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# The influence of Augmented Reality Technology on Integrated Business Communications

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**Abstract.** Over the last decades, the advancement and expansion of creative digital technology tools have contributed to the development and flourishing of the Augmented Reality Technology environment. Technological innovations have created an opportunity for marketers to apply them effectively in the process of communication and information, providing an exciting and amazing user experience. Augmented Reality technologies are a very attractive with incredible potential that emphasizes the importance of virtual interaction in the implementation of marketing and business communication. As a technological system that transmits computer-generated information to a real-time environment and evolve more and more, there is a tendency of their increasingly dominant influence on the marketing and business of companies. This trend leads to the research of an increasing number of scientific studies that explain the current and potential state of AR technologies in business and marketing communication. The aim of this study is to use meta-analysis to highlight the most credible and high-quality studies in the field of AR technologies and integrated business communications. So, the idea is to present the concept and nature of integrated business communications in a quality and concise way through understanding the impact of AR technologies.

**Keywords:** Integrated Communications, Marketing Communication, Augmented Reality.

## 1 Introduction

Organizations constantly tend to interest and inspire their target public by expecting them to engage in the communication process. Marketing and business communication are considered a very important competence and strategic asset of the company (O'Mahony, 2015). Given that the market is dynamic and overloaded, characterized by a high level of competitiveness, organizations face a great challenge when it comes to how to communicate with the public.

The audience is informed more than ever, the range of products and services is more than rich and diverse, so the experience with the brand is a key parameter in communication with customers (Javornik, 2014). Modern multimedia technology tools, AR and

VR (Virtual Reality) technologies, applications and other innovative digital channels have great opportunities and capacities in creating, designing and presenting marketing and business communication in order to improve their efficiency and effectiveness (Scholz J. & ., 2018). In this regard, ARs are a very attractive technology that has significant potential in the implementation of experiential marketing and improving business communication (Scholz J. &., 2018).

Augmented Reality technologies incorporate the virtual into the real environment, are interactive in the real, present moment and are programmed in a three-dimensional environment (Azuma RT, 1997). Augmented Reality technologies enable the expansion of classical and virtual information with an interactive and experiential component (Chan, 2010). Interactivity can be seen as a key component that encourages the level of information processing of the user by ensuring his continuous and intensive engagement in the communication cycle (Hernandez, 2009). In this regard, it is an indisputable fact that Augmented Reality Technologies can improve and enhance the quality and effect of a company's communication with consumers (Chan, 2010).

## **2 Literature Review**

There are a number of explanations and views of the term communication (s). Although almost everyone notices and understands it, few people have the opportunity to formulate it in a precise way. Simply put, communication is a sociological interaction through messages (Heide, 2015).

(Oliver, 1997)expresses a more extensive interpretation of communication as "Interaction of ideas, facts and emotions by two or more persons using letters, words and symbols". Along with his definition, the author points out that there are three types of difficulties in the communication process: Technical, which identify exactly how much symbols can convey a message; Semantic ones that represent how symbols convey the desired knowledge, and effective ones that determine how the acquired knowledge through a message affects a certain behavior. In order to better understand the nature of communication and the definition chosen for integrated communications, certain key issues will be presented in this research paper.

(Spence, 1994)emphasizes that communication is a reciprocal and two-way process, where the basic idea of the sender is to act and influence the recipient. Also, Spence assumes that in order for the communication process to be successful, and for it to cause a certain action, the message must be accepted and understood. It is important to emphasize that efficient communication is not the same as the process of information (one-way communication) and two-way exchange of knowledge without taking action. Therefore, communication is not a neutral process of conveying messages and information (Bisel, 2012).

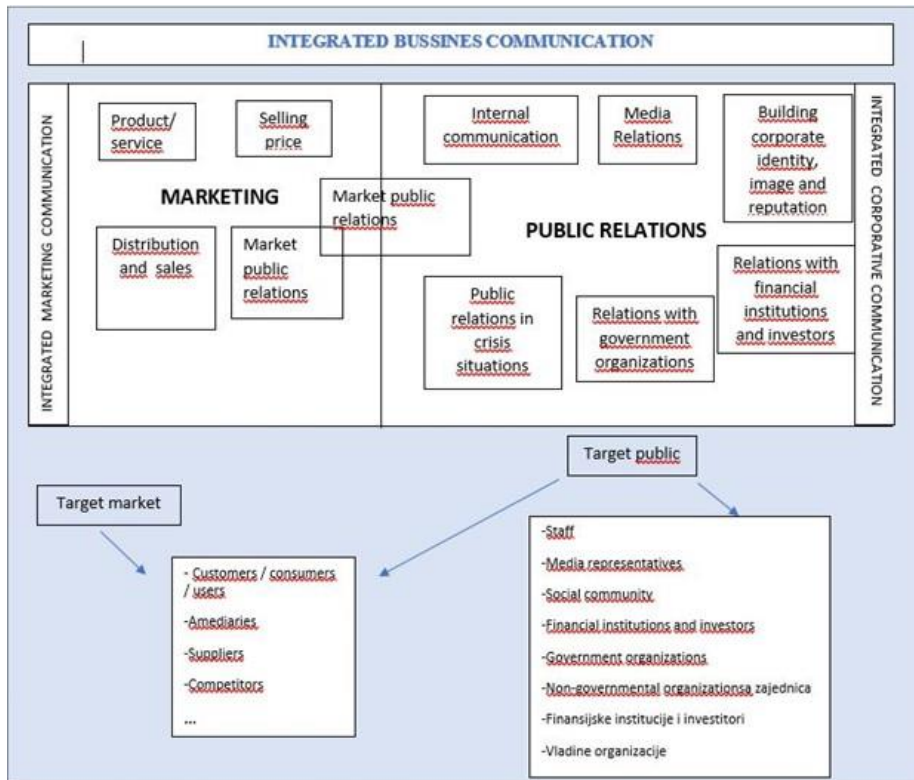
Some authors differentiate between communication and efficient communication, while several of them believe that communication always implies efficient communication. Effective communication implies mutual understanding of its participants and motivation of others to conduct activities and think differently (Thill, 2013).

The primary goal of any type of organization in the communication process with its consumers, stakeholders, stakeholders and the public is to inform them about its offer and business and social activities, which has the ability to meet their requirements, expectations, desires and needs. Therefore, the purpose of integrated business communications of companies is to develop and nurture favorable quality relations of organizations with their wider and narrower social community. A key factor in forming a good image and reputation of an organization is planning, managing and coordinating a comprehensive process of integrated business communications (Kostic Stankovic, 2011).

(Miller, 2003) He views integrated business communications as a combination of communication and organizational life, ie a synthesis of business, organizational, managerial and corporate communication. Integrated communications are not exclusively oriented towards formal communication, but also informal ones. The nature and function of communication are only sometimes the focus of scientific research and debate because it is understood that they are clear in themselves. However, the role of communication between companies and organizations, and within them, is far from clear, and the scope of formal terminology in application challenges the formation of a "cognitive basis" (Liyanage, 2009).

The core of the entire cycle of integrated business communications is the recognition and understanding of target and interest groups by applying modern and innovative technological achievements. When it comes to identifying and understanding the environment and the target group, the focus is on recognizing them as human beings with names, addresses, desires, needs, shopping habits, which initiate the understanding of the contribution of communication (Kostic Stankovic, 2011). However, all this would be quite difficult, almost impossible without integration with the function of marketing and public relations.

In everyday life, it is very difficult to differentiate in detail the scope of the influence of marketing on the one hand, and public relations on the other, because they, often in the communication process, intersect. The intersection and association of marketing and public relations in the communication cycle, focused on the different internal and external environment is shown in the following figure (Kostic Stankovic, 2011).



**Fig. 1.** Integration of marketing communication activities and public relations

According to (Kostic Stankovic, 2011) all types of integrated business communications, it is possible to classify them into several following categories based on different parameters.

The first category is real (actual) and potential (possible) business communication. Actual communication refers to the already formed and existing communication system that works. Possible (potential) communication is the type of communication that has the potential to be established. This category of communication is very attractive, and is the focus of interest due to the constant variability of industry, markets and social environment.

The second category of communication is defined according to the style of forming and establishing the process of communication between its participants. Thus, this category refers to direct (indirect) and indirect (direct) business communication. In the direct process of communication, participants in communication communicate directly, face to face, while in indirect communication they use various devices (radio, telephone, television, written texts) that represent the initiators, carriers of the message.

The next category is formed based on the number of participants in business communication. There is a difference between interpersonal (personal) communication where there is only one sender and one recipient of the message, and mass (general)

communication where there is a large number of participants in the communication, or a larger number of recipients of the message.

Depending on the use of oral, written or other signs, movements and behavior, there is a difference between verbal and non-verbal communication. Verbal communication implies the use of oral and oral words (conversations, letters, messages ...), while non-verbal communication refers to actions and behavior through gestures and facial expressions.

The primary and crucial classification of integrated business communications is defined according to the target group to which the communication process is oriented and focused, the purpose / goal of communication (promotion of products / services / organizations) and the subject of communication. In this regard, two types of communication are classified:

-Integrated corporate (institutional) communications, which is divided into internal communication (communication within the organization) and external communication. External corporate communication includes advertising, communication with the media, relations with the community, financial institutions and investors, governmental and non-governmental organizations, etc.

### **3 Internal Corporate Communication**

Internal communication as a pillar of internal public relations can be defined as a complete system of mutual connections, through which contacts, relations and relations within a company or organization are formed, nurtured and developed. It also includes all resources, policies, practices and procedures through which people are informed and informed, in order to encourage certain thinking, acting, behaving, and to ensure the performance of certain activities and tasks that affect the achievement of results and goals of the company (Baker, 2007). On the other hand, it (Heide, 2015) defines internal communication as a process of exchanging ideas and information within a company. Also, the observed literature indicates that internal communication can be presented as a set of all activities and procedures that establish and develop a positive atmosphere and respect for all employees in the company (Kalla, 2005).

Among the crucial factors influencing the process of internal communication are (Barjaktarović, 2021):

- Economic activity to which the company belongs
- Competition and competitive activities
- The company's mission
- Company size and organizational structure
- History and tradition
- The company's image so far
- Human resources (employees)

Thanks to the advancement of communication tools, informal communication has been improved, two-way communication has been developed and the efficiency and effectiveness of communication has improved. Also, all this implied the creation of a

positive and balanced organizational climate and the creation and nurturing of quality and reliable interpersonal relationships (Kostic Stankovic, 2011).

#### **4 External Corporate Communication**

Good coordination and integration of external and internal communication is necessary for the successful functioning and operation of any organization. It is necessary to constantly nurture and improve such a relationship. Quality coordination and interaction of internal and external communication encourages efficient dynamics of the entire communication system (Keeps, 2013).

External communication in the company includes the entire communication network of the organization and its external environment. Thus, external communication primarily involves the exchange of information between the company and the public, ie customers, consumers, stakeholders and other external entities. External communication channels are numerous, and include direct contacts, face-to-face, media, internet... External communication systems and connections provide employees to establish and promote good and quality communication with individuals and the environment, in order to attract potential and nurture relationships with existing customers , and to generally influence the way the environment treats the organization (Cheney, 2001).

The scope and intensity of the information process in the corporate and business world are constantly expanding. More dynamic and intensive messaging activities are realized by applying efficient and quality communication tools inside and outside the organization. The model that presents the operational integration of reducing costs and improving the effectiveness of transmitted information and displayed messages is actually the so-called. The concept of integrated business communications. This concept emphasizes a unique, modern and contemporary principle of business communication management, which includes all unified forms of communication, and which functions as a generic mechanism at the level of the entire organization, and against the external environment (Kitchen, 2010).

#### **5 Integrated Marketing Communications**

Marketing communication presents the foundation of modern marketing, which includes all channels of communication between the company and its target public with personal goals, credibility, stereotypes and opportunities, in everyday events, which include the application of marketing activities. Marketing communication, as the company's communication with the target environment and the public, in order to increase sales revenue, is crucial for efficient and quality business of any company. (Kostic Stankovic, 2011). According to (Kostić-Stanković & Jaško, 2004) the purpose and goals of marketing communication can be classified into three groups:

- Informing potential and existing customers about their products, services and sales terms;

- Persuading people to opt for a particular product, to make purchases in certain stores, to attend certain events;
- Stimulating the actions of consumers and directing their behavior towards the range of the company in question.

Integrated marketing communications present the phenomenon of modern and innovative management of the communication process. The primary role of integrated marketing communications is to plan a unified communication strategy in an increasingly dynamic, polarized and inhomogeneous market environment. Experts in this field point out that the success of the concept of Integrated Marketing Communications, which focuses on the chain from manufacturer, through distributor to consumer, requires coordination of communication, ie collective, unanimous statement that promotes and strengthens the main message and mission of the brand or organization (Baker, 2007). Thus, marketing communication involves the use of means by which companies directly or indirectly inform, reassure and remind users of the products, services or brands they present.

Integrated marketing communications imply the coordination of the most important functions of marketing communication and the application of appropriate variants of communication activities, in order to form and nurture positive and loyal relationships with consumers and users (Kostic Stankovic, 2011). Thus, integrated marketing communications are based on the benefits of coordination, consolidation and community, and the view that the whole is better, more constructive and more efficient than the sum of individual parts (Cornelissen, 2001). The observed literature indicates that for a successful and effective marketing communication strategy, coordination and consolidation of marketing communication instruments (advertising, sales promotion, personal sales, public relations, economic publicity, direct marketing communication activities, product communication, pricing, distribution and sales) is more optimal. ) rather than individual activities, or a combination of certain marketing communication tools (Nowak, 1998). The whole concept of integrated marketing communications includes integration and coordination of observed tools (instruments), formulation of goals to be achieved by applying them, defining the budget that is optimal to achieve goals, creating specific methods to achieve goals, evaluating results and implementing corrective measures when the outcome is not in accordance with the set goals (Kostic Stankovic, 2011).

The rapid progress of information and communication technologies and the process of globalization itself has caused transformations in the thinking and behavior of customers, and thus the need for digitalization of marketing activities has arisen. All of the above implied the emergence of innovative products, services and sales channels, but also crucial changes and turbulence in the marketing and communication cycle (Miller, 2003).



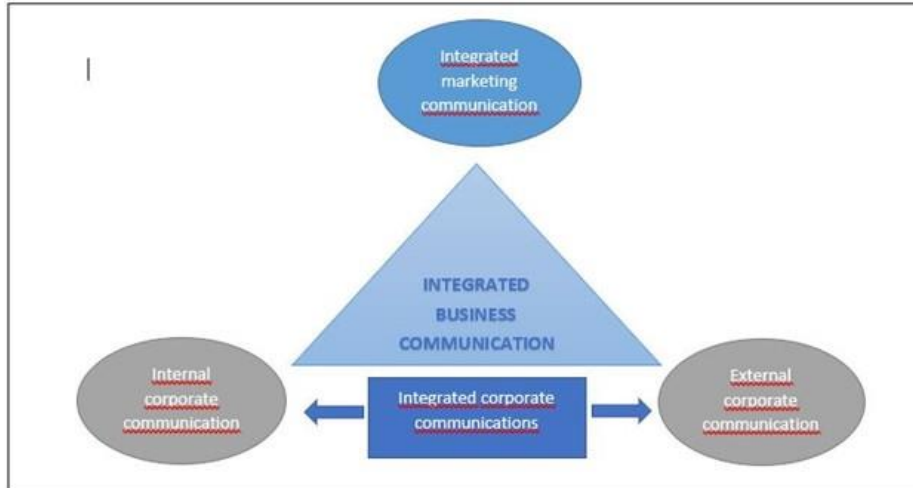


Fig. 2. Integrated business communications

## 6 Augmented Reality Technologies

Augmented Reality (AR) technologies are a direct or indirect representation of the physical environment, complemented by virtually computer-generated content in the present, real time (Azuma R. B., 2001). AR technology system combines real environment with virtual information, which improves and enriches the user experience (Dacko, 2017). In the field of marketing, ARs first appeared in the early 2000s, representing a great opportunity for marketing communication, customer engagement, consumer behavior and retail mobile marketing, given the great potential they possess. Several global brands were already incorporating Augmented Reality Technologies into their business operations, offering consumers the opportunity to virtually test and evaluate products and services (Carmigniani, 2011).

Today, the application of Augmented Reality Technology in the field of marketing is large and diverse; from AR used as a promotional marketing tool, to AR that timely and effectively implies developing a quality and positive relationship between the consumer and the brand (Vilkina, 2019). AR technologies favor the creation of the perceived experiential values, which increases the degree of customer satisfaction. The use of AR technologies in marketing communication is a form of experiential marketing, because it is not exclusively focused on the product / service but on the complete consumer experience (Chylinski, 2020).

Given that more and more marketers consider AR technologies a key component for the successful future of their brands, and that the AR technology market is making rapid progress every day, it is necessary to continuously and qualitatively explain the role and impact of augmented reality in marketing (Mauroner, 2016). It is necessary to integrate and analyze a large number of scientific research studies, in order to determine the relations and present relevant conclusions and predict future trends in this field. The relationship between value and customer satisfaction is theoretically underpinned by

numerous findings that emphasize that AR technologies in marketing should contribute to increasing experiential value, ie emotional and functional value and positive customer satisfaction (Scholz J. &, 2018).

Modern digital technologies have incredible potential when it comes to creating, designing and designing marketing and business communication. Augmented Reality technologies are a very attractive and sophisticated technology that emphasizes the importance of virtual interaction in the implementation of marketing communication. Augmented Reality (AR) is defined as a technological system that transmits computer-generated information to a real, real environment at the present time.

Augmented Reality technologies offer consumers the opportunity to experience a certain product or service more intensively, realistically and credibly through the digital empirical component, before purchasing it. The purpose of Augmented Reality Technology in the implementation of marketing communication is more convincing and relevant determination of product / service characteristics in order to improve knowledge about the product and the brand itself. The interactive determinant of marketing communication implies a more intensive user examination of an authentic advertising message, and thus leads to a better knowledge of the company and the brand.

## **7 Application of AR Technology in Marketing**

Augmented Reality technologies provide the user with an incredible interactive experience that is not possible with the use of other technological tools. As already mentioned, AR technologies have great potential for the development and support of companies' aspirations to promote and market their products and services, strengthen the company's value, image, reputation and brand (Bulearca, 2010). Businesses can incorporate Augmented Reality Technologies into their marketing strategies to provide experiential relationships between their product and service range, their customer offerings and network resources and outlets (Mauroner, 2016).

Experience is a much more complex component than the subjective personal point of view of the observed event or situation . Experience is the result of ongoing interaction based on quality, intensity, meaning , including mental, intellectual, and emotional states (Li, 2003). Thus, each experience presents the consequence of the individual's relationship with the object , ie the environment. Experience management is a much more complex process than providing fun or creativity (Li, 2003).

Over the last decade, managers and marketing professionals have been more open to creating value for consumers through experience (Berry, 2002). Experience -based marketing communication strategies have caused every company, and every brand, to become "experience designers". Experts in this field point out that the modern environment is in the "economy of experience" where users do not always focus, and exclusively on the product itself, but on the overall shopping experience because the functional component of the product is implied or considered "irrelevant" (Bulearca, 2010). Consequently, in many industrial activities, companies, in contrast to the traditional, often turn to "modern marketing" where the emphasis is on creating an experience for customers (Chylinski, 2020).

Today, thanks to the progress of information and communication technologies, people have the opportunity to use computer devices with a combination of mobile devices anywhere and anytime. These innovative technology tools offer companies the ability to implement products focused on the user experience, encompassing creativity, quality, fun and interaction (Rauschnabel, 2019). Placing information in the form of animations, multimedia presentations, audio, video and other virtual elements on a real, real environment at a given time, is a creative and quality marketing weapon to gain an advantage in a dynamic competitive market (Vilkina, 2019). In this context, AR Augmented Reality Technologies have the ability to put the product in the hands of users, giving them the opportunity to test it, attracting the user to get involved, engage, dedicate time, and even initiate a purchase (Dacko, 2017).

AR technologies can be applied in marketing communication in order to improve classic advertising in print media. A large number of companies have created AR tools that allow readers to present 3D virtual content in a real environment when they install an application and point a mobile device at a magazine (Bulearca, 2010). In 2012, for the promotion of the film Transformers 3, Augmented Reality Technologies were applied during the implementation of the marketing strategy. Namely, users were enabled to view the three-dimensional content of the film by pointing the mobile device towards the movie poster (Kipper, 2012). In this way, a plain movie poster is transformed into a 3D presentation in a real environment, with audio and video animations, while providing viewers with an impressive user experience. Also, an AR application has been developed, where customers are enabled to see what is in the box when they enter certain toy department stores, by leaning their mobile device on the toy packaging. The animated 3D display of the toy in real time, with the presence of multimedia effects, is a phenomenal interactive user experience (Das, 2017).

The observed literature indicates that there are similar examples of the application of AR technologies, where in addition to its primary function as a creative and quality marketing tool, it significantly contributes to saving time and money. By eliminating the need for traditional testing, companies' chances of selling their products and services increase (Vilkina, 2019). The authors state that Augmented Reality Technologies significantly influence the positive relations between consumers and the brand, encouraging the development of strong perceived experiential value. The application of Augmented Reality Technology in marketing campaigns is a form of experiential marketing, because its main purpose does not arise exclusively from quality promotion of products or services, but provides a quality interactive experience and a high degree of consumer satisfaction (Rauschnabel, 2019).

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