machines to interact; and 4) an improvement in how digital instructions is translated to the physical world, such as with robotics and 3D printing.

Furthermore, according to Backhaus and Nadarajah (2019), the fundamental tenet of Industry 4.0 explains the implementation of intelligent networks along the production process and supply chain that produce independent control of machines, workflows, and systems. Hermann et al (2016) confirm that the 4.0 industrial design principles exist in four industrial design principles.

Additionally, the intention behind the actions an organization takes is entwined with its strategic decisions. It involves trying to act in accordance with how management and stakeholders would like the organization to be. This could and might include crucial choices regarding the vision, mission, objectives, product line, pricing, exiting current markets, or entering new ones. The strategy will be apparent because of "seeking strategic fit," which is the process of matching an organization's activities and resources to the environment in which they operate (Low et al., 2020).

The first type of interconnection (connection) (IoP) can be introduced as the ability of machines, devices, sensors, and people to connect to each other and communicate with one another via the Internet of Things (IoT) or the Internet of People. Standardization, cooperation, and security are required for this principle. Second, information transparency is the capacity of information systems to enrich digital models with sensor data, including data analysis and information provision, to produce virtual replicas of the real world (Ibrahim & Yahaya, 2018).

Third is the technical assistance that (a) helps in making the right decisions and solving problems urgently and immediately by understanding the capability of an aid system to support people in consciously combining and evaluating information. (b) the capability of the system to support people in performing a variety of unpleasant, exhausting, or unsafe tasks; and (c) the inclusion of both visual and physical assistance. Fourth, decentralized decision-making, which refers to virtual physical systems' capacity to take independent actions and complete tasks as efficiently as possible (Joghee, 2021).

### **Research Methodology**

In this study, the research design that is being used is descriptive research. The study's analytical approach is a qualitative analysis, and it takes the form of a case study. The Local Marketing Department and the International Marketing Department, two majors, were visited during the observation at City-U Petaling Jaya campus. In this study, purposive sampling is used with non-probability methods (Wijermans et al., 2022). The authority in discussing the direction of development and the implementation of the marketing strategy was appreciated during the in-depth interviews with three chosen speakers from City-U.

Four different methods of gathering data can be used: (1) interviews, (2) observations, (3) gathering and analyzing data, and (4) using feelings. (Schindler, 2022). Researchers used observational and interviewing techniques to gather data for this study. Both behavioral and non-behavioral observations will be made during this study. City-U has done a complete observation and mandated the procedural, physical, and spatial analysis of the IMC implementation.

### **Data Analysis**

Content analysis is the method of choice for data analysis because it considers the information that will be gathered from semi-structured interviews and observations. The analyzed data source shows the written content, audio recordings, and videos from interviews and observations. Research that is an in-depth discussion of the information contained in written or printed form in the mass media is known as "content analysis." This analysis systematically assesses the semantic components or elements of what is contained in a message and then provides an interpretation. There are five stages to conducting data analysis after the interview or data collection stage, including:

- Gather and classify interview and observation notes or transcripts,
- Rename and categorize the prepared parts with a new label or code.
- Arrange or combine data by graphically describing them or arranging them into lists or tables,
- Reassemble the information to form a new narrative that is accompanied by pertinent tables and graphs that will be an important component of the analysis of the manuscript's concept; and
- All research analysis's findings draw the conclusion.

### **Result**

The researcher organized three key points in the interview guide that was created to create interview questions. The three components stand in for three different research questions. (1) the shift from an organizational-centered to a customer-centered mindset in educational organizations; (2) the application of IMC by educational organizations based on the four levels of the IMC thinking framework; and (3) a comparison of the planning and implementation of IMC in commercial organizations with applications in educational organizations. Moving forward, the three key points found were that the questionnaire was filled with several question items that were intentionally constructed to guide the resource person in their responses and were based on a variety of theorized theories and research.



Table 4.0

*The research's key indicator points*

No	Key Point	Indicators	Analysis Result
	<b>Transforming an educational organization from an organizational-centered mindset</b>	<p>a. The top-level management view of the concept of marketing in education institutions</p> <p>b. Proportion of stakeholder needs in decision-making</p>	<p>The highest level of management acknowledges that marketing aids in fundraising, work program promotion, and student recruitment.</p> <p>Through tracer studies, City-U promotes direct alumni participation, ensuring a proportionate response to industry needs.</p>
	<b>Into a customer-centric mindset</b>	<p>a. Justification for the Industrial Revolution 4.0</p> <p>b. Segment the market.</p> <p>c. Educate and promote to the community</p>	<p>Implementation of educational programs with a new focus on higher education programs with a focus on certified work competencies.</p> <p>In line with the national and international standards, higher education produces graduates that possess the skills to communicate in foreign languages, who embrace entrepreneurial spirits, and who can comprehend the fundamentals of information technology.</p> <p>Form solid alliances with the national and local governments.</p>
	<b>The application of the IMC is based on four stages of the IMC framework</b>	<p>Tactical coordination between departments</p> <p>Commitment to market research applications of information technology</p> <p>Strategies</p> <p>Integration of IMC</p>	<p>1. <b>Tactical coordination</b></p> <ul style="list-style-type: none"> <li>• Coordination is done vertically between top management, department heads, and course coordinators as well as horizontally between technical implementation units.</li> <li>• Additionally, coordination is done with the student activity units.</li> </ul>

		<p>Tactical Coordination</p>	<p><b>2. commitments do market research</b></p> <ul style="list-style-type: none"> <li>• has a research and development unit, which is responsible for learning and research.</li> <li>• both when gathering information and creating IT system applications.</li> </ul> <p><b>3. Application of the integration of information and technology (IT)</b></p> <ul style="list-style-type: none"> <li>• Providing more details on an integrated information system that is used both internally to support HR management and externally to collect student data.</li> <li>• Integration of websites, social media, and integrated information systems in teaching and communication.</li> <li>• development of online learning.</li> </ul> <p><b>4. Strategic integration of IMC</b></p> <ul style="list-style-type: none"> <li>• The idea of integrating various media is supported by senior management.</li> <li>• All lecturers, staff members, and students can participate in activities because top-level management support is demonstrated in their attitudes.</li> </ul>
	<p><b>Comparison between IMC planning and implementation in the business sector and non-profit organizations</b></p>	<p>1. Internal and external analysis and identification of opportunities</p> <p>2. Planning a marketing campaign or communication program</p> <p>3. Implementation of marketing communications</p>	<p>1. As an adaptation to the mechanics of organizing, City-U has made several changes to the IMC implementation that is typically used in the business sector.</p> <p>2. Since City-U has so far continued to use its own lecturers and staff, who just so happen to be knowledgeable in the required fields, that is different if it were to compare</p>

		<p>campaigns or programs</p> <p>4. Evaluate the marketing communication program.</p> <p>5. Long-term planning</p>	<p>with the profit-sector organizations that create business partnerships with organizations outside the organization. This is especially true when developing IMC's own material.</p> <p>3. City-U doesn't engage in extensive media planning by analyzing thoroughly which media are most frequently used.</p> <p>4. Because there has never been research done on the effectiveness of media, there is no reliable information to support media planning, which is a weakness of City-U.</p> <p>5. City-U prefers using personal communication channels to share information or work-related programs with stakeholders.</p>
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**Discussion and Recommendation**

Although marketing is also thought of as a way of disseminating ideas, City-U's implementation of a marketing strategy as a private institution has become one of the main measures to change the way that its educational services are provided in the age of the industrial revolution.

A shift from an organizational-centered to a customer-centered attitude is the direct result of the organization's development of the marketing idea that will be consistently implemented in City-U. Customers (or stakeholders) should be the axis in determining organizational strategy, according to this way of thinking, because doing so will help to increase the accomplishment of organizational missions. The idea of integrated marketing communication (IMC) is relevant to City-U's ambition to become a top-tier university.

In achieving City-U's vision, two direct core components, the "Innovation Strengthening Program" and the "Student and Learning Program," must be planned accordingly. The "Research and Development Strengthening Program" and two additional supporting elements, the "Institutional Strengthening Program" and the "Resource Strengthening Program," support the two direct core elements. These two indirect core elements also support the two direct core elements. To achieve its target, the indirect core elements, supporting elements, and direct core elements need to be planned in terms of productivity, quantity, and quality, and these elements must support one another.

Figure 5.0: Planning and Implementation Stages of Integrated Communication in the Educational Context

As an



adaptation of City-U organizing mechanism, the IMC implementation that is typically used in the business world has undergone several changes. City-U is distinct from profit-making organizations that form business alliances with organizations outside the organization, even though it continues to use members of their own congregations who just so happen to be skilled in the required fields (Namin et al., 2020).

City-U does not conduct in-depth media planning, such as by carefully examining which media are most frequently used. The shortcoming is that there isn't any research in the area of media effectiveness, so there aren't any reliable statistics to back up media planning (Bala & Verma, 2018). City-U prefers using personal mechanisms to communicate with congregants when delivering information or work programs.

IMC is one of the fields within marketing where there have been significant advancements. The IMC strategy is a combination of disciplines that provides impactful clarity, consistency, and communication for City-U. According to Zhang et al (2020), the application of IMC ensures that the company's messages, character, and brand positioning can be conveyed

synergistically in every element of communication assembled through a consistent strategy. All forms of communication within the organization will be managed and controlled (Krafft et al., 2017).

The IMC's use is coordinated with an organization's mission and objectives. IMC adaptation is influenced by top management's cooperation. The IMC should ideally be used to address both tactical departmental or sub-departmental coordination and organizational strategy, in line with other managerial tactics (Daviet et al., 2022).

### Conclusion

To create superior institutions that could compete with other higher education institutions, City-U repositioned and reoriented institutional development. To achieve this, City-U must create institutions that are well-planned and can be formulated in several ways, such as long-term planning, medium-term planning, and short-term planning. The goal of this revitalization is to make education more relevant to the graduates' demands, to promote unique advantages at each university in accordance with the potential of the region, and to boost bargaining power to collaborate closely with businesses and institutions from developed nations.

The four measurements of the level of IMC application and acquisition in organizations 4.0 are the use of IT, tactical departmental coordination, research commitment, and the strategic application of IMC as a tool for the industrial revolution. When higher education services are being applied, the practice and creation of ideas within marketing communication in the business world will generally be focusing on adaptation and modification. City-U is advised to consider conducting research or studies specifically for evaluating the efficacy of the media that have always been used in the future.

### References

- Abdul Lasi, M. bin. (2021). Online Distance Learning Perception and Readiness During Covid-19 Outbreak: A Research Review. *International Journal of Academic Research in Progressive Education and Development*, 10(1). <https://doi.org/10.6007/ijarped/v10-i1/8593>
- Abdul Lasi, M. Bin, & Rahim, R. Bin. (2021). Factor Influencing Integrated Marketing Communication towards SME's Business Performance in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 11(1). <https://doi.org/10.6007/ijarbss/v11-i1/7842>
- Arumugam, M. A. P., Lasi, A., Nisa, K., & Halabi, M. (2021). *Determination Factors of Online Marketing and Integrated Marketing Communication Effectiveness on the Organization Marketing Strategies*. 32(3).
- Bala, M., & Verma, D. M. (2018). A Critical Review of Digital Marketing Paper Type: -Review and Viewpoint. *International Journal of Management*, 8(10), 321–339.
- Binter, U. (2019). *Influence of Online Marketing Strategies on the Sales Success of B2B Companies*. May, 96.
- Daviet, R., Nave, G., & Wind, J. (2022). Genetic Data: Potential Uses and Misuses in Marketing. *Journal of Marketing*, 86(1), 7–26. <https://doi.org/10.1177/0022242920980767>
- Backhaus, H. S. K., & Nadarajah, D. (2019). *Investigating the relationship between industry 4.0 and productivity: A conceptual framework for Malaysian manufacturing firms*. *Procedia Computer Science*, 161, 696–706.

- <https://doi.org/10.1016/j.procs.2019.11.173>
- Ibrahim, A. Z. M., & Yahaya, J. H. (2018). *Information Security Factors in the Implementation of Industrial Control System into Cloud Environment*. *Advanced Science Letters*, 24(7), 5239–5242. <https://doi.org/10.1166/asl.2018.11710>
- Joghee, S. (2021). Internet of Things-assisted E-marketing and distribution framework. *Soft Computing*, 25(18), 12291–12303. <https://doi.org/10.1007/s00500-021-05920-0>
- Khoa, B. T. (2021). The Impact of Chatbots on the Relationship between Integrated Marketing Communication and Online Purchasing Behavior in The Frontier Market. *Journal The Messenger*, 13(1), 19. <https://doi.org/10.1007/s00500-021-05920-0>
- Man, K. M. M., & Yang, L. R. (2021). The Future Prospect of Digital Marketing in the Malaysian Context. *International Business Research*, 15(1), 72. <https://doi.org/10.5539/ibr.v15n1p72>
- Kotler, P., & Keller, K. L. (2020). *Marketing Management* (15e ed.). Pearson.
- Kotler, P., Keller, K. L., & Chernev, A. (2022). *Marketing Management* (16e ed.). Pearson.
- Krafft, M., Arden, C. M., & Verhoef, P. C. (2017). Permission Marketing and Privacy Concerns — Why Do Customers (Not) Grant Permissions? *Journal of Interactive Marketing*, 39, 39–54. <https://doi.org/10.1016/j.intmar.2017.03.001>
- Krafft, M., Sajtos, L., & Haenlein, M. (2020). Challenges and Opportunities for Marketing Scholars in Times of the Fourth Industrial Revolution. *Journal of Interactive Marketing*, 51, 1–8. <https://doi.org/10.1016/j.intmar.2020.06.001>
- Lasi, M. A. (2020). The Impact of Marketing Mix Elements on Brand Loyalty towards Speech Therapy in Health Science Industry Malaysia. *American Journal of Industrial and Business Management*. <https://doi.org/10.4236/ajibm.2020.109100>
- Low, S., Ullah, F., Shirowzhan, S., Sepasgozar, S. M. E., & Lin Lee, C. (2020). *Smart Digital Marketing Capabilities for Sustainable Property Development: A Case of Malaysia*. *Sustainability*, 12(13), 5402. <https://doi.org/10.3390/su12135402>
- Pluta-Olearnik, M. (2018). Integrated marketing communication — concepts, practice, new challenges. *Marketing of Scientific and Research Organizations*, 28(2), 121–138. <https://doi.org/10.14611/minib.28.06.2018.12>
- Namin, A., Hamilton, M. L., & Rohm, A. J. (2020). Impact of message design on banner advertising involvement and effectiveness: An empirical investigation. *Journal of Marketing Communications*, 26(2), 115–129. <https://doi.org/10.1080/13527266.2017.1393767>
- Nisa, K., Halabi, M., Lasi, M. A., & Ming, C. W. (2022). *Malaysian Trend of Online Shopping During Pandemic Covid-19: Literature Review*. 4(1).
- Rehman, S. Ul., Gulzar, R., & Aslam, W. (2022). Developing the Integrated Marketing Communication (IMC) through social media (SM): *The Modern Marketing Communication Approach*. *SAGE Open*, 12(2), 215824402210999. <https://doi.org/10.1177/21582440221099936>
- Schindler, P. S. (2022). *Business Research Methods* (14th ed.). Mc Graw Hill.
- Tafesse, W., & Kitchen, P. J. (2017). IMC – an integrative review. *International Journal of Advertising*, 36(2), 210–226. <https://doi.org/10.1080/02650487.2015.1114168>
- Wijermans, N., Schill, C., Lindahl, T., & Schluter, M. (2022). Combining approaches: Looking behind the scenes of integrating multiple types of evidence from controlled behavioural experiments through agent-based modelling. *International Journal of Social Research Methodology*, 25(4), 569–581. <https://doi.org/10.1080/13645579.2022.2050120>

- Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Machines versus Humans: The Impact of AI Chatbot Disclosure on Customer Purchases Xueming Luo, Siliang Tong, Zheng Fang, and Zhe Qu June 2019 Forthcoming. *Marketing Science*, June 1–30.
- Zhang, J., Oh, Y. J., Lange, P., Yu, Z., & Fukuoka, Y. (2020). Artificial intelligence chatbot behavior change model for designing artificial intelligence chatbots to promote physical activity and a healthy diet: Viewpoint. *Journal of Medical Internet Research*, 22(9). <https://doi.org/10.2196/22845>