

A Communication Process of Network Affiliates between Public and Private Sectors for Enhancing the Thai Elderly's Well-Being through Digital Application

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Abstract

The research aims to analyze a communication process and develop appropriate communication guidelines for network affiliates between public and private sectors towards empowering the Thai elderly towards well-being through a digital application. The research is a qualitative study conducted by documentary analysis from online and personal information. The findings are as follows: 1) In terms of internal and public communication processes of network affiliates, network affiliates conducted strategic plans related to senders, message, and communication channels as key communication factors in mobilizing the elderly towards cognitive, attitudinal, and behavioural changes in using digital technologies for their health care. However, they found some limitations in public relations to all areas, which obstructed the creation of the elderly's perception of their health care through a digital application. 2) Appropriate communication guidelines were developed based on four communication elements: 2.1) Sender: communication and public relations skills need to be developed, 2.2) message: the more logical and emotional message should be presented, 2.3) communication channels: media exposure potential of receivers should be analyzed, and 2.4) receivers: target audience should be studied for choosing content and channels to respond to their interest and need.

Keywords: Communication process, Network affiliate, Empowerment for well-being, Thai elderly, Digital technology

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Introduction

Nowadays, Thai society is moving into an aging society, in which changes in the age structure of the Thai population have yielded several impacts. From an in-depth study on the development of Thailand towards the digital economy (Ministry of Science and Technology, 2017), it was found that the predominant impact of movement towards aging society was on the elderly themselves. It is quite a challenging issue that leads to the enhancement of the elderly's better quality of life. However, preparation for coping with such changes and for developing the society to support aging society is very essential. For Thailand, it also realizes such necessity and has specified aging society as one of the main public issues to be carried out for moving Thailand according to the 20-year National Strategic Plans. Hence, all concerned sectors included such an issue into their organization's policies and action plans to respond to the government's policies. Especially, owing to the changes of Thai society at present that have been moving into Thailand 4.0 era, or the age of digital technological growth, several sectors grab such an opportunity and challenge of digital technology as a major mechanism for empowering and mobilizing their organizational operations. A part of the subsequent outcomes is innovation and creative technologies that provide facilities for people of all ages, including the elderly. Thus, it reflects a call for the elderly's awareness, understanding, and capability of the use of digital technology concretely. On the other hand, it requires appropriate message or information transmission. Communication, therefore, is comparable to a major key for driving the elderly towards desirable development and changes. Accordingly, the researcher assumes that effective communication

for the elderly and its concrete outcomes can take place under the collaboration among all concerned sectors in jointly planning and implementing communication plans to the public. From the preliminary survey, it was found that at present several agencies or organizations have been conducting their missions to promote and support the application of digital technology and innovation for upgrading the elderly's quality of life. Besides, there has been a collaboration under the Memorandum of Understanding or MOU of academic collaboration in a digital application for promoting works for the elderly in the form of network affiliates or partners between government and private agencies, namely Digital Economy Promotion Agency (DEPA), Department of Medical Services (DMS), Department of Older Persons (DOP), and new health entrepreneurs or Health Tech Startup, operated by Trecon (Website), Co., Ltd. From the aforementioned data, the researcher thus is interested to study how a communication process is operated under the collaborative network affiliates between government and private sectors to enhance the elderly's well-being through a digital application. The results from the study then can be synthesized for developing appropriate communication for the network affiliates. Expectedly, the findings can also provide some useful contributions for concerned agencies for their future application or be guidelines for planning their communication for empowering the elderly's potentials and enhancing their quality of life following the government's strategic plans and policies.

Literature Review

Communication Network Concept

Cheyjunya, P., Vivatananukul, M., & Anawatsiriwong, T. (1999) classify communication networks based on communication directions into two main types: one-way linear communication without receivers' feedback or response. This type of communication is top-down communication, i.e., policies or commands. The second type is two-way communication, which is interactive and reciprocal. The latter type can reduce communication gaps, prevent misinterpretation, and create morale and participation. Examples of this type of communication are a meeting, discussion, etc.

Besides, Sthapitanonda (2004) explains that network communication routes identify the direction of power a person has over other persons, which include the direction of information circulation and diffusion within a network

Concerning an operation process of a network, besides accomplishment as an output, another major outcome is good collaboration and relationships. Apakaro, P. S. (2004) states that the success of a network is a learning process and continual development, comprising 1) a common learning process, 2) increased opportunities for problem-solving, 3) self-reliance, 4) local resources management, and 5) a policy-driving process, and 6) empowerment and group synergy.

The researcher applies the mentioned concepts as a conceptual framework for analyzing a communication process of network affiliates to explain the patterns of network communication between government and private sectors that help to reflect the success of communication networking for empowering the elderly's well-being through digital technology.

Concepts on Communication and a Communication Process

Roger M. E. (1981) defines communication as a process in which a source's thoughts or information is transmitted to a receiver or receivers towards a common understanding. Notably, a communication process is what can create understanding for people in society the most. Osgood, E. C. (1974) views that communication occurs when a party or a sender influences the other party or a receiver through the use of symbols transmitted via mediating media between two parties.

Despite different definitions of "communication," most communication scholars admit that human communication is a dynamic process. In other words, all communication components are related and yield reciprocal effect. Therefore, human communication is continuous, changing, and adaptive all the time.

Accordingly, communication is a process due to its dynamism and continual changes. Besides, each communication component has reciprocal relations and affects the consequence. In 1960, David K. Berlo proposed a model consisting of four main components: source or sender, message, channel, and receiver. The Berlo Model is mostly known as the SMCR Model.

Hence, the researcher adopts such a concept as a conceptual framework for analyzing and explaining communication within the network and from the network to the public of the network affiliates based on these four communication components for developing appropriate communication guidelines for the network affiliates in the future.

The Collaboration Structure of the Network Affiliates

The collaborative network was established from the intent of the Digital Economy Promotion Agency whose missions are to promote and develop the application of digital technology and innovation for bettering the quality of life of communities, society, and the nation as a whole (Digital Economy Promotion Agency, n.d.). Especially, due to challenging problems caused by an aging society, the Agency has to prepare all concerned parties to be ready for coping with the aging society movement and for dealing with social situations that may affect the quality of life of the overall national population. An attempt towards collaborative operations among all concerned through the use of digital technology is thus required. Hopefully, digital technology can help to increase the effectiveness in medical treatment, health care, and creating an awareness of the elderly's well-being. To achieve such goals, a connection and collaboration among government and private agencies are essential for mobilizing the missions related to both digital technology and public health to support an aging society. The said intent led to the Memorandum of Understanding (MOU) on February 15, 2018, for academic collaboration to conduct an implementation project of a digital application for developing works for the elderly. The collaborative partners are the Digital Economy Promotion Agency, the Department of Medical Services, the Department of Older Persons, and Health Tech Startup, operated by Trecon (Website) Co., Ltd. Network affiliates are designated to perform roles and conduct operations as specified in the written agreement, (A memorandum of academic cooperation on the Use of Digital

Application for Developing Work for the Elderly Project, 2018) as follows:

1. The Department of Medical Services provides policies and assigns personnel for advising on developing systems and connectivity with the information processing and data systems of six pilot hospitals.
2. The Department of Medical Services supports the application of operating systems of the pilot hospitals under its supervision.
3. The Department of Older Persons provides policies and assigns personnel for creating a quality aging society through the use of digital technology and integrated health information for the elderly widely and inclusively.
4. The Digital Economy Promotion Agency supports the establishment of health digital platforms by buoying new health entrepreneurs of Health Tech Startup groups towards the development of e-Health open data platform. Information of all six pilot hospitals under the supervision of the Department of Medical Services are connected whereas the collaboration is extended to include other health application developers in the future, based mainly on the concern on personal security and privacy.
5. The Digital Economy Promotion Agency supports Health Tech Startup groups to arrange Digital Aging Portal for further connection towards the elderly's health care.

The collaboration structure and the operation of network affiliates portray their operations as a multidisciplinary team, which focuses on the exchange of knowledge, understanding, and specialized skills among operating agencies for enhancing the elderly's quality of life through a digital application.

Research Method

The study is qualitative research. The researcher determined two research questions as follows: 1) How did network affiliates communicate in applying technologies for promoting the elderly's well-being? 2) Which communication approach was appropriate for network affiliates for promoting the elderly's well-being by digital technology?

Data related to a communication process of both network communication and public communication of network affiliates were gathered from the document, online information, and in-depth interviews with open-ended questions. Samples were selected by purposive sampling to ensure qualified key informants as per research objectives.

Participants

Key informants were classified into two groups by their roles as senders or receivers.

Participants 1

Senders were members of network affiliates, namely the Digital Economy Promotion Agency, the Department of Medical Services, and the Department of Older Persons, including private health entrepreneurs, or Health Tech Startups, operated by Trecon (Website) Co., Ltd.

Participants 2

Receivers were the elderly, selected purposively by their potential in using digital technology. Their attitude and behaviors related to health through the use of digital technology were analyzed.

Data Collection

Information was collected from three sources: 1) documentary sources, i.e., a project report on the digital application for developing the

elderly's well-being, etc. for content analysis, 2) online sources by analyzing the selection of online channels from eight sources, i.e., Web Application, Facebook, Line, YouTube, Twitter, Instagram, Special Application and websites of concerned agencies, for communicating to the public, and 3) personal sources by purposive sampling and in-depth interviews. Key informants were 3.1) 3 top executives, 2) 3 experts, 3) 3 practitioners of the Digital Economy Promotion Agency, the Department of Medical Services, and the Department of Older Persons, including health Tech Startups and not less than 20 receivers are the elderly.

Data Analysis

The information collected from in-depth interviews was analyzed and summarized with data gathered from documentary and online sources, based on the literature review and related concepts for developing appropriate communication guidelines for the network affiliates in empowering the elderly towards well-being through the use of digital technology.

Results

An Internal Communication Process of Network Affiliates

Sender

Network affiliates used strategies in creating networks by focusing on the collaboration of all agencies in the area, or network members of agencies in each region of the country, i.e., Chiangmai, Khon Kaen, Phuket, Chonburi, Ubon Ratchathani, etc. Thus, network affiliates were equipped with an essential mechanism in connecting their operation in each area. Besides, the collaboration was extended to cover community groups. Therefore,

collaborative operations of network affiliates led to the creation of joint agencies in the area that helped to drive the operations for the elderly. Especially, digital technology that was collaboratively developed was adapted to be used in the affiliated agencies, adjacent to communities, increasingly. This helped to stimulate the perception of general public and assure them of genuine practicality.

Besides the strategies of collaborative network creation, the other apparent strategy found in the operations of network affiliates was the strategy of establishing participatory communication. Participation here means the ability of personnel of both government and private agencies to participate in every step of an operation, starting from the initiation of a project, planning, follow-up, and public communication, i.e., meeting, discussion, etc. Accordingly, it is the creation of the public sphere for face-to-face communication in which all members can participate in expressing their ideas. Such communication strategies towards collaborative operations helped to stimulate and enable network members to have common learning. Besides, it is a guideline helping to empower network affiliates in their operations.

Message

The information used for analyzing network communication of the network affiliates came from the performance evaluation written report, in combination with data from informal communication via online media or channels. The collected data were analyzed in the dimension of message-creation strategy, based on the concept of communication and communication process as follows:

Objectives of communication

Message content appearing in the report reflected the objectives of senders who intended to present details of the digital system development. The explanations about the methods of using the operating systems via images enabled network members to understand the explanation more easily. On the other hand, network affiliates also emphasized using digital communication for more dexterous operations. Since most of the content communicated through online media aimed to inform or make decisions, online communication helped to stimulate members to participate in expressing their ideas. Consequently, it can be considered as an informal channel enabling members to feel like a part of the operations.

The determination of target receivers

From the message content appearing in the report and online media, it reflected message design that concerned greatly about the target receivers' characteristics. As target receivers were network members who were government and private personnel with different knowledge, capabilities, and expertise, the message needed to be conveyed specifically to each group. The strategy of specific identification enforced each targeted receiver to acknowledge and apply what was told into action. Therefore, it indicates that senders selected and presented details of message content differently and appropriately to each target group.

Message Presentation

Private agencies as senders organized the sequence of the content according to the scope of the determined collaboration and intent of the network affiliates. From the documentary analysis, it was found that the content was disposed and structured with explanations of how to use the

systems in sequence. However, for the emphasis on the consequences or importance of digital operating system development, encouraging to actual practice, only the written content may not bring about the accomplished goals. For online communication, it was found that the message presentation pattern encouraged members to participate in their opinions and suggestions towards the design and development of effective systems. The message presentation also emphasized the importance of progress, follow-ups, and development evaluation. Besides, it reflected a tendency of planning for developing innovative systems to support the maximal utility for medical personnel and service users in the hospitals or medical places.

Channel or Media

Network affiliates applied the strategy of integrated media, i.e., specialized media, online media, and activity media, for transmitting their intended content related to the operations and communicating with their network members.

Specialized media

Specialized media appeared in the form of a report for presenting joint operations of network affiliates. This type of media aims to present a message for formal communication. The content structure was disposed of following the scope of the designated collaboration. The main purpose of the content was to induce network members' understanding of the innovative systems that had been jointly developed with explanation in sequential order. It can be considered as a medium for providing knowledge for practitioners. Especially, the use of specialized media makes receivers be informed directly and accurately that helps them to make decisions and implement plans correctly.

Besides, such a medium can keep information for the long term.

Online media

Network affiliates used online media via Line Application as a major communication channel for reporting the results of the operations to network members. It is a kind of informal communication. However, online media can increase the effectiveness of the operations since it facilitates rapid coordination and dexterous operations. Still, the use of online media has some limitations since it may cause misinterpretation by receivers.

Activity media

It appeared in the form of a meeting, which is face-to-face communication. It helped to arouse network members to express their opinions, exchange their knowledge, and mobilize members towards good relationships, which are all important elements for joint working.

A Public Communication Process of the Network Affiliates

Sender

Knowledge and capability of the network affiliates

Network affiliates comprised members of various sectors, both government and private, and covered segments of digital technology, public health, and the elderly society, especially all concerned in the elderly's well-being promotion. From the study, it was found that network affiliates performed as a leader in several ways, especially in transmitting factual information leading to some changes in the target elderly. Particularly, the operations of network affiliates, as government agencies, were accredited and accepted by society since there had been some mechanisms for auditing the transparency of their operations. Moreover,

network members had potential and academic knowledge that supported mutual working. Therefore, the connection as a network helped to reduce the limitations of operations between agencies. On the other hand, it was also a major mechanism for driving their communication to the public towards utmost effectiveness and efficiency.

Communication strategies

Logical appeals were applied as persuasive strategies since the intended message to be conveyed was quite delicate and required collaboration from the target receivers. Therefore, network affiliates needed to provide information responding to their target receivers' needs by explaining the advantages and disadvantages of digital technology to encourage the receivers to be exposed to their information and ready to learn. It was found that a logical-appeal strategy obtained good feedback from the receivers due to the effort of using reasoning to connect with the receivers' needs and expectations in several ways, such as motivation by rewards or results desired by the elderly from the use of digital technology. Seemingly, persuasion by rewards could increase receivers' awareness of the importance of the use of digital technology increasingly.

Message/ content

The message disseminated by network affiliates to the elderly covered general knowledge for reminding them of the usefulness and risks of digital technology. Besides, they provided knowledge that the elderly could apply or practice in their ways of living, especially in creating jobs, income, etc., including knowledge training for the elderly and their offspring on how to use digital technology systems to facilitate their lives, especially in an emergency. However, from the assessment of receivers' responses, it was found

that there was a shortage of content or knowledge on how to use digital technology for the elderly's health care.

Channel/ media

Network affiliates used the strategy of selecting integrated media as a channel for transmitting content useful for the elderly as follows:

Activity media

Activity media emphasized a participatory process for the elderly to express their opinions via training and workshop activities. Such activities are influential processes that enhanced the elderly's knowledge, understanding, positive attitude, and expertise in a particular issue. Eventually, the activities could lead to a change in their behaviors. It was found that network affiliates organized activities for the elderly in every area as they had dispersed branches and alliances in every region of the country. Besides, the focus on knowledge provision on the use of digital technology, activities also played a role in promoting the elderly in using digital technology by themselves, without emphasizing lecture or theoretical knowledge. Activities thus led the elderly into a learning process by doing and encouraged them to publicize their performance via various channels, such as training on online-shop skills, video-clip creation skills, photo-sales on a smartphone, etc.

Online media

Network affiliates used various channels of online social media for transmitting their message to the public, especially useful knowledge for the elderly, as follows: 1) Web application, 2) organizations' websites, 3) Facebook, 4) Line, 5) YouTube, 6) Twitter, and 7) Instagram. Besides, specific applications for health care were also developed. Moreover, for

online media selection, network affiliates pointed the advantages and disadvantages of each kind of online media. Especially, the different potential of each media in transmitting content and accessing each target group was illustrated. Accordingly, online social media can convey a message to people widely and quickly. However, it depends on how many users are interested in using each type of online media. For instance, Facebook is quite more popular among people of all ages than Instagram.

Receivers from the interviewed elderly

The following attributes of receivers were analyzed:

Attitude towards network affiliates

Most of the interviewed elderly realized the importance of the senders or network affiliates as government agencies. Thus, such realization was a major factor driving the elderly to acquire knowledge, adapt themselves, and learn how to use digital technology in their ways of life effectively, as illustrated in the interview given by one of the interviewed elderly, “the government played a great part in promoting health care and ways of living through the use of technology and in updating the use of the internet for the acquisition of nutritious food.” The findings also reflected that network affiliates, as government agencies, have played significant roles as a credible sender up to now, which makes the elderly trust the received information or facts. However, on the other hand, it was also found that the weakness of the network affiliates’ operation was that they could not publicize their information or activities to reach the target elder people in the area genuinely. As a result, there have been several groups of the elderly who have not acquired information or knowledge,

nor have they learned how to use digital technology directly from government agencies. Still, they were found to have potential in using digital technology through their self-learning from family communication and communication with their friends, as illustrated in the interview given by one of the interviewed elderly, “Mostly I learned how to use technology and communication devices from my colleagues. I’ve never attended training organized by the government. It’s quite hard for every elderly people to access the government’s training organization.”

Attitude towards media selection

The media exposed by the elderly to acquire information about health care and useful knowledge for their living was smartphones via several kinds of online platforms, i.e., Line, YouTube, Google, Facebook, etc. Only a few of the elderly used other programs or applications for health care. Regarding the elderly's attitude towards the use of online media, it was found that the elderly perceived online media as a convenient channel. Besides, they could search for information by themselves anywhere anytime, as illustrated in the interview given by one of the elderly samples, “Mostly I use programs and applications from communication devices, i.e., YouTube, Google, etc. We can compare data from a variety of media, i.e., media with illustrations or a model of some exercises that the elderly can follow easily, but can yield good results.” On the other hand, some parts of the elderly were still exposed to mainstream mass media, i.e., television, radio, magazine, etc., as they perceived it as more reliable than online media. Furthermore, mass media was the traditional media with which they had been familiar for a long time. Therefore, it reflects the value of the elderly on

media exposure, which depends on their familiarity and convenience in using each kind of medium.

Healthy behaviors from the use of digital technology

Most of the elderly started to learn how to use communication tools increasingly. Primarily, due to social environment and values, the elderly needed to use them for communicating with other people. Besides, communication tools could provide facilities for the elderly. From the data collection, the elderly preferred using online media for accessing information about exercises, food, health care during sickness, including general information for leisure. The finding accords with the interview given by an elderly sample, "I selected information from the programs and applications as guidelines for having good food and exercises. I also read medical opinions on how to prevent some diseases."

The Development of Communication Guidelines for Network Affiliates

From the study, the findings can be developed to be appropriate communication guidelines for network affiliates to enhance the elderly's well-being through digital technology, based on four communication components as follows:

Sender

From interviews with network affiliate personnel, it was found that the communication of network affiliates still faced limitations in public relations for creating awareness of the elderly in the area genuinely. From the findings, it was recommended that senders plan their PR strategies in sequence for driving their public communication effectively and bringing about concrete efficiency for receivers.

Message/ Content

To develop rational or emotional message strategies for persuading receivers and responding to their needs, senders should consider using short, brief, and easy-to-understand messages with some illustrations, but avoid using technical terms or academic vocabularies. Message design is another indicator for evaluating if certain communication succeeds or fails. If receivers do not understand or misinterpret, it means that the constructed message or codes cannot convey the desired meanings to the target receivers.

Channel/ media

The elderly were found to be exposed to the information for learning digital technology on health care from both mass media and online media. However, network affiliates missed a communication channel, namely mass media. Thus, developing media usage strategies requires integrated media, both offline and online, with consideration on convenience, accessibility, media coverage, credibility, depending on the potential and readiness of receivers' media exposure.

Receivers

From the study, it was found that communication of network affiliates still could not create awareness for learning the use of digital technology on health care for the elderly widely and inclusively in all areas. Besides, senders must develop strategies of audience analysis to help them know the audience or receivers' demographic data, which helps to anticipate their reception behaviors, determine message or content and communication channels in response to receivers' interest, satisfaction, and needs. The following aspects of the receivers should be considered: demographic, psychological, needs, and environmental aspects,

including geographic aspects, locations of communities, related knowledge, and existing media in the area. All mentioned components will help senders to plan their communication more effectively.

Discussion

1. In the study of a communication process of network affiliates in applying digital technology for promoting the elderly's being, all components of a communication process: a sender, message, channel, and receiver, based on Berlo's model of a communication process of SMCR of both internal and public communication, were examined. The study, showed that communication effectiveness does not depend only on some components, but every component is all related. Therefore, an awareness of good communication planning can enhance more effective and efficient communication. From analyzing each component in the communication process of network affiliates, the following results were found:

1.1 Sender: From the communication strategies used by senders, it reflected the senders' communication skills, knowledge, and capabilities. Especially, the senders' skill is the key factor in the communication process. Typically, a sender with skills and capabilities can lead to effective design of other components subsequently. Source credibility is another important qualification of a sender and a major mechanism for persuading receivers to comply with the sender and to induce receivers' behaviors towards the goal intended by the sender.

1.2 Message. From the analysis of message design strategy of Power (1995, as cited in Wirachai Tangsakul, 2006) which reflects communication objectives, the determination of target receivers,

and main content of the message, it was found that network affiliates gave importance to the creation of message by concerning about the modification of message to be suitable for the target receivers, including the selection of types of media for transmitting content that can be stored properly and formally, i.e., a written report, which helps to present the operational performance transparently and being able to be audited to follow policies of each agency.

1.3 Communication channel. From evaluating the effectiveness of each media in various dimensions based on the concept of communication and communication process of David K. Berlo (1960), it was found that the selection of media reflects the senders' ability in integrating communication media, i.e., printed media, online media, and activity media. Each media opens an opportunity for receivers to respond to message immediately, which can also indicate the effectiveness of feedback and the receiver's participation. Especially, activity media is face-to-face communication in which all members can create mutual relationships. Besides, the media selected by network affiliates portrays the effectiveness of media in keeping the message, i.e., in the form of printed media, which can be tangible proof, traced back, auditable, and evaluated in the future.

1.4 Receiver: It was found that receivers' attitudes towards senders, the selection of media, and healthy behaviors, were all related to the needs of the elderly based on the concept of Clark (n.d., as cited in Kullaya Tantipalachiwa 1981). The finding accords with the study on the classification of the elderly's needs of Srithabthim Rattanakosol (1981), which found that most receivers, who were the elderly, wanted to spend their free time

usefully, have amusing activities with their friends, reduce their self-dependence, be accepted, and do what they wished to do. Besides, it was found that the use of digital technology could fulfill those needs of the elderly. Moreover, the elderly samples gained knowledge, understanding, and had a higher ability to making use of digital technology increasingly. Besides, it was further found that at present digital technology has connected with the elderly's way of living increasingly as it can facilitate them greatly in many ways. Mangan (2000) explains that technological changes will facilitate and better the elderly's quality of life and health, learning, communication, and socialization, including psychological aspects and mental health. It can say that digital technology is vital for the elderly's life in various dimensions, which brings about better well-being and quality of life.

2. From the findings, network affiliates used both internal communication in the network and public communication. For internal communication, network affiliates used the communication strategy or "complexity network" based on the concept of Harold J. Leavitt (1964) by collaboration with external agencies or agencies at the area level, which brought about integrated operation style, while using a variety of communication patterns simultaneously. Several collaborative networks induce communication between organizations that were a center of each network and communication of all members in the network of alliances or partners. The advantage of this communication pattern is when the network needs to extend the collaboration by having external partners or alliance organizations and agencies cooperate in the operation or to facilitate and coordinate all networks or members to operate together smoothly.

Regarding communication to the public, network affiliates used communication strategies: logical appeal and source credibility, to persuade the elderly or the target groups towards changes as intended by the senders. The finding is congruent with the criteria of the classification of persuasive strategies of Smith (2002). Such strategies are positive strategies that attempt to persuade receivers towards changes in cognitive, affective, and behavioral domains.

3. From the analysis of the communication process of network affiliates based on the classification criteria of communication directions into one-way and two-way communication (Berlo, K. D., 1960), it was found that the communication process of network affiliates was two-way communication in the form of meeting or consultation, including communication via online platforms. Due to this kind of communication, network members can convey their information and exchange their ideas reciprocally. At the same time, it provides an opportunity for members to express their ideas, which can reduce communication gaps and prevent misinterpretation. Importantly, two-way communication can also create morale and motivation, participation, and a sense of belonging, which can create empowerment in the network affiliates' operations

4. For the network affiliates' communication to the public, it reflects senders' strife to use communication strategies towards attitudinal and behavioral changes. Notably, such strategies, postulated from a psychological theory by Fishbein, M., & Ajzen, I. in 1975, assume that behavioral changes have to start with providing knowledge for the target receivers, which will firstly bring about attitudinal change towards compliance, supportive

attitude, and then behavioral changes eventually. Moreover, another strategy used by network affiliates is the strategy of persuading the target receivers to “Learn-feel-do” by activity media, i.e., workshops, which can stimulate receivers’ participation. Such strategies are one of the traditional and preferable methods that were found to yield satisfactory responses in many cases.

5. The communication process of the network affiliates indicates that each communication element and its relationship with other elements all affect communication outcomes. Such a notion supports Berlo’s communication model that all four elements (sender, message, channel, and receiver) are interrelated. If a sender is effective, but a channel and receivers are ineffective, communication will be inefficient. Likewise, if a sender is ineffective and a message is unclear, but media and receivers are effective, communication will be inefficient as well. Therefore, the most efficient communication can take place when all communication components are effective. The communication outcome can be both short-termed and long-termed in causing changes in receivers’ cognition, attitude, and behavior.

6. Regarding restrictions of the communication process between network affiliates and the elderly, it was found that the communication of network affiliates could create a perception for the elderly limitedly. Network affiliates could access and transmit their concept about the application of digital technology to only some elderly groups, which led to their changes in attitude and behaviors related to well-being. The researcher perceives that it may be caused by the internal working procedure of network affiliates, which is communicated among members of the internal network only. Besides, creating needed perceptions to the public that can

cover the population of every area requires the creation of collaboration with other concerned agencies, i.e., agencies at a provincial and district level to extend communication impact to reach the target group in a wider area. Still, such limitations are another challenge of the network affiliates’ operation, which necessarily emphasizes the decentralization of communication at a local level. According to Kriengsak Charoenwongsak (2000), the network management in the local area can be divided into many patterns based on types of networks: networks at a village level in sub-district areas, networks at a village level across sub-districts, networks between sub-districts or districts, networks at a sub-district level across districts, networks at a district level in a province, networks at a district level across provinces, and networks between provinces in a region. The decentralization of network affiliates thus can be done at a provincial or district level. Since the researcher perceived strengths of network affiliates’ dispersed branches and affiliated agencies in many areas. Therefore, if there is any delegation of responsibilities or a transfer of communication authority to an affiliated agency, i.e., at a district or provincial level, etc. it will help to bring about flexibility to work in a local area. Besides, practitioners of each field can communicate or publicize about the projects operated by the network affiliates to let the target group be informed to increase the chances of the target group to participate in the activities organized by the network affiliates increasingly. Moreover, the cooperation with affiliated agencies and the creation of collaborative networks with external agencies, i.e., provincial municipality or other concerned agencies in a province, will help to upgrade the connection of network-to-network structure that is

more complicated. Such connection structure will lead to a macro network, which will increase communication power more than the connection of the internal network within an agency only.

Conclusion

From the study, the following findings can be applied for developing appropriate communication guidelines for the network affiliates:

1. A sender must be concerned about developing communication and public relations skills and give high importance to the audience analysis to understand their characteristics and be able to design a message to respond to their needs.

2. For message, message design, language usage, and content creation must be updated. Information sources must be reliable and the content must respond to receivers' needs.

3. The selection of channels or media must consider environmental factors and receivers' readiness and potential. Communication with the elderly is delicate and needs thorough consideration. It requires proper strategic planning and media selection, including an understanding of receivers' media exposure behaviors.

4. Regarding receivers, it is important to analyze demographic variables of the elderly, which are diverse, in advance, to help a sender to be able to plan communication strategies effectively.

In short, all communication factors are important and interrelated. Communication is dynamic and all communication components have reciprocal effects. A thorough communication design and planning is a key factor leading to cognitive, attitudinal, and behavioral changes of receivers.

Recommendation

Recommendations for application

1. It was found that the communication process of the network affiliates still had some operational limitations as they could not reach the target receivers in the area genuinely. Therefore, communication of the network affiliates could not create an awareness to the elderly in many areas. It thus reflects some weaknesses of the network affiliates' coordination, which requires a decentralized network communication to strengthen the coordination among all concerned agencies and extend networks to include external collaboration to help mobilize communication operations to be maximally effective and efficient.

2. Similarly, public communication of the network affiliates also faced some limitations in communication and public relations. Typically, PR planning can be effective if receivers are assessed, and research and development (R&D) is conducted to analyze the environmental contexts and needs of the target receivers. By doing so, it helps to reduce the risks of developing any innovation while the results can yield the utmost benefits for the target receivers. Besides, two-way communication should be further supported to provide an opportunity for people or receivers to share their ideas, while a sender can acknowledge receivers' feedback. Such feedback can be used to improve more appropriate communication plans and guidelines in the future.

Recommendations for future studies

1. The findings of this research should be further studied in combination with the study of development communication in various dimensions to stimulate a design of proper communication

guidelines that can be applied for development in other contexts.

2. The research results should be used for conducting communication action plans through the use of digital technology to improve the elderly's quality of life. Besides, studies on the creation of communication innovation in the

context of digital technology should be conducted to catch up with changing values and social changes in the future.

Conflict of Interests

The authors declare no conflict of interests.

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