The Roles of Pragmatic Competence in Facing the Challenge of Industrial Revolution 4.0

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Abstract: Pragmatic competence has been known as one of the critical element aiming to employ successful communication acts. However, the existence of Industrial Revolution 4.0 has impacted several domains in economy, society, business, governments, and individual across countries around the world. Moreover, present skills and literacy is also facing disruptive change triggered by fourth industrial revolution which demands people to prepare to face the challenge. Consequently, pragmatic competence, as aspect communication skill, may be also facing the same fate. This paper discusses some theoretical reviews focusing on the roles of pragmatic competence in facing the challenge of industrial revolution 4.0. This review found that pragmatic competence plays critical roles in facing the challenge of industrial revolution 4.0 as one of 21th century multicultural literacy, social skill and global awareness. Through understanding on how critical the roles of pragmatic competence in facing the challenge of industrial revolution 4.0 are, it is expected that pragmatic competence should be taken account and taught in the classroom or outside the classroom to avoid misinterpretation, awkwardness, and confusion in interlocution within intercultural environment.

1 INTRODUCTION

To define a successful communication, a good communicative competence is required by both speaker and listener. According to Celce-Murcia, Dornyei, & Thurrell (1995: 10), this communicative competence covers four domains; linguistic competence, actional competence, socio-cultural competence, and strategic competence. Lacking one or more of these domains leads to misinterpretation, awkwardness, or even confusion. Therefore, each of these competences is very critical to have a successful communicative task.

Pragmatic competence shares similar aspect to communicative competence which is the connection between functional and situational of the language. In this regards, pragmatic construction in connecting between language use and sociocultural context has been an essential aspect of communicative competence (Canale & Swain, 1980). Since communicative competence aims not only to know grammatical rules and employ the rules in communication, but also to use the language

appropriately in certain context and situation, developing pragmatic awareness is important to have a successful communication in intercultural context. Therefore, one of the importance aspect in pragmatics is to aim a successful communication.

There are some discussions that concern on the importance of pragmatic competence especially in English language learning and teaching (McLean, 2004; Lin, Su & Ho, 2009; Krisnawati, 2011; Deda, 2013; Lankiewicz, Szczepaniak-Kozak, & Wąsikiewicz-Firlej, 2014; Tulgar, 2016), and in socio-cultural environments (Kescskes, 2015). They suggest that one of the important role of pragmatics in education is as a tool for learners that enables them to understand meaning from different perspective of intercultural view (Lin, Su & Ho, 2009; Lankiewicz, Szczepaniak-Kozak, & Wąsikiewicz-Firlej, 2014), how pragmatics is important for learners to learn the target language and use specific appropriate features in different contexts (Rueda, 2006; Krisnawati, 2011; Deda, 2013), and how pragmatic competence affects language users' behaviors (Kecskes, 2015). Thus,

the pragmatics aims to provide learners to aware and develop pragmatic competence that enables learners to have successful communication.

Furthermore, in fourth industrial revolution era, the social relation has shifted from face-to-face interaction, into simple and practical way through internet features (Schwab, 2016: 86). The potential of interaction between two different persons from different countries are highly possible. Regarding this, pragmatic competence might play important role in this fourth industrial revolution era, yet, the role of pragmatic competence in fourth industrial revolution has not been widely discussed. Most of them focused on the roles of pragmatic competence in education (Lankiewicz, Szczepaniak-Kozak, & Wąsikiewicz-Firlej, 2014; Krisnawati, 2011; Deda, 2013). It remains unclear whether pragmatic competence still serves as important role outside education field, especially in industrial revolution 4.0 era. Also, in what domain that pragmatic competence serves important role in industrial revolution 4.0 era. Therefore, this paper aims to discuss the role of pragmatic in the fourth industrial revolution era.

2 METHODOLOGY

This paper used theoretical literature review. Theoretical literature review is a summary of the prior work and interpretations of it (George, 2018: 22), and it covers all the scientific literature in a field, which in this paper was roles of pragmatic competence in facing the challenge of industrial revolution 4.0. By doing this, it is not necessary to review all of the past literature since the recent studies had already covered past theories (Willison, 2014). Therefore, the theories which were collected were derived from previous studies and books that relate to the topic of this paper which was roles of pragmatic competence in facing the challenges of industrial revolution 4.0.

3 LITERATURE REVIEW

3.1 Pragmatics

Skyrms (1984: 10 – 11) stated that Pragmatics was the study of relation between signs and the significations to the users. According to Leech (1989: x), Pragmatics could be defined as the study of how utterances have meanings in situations in

which the events are taken place. Regarding these, pragmatics deals with implicit meaning in specific context and situations in which sentences were uttered. It is also confirmed by Mey (2004: 6) who says that Pragmatics studies the language use in human communication as determined by the conditions in the society in which communication is occurred.

Another definition of pragmatics was suggested by Bezuidenhout (Mey, 2009: 913) who stated Pragmatics concerned with linguistic performance by using sentences to create a successful communicative task, rather than competence. However, Prince and Kasher (Bezuidenhout in Mey, 2009: 913) argue that to put performance and competence in separate way in the focus of Pragmatics is incorrect. Moreover, they assume that Pragmatics also encompasses the rules or a module concerning the use of certain linguistic forms with certain function.

According to Thomas (2013: 1 – 2), "the most common definitions of pragmatics were: meaning in use or meaning in context." The extended explanation on Pragmatics is stated by Korta & Perry (2015) who say that this study deals with utterances, meant by specific events, the intentional acts of speakers at times and places, involving language as a medium. In this view, pragmatics not only focus on the implicit meaning, but also the relation of the meaning with the situations that the sentence is used. This argument suggests that Pragmatics deals with performance which is governed by certain linguistic structures and features to achieve a successful communication in social context.

3.2 Pragmatic Competence

Chomsky (Kecskes, 2015: 2) states that pragmatic competence involves 'knowledge of conditions and manner of appropriate use, in conformity with various purposes'. It is different from grammatical competence, which Chomsky claims that it is related only to language form and meaning. Horn & Ward (2001: 451) suggest that linguistic does not specifically underlie the type of competence in the process of pragmatic interpretation which is involved in the understanding of human action in general. Thomas (McLean, 2004: 75) agrees that the difference between pragmatics and grammar is that pragmatic meaning does not rely on the form of the words or sentence alone. It can be inferred that pragmatic competence focuses on the implicit meaning rather than meaning based

on the linguistic forms. It is supported by evidence of some researchers (Rueda, 2006: 171) that a high grammatical competence does not always indicate that language users can apply a successful pragmatic performance. Regarding this, grammatical competence and pragmatic competence are two separate elements which do not show any interrelation towards one another.

Retnowaty (2017: 74) defines that pragmatic competence is a communication skill of target language which aims to use the target language features to create and respond intended meaning. Then, Kasper (Wyner & Cohen, 2015: 521) elaborates more about pragmatic competence "as knowledge of how to use language to achieve goals in language interaction, or rather, competence of language interaction in a sociocultural context." Therefore, the pragmatic competence can be defined as knowledge and skill of how language is appropriately used in certain contexts in sociocultural environments.

There are some authors and researchers that refer pragmatic competence as pragmatic ability (Ifantidou, 2014; Sickinger & Schneider, 2015). Taguchi (2012: 6) agrees that pragmatic competence is the ability to use appropriate language in certain context of social environment. Ifantidou (2014: 38) also adds that pragmatic competence is the ability of language users to communicate appropriately in different socio-cultural situation. This is similar to Sickinger & Schneider (2015: 115) who suggests that pragmatic competence, which concerns more on the context-sensitive, is defined as the ability to use language features for achieving particular communicative goals. Therefore, the lack of pragmatic competence might lead to the failure of communication acts, such as, misinterpretation, awkwardness, and misunderstanding. Based on these theories, pragmatic competence can be defined as ability of language users to use linguistic features appropriately within sociocultural context as a medium to successfully communicate with people and avoid communication failure in using any pragmatic features for given context.

Wyner (2014: 85) claims that pragmatic competence consists of two components; pragmalinguistics and sociopragmatics. According to Leech and Thomas (Wyner, 2014: 85), pragmalinguistics covers linguistic forms used for successful communicative acts. On the other hand, sociopragmatics encompasses appropriate social behaviors of language users who are aware of the consequences of the pragmatic choices that they use in sociocultural situation. These components are similar as what Kasper (McLean, 2004: 76) defines that pragmalinguistics as linguistic knowledge used for expressing speech acts in communication, while sociopragmatics covers the social perceptions of language users that underlies their interpretation and performance of speech act influenced by several aspects, such as, gender, social distance, relationship, etc.

Despite the components of pragmatic competence–pragmalinguistics and sociopragmatics – Leech (Krisnawati, 2011: 111 – 112) proposes that pragmatic competence may cover several elements; 1) language level of adaptability with pragmatics rules; 2) focus level on pragmatics in term of social and cultural differences; 3) The level of understanding certain situation; 4) time and place where utterances are applied. These elements are crucial in developing a successful pragmatic communication in sociocultural situation. These elements are crucial in developing the successful communication in social interaction. Moreover, these elements are simplified by Bialystok (Rueda, 2006: 173 – 174) who elaborates that pragmatic competence includes three key important elements. First element is the speaker's ability to use any linguistic forms for specific purposes which is to employ speech acts. Second element is the listener's ability to understand the speaker's real intention in an utterance (e.g. indirect speech acts, irony and sarcasm). The last element is the command of the rules by which utterances are applied coherently by interlocutors and creating a discourse.

3.3 Industrial Revolution 4.0 Era

3.3.1 Three Industrial Revolutions Stages

According to Marope (International Bureau of Education, 2017: 82 – 83) "the lag time between four industrial revolutions is shrinking, while the complexity between one and the next grows exponentially." The first industrial revolution was introduced in 1800s by the existence of mechanical production facilities which were helped by water and steam power. This had brought "the transition from manual work to the first manufacturing processes," (Rojko, 2017: 79). One of the facilities was mechanical loom in 1784.

The second stage of industrial revolution was triggered through the introduction of the division of labor mass production which was helped by the power of electrical energy (Penprase, 2018: 209). One of the example of this revolution was the assembly line of the mass production of the Ford T-

Model car in 1870. However, this mass production was lack of possibility of products' customization.

The third industrial revolution was introduced "through the use of electronic and IT systems that further automate production" (Marope in International Bureau of Education, 2017: 82). One of the example was programmable logic controller in 1960. This digitalization with introduction of microelectronics and automation characterized the third industrial revolution. According to Rojko (2017: 79), third industrial revolution provides flexible production in manufacturing, "where a variety of products is manufactured on flexible production lines with programmable machines." However, this production was not flexible regarding the quantity of products.

3.3.2 Fourth Industrial Revolutions

According to Marope (International Bureau of Education, 2017: 85), in industrial revolution 4.0 era, technology will more insidiously pervade all aspects of life, rather than just avant-garde technologies production. Today, the fourth industrial revolution is characterized by the development of Information and Communications Technologies (ICT), and through the use of cyber-physical systems, the internet of things (IoT), the cloud, augmented reality, autonomous robots, cyber security, simulation, etc. 3D printers is one of the example of the introduction of industry 4.0. Despite the digitalization and new advanced technologies, fourth industrial revolution is also triggered by the demand by industrial manufacturing to increase the profit with lower work costs (Rojko, 2017: 80). Hence, industry 4.0 offers a promising solution suitable for decreasing costs of industrial production by using advanced technologies and internet services that allow manufacturers to flexibly produce mass custom products with flexible quantity (Rojko, 2017: 80)

The definition of industry 4.0 was coined at the Hannover Fair in Germany in 2011 as a strategy to decrease the rising competition from overseas and to differentiate German and European Union industries from other international markets (Pascall in Morrar, Arman & Mousa, 2017: 14). Moreover, the definition of fourth industrial revolution, proposed by National Academy of Science and Engineering (Liao et al., 2018: 13), was "as the technical integration of Cyber-Physical Systems (CPS) into manufacturing and logistics and the use of IoT in industrial processes." However, Schwab (2016: 12) implies that "the fourth industrial revolution… is not

only about smart and connected machines and systems." Schwab (Shahroom & Hussin, 2018: 316) also adds that the fourth industrial revolution is a phase in the development of knowledge in which the lines between physical, digital and biological worlds are fading. The difference between fourth industrial from previous revolutions lies in the fusion of technologies (Internet of Things, Artificial Intelligence, Cyber Security, etc.) and their interplay across the physical, digital and biological worlds (Schwab, 2016: 12). Therefore, industrial revolution 4.0 is a stage of how the advanced technologies interact toward physical, digital and biological domains to erode the boundaries of these domains.

4 DISCUSSION

4.1 Pragmatic Competence in the Fourth Industrial Revolution

Since pragmatic competence concerns on the ability of language users to use linguistic forms and features to achieve a successful communication in sociocultural environments, it is believed that this competence plays important role in the era of industrial revolution 4.0 where digital media is connecting people in new ways which enables them to maintain relationships across time and distance as a part of social activities, and/or as participants to face the challenge of industry 4.0. Moreover, fourth industrial revolution also demands new talent who has required skills development to work in a company which is in facing competitiveness toward international companies (Geissbauer, Schrauf, Koch, & Kuge, 2014; Deloitte, 2015; Khan & Turowski, 2016). There are three domains where pragmatic competence play important role in industrial revolution 4.0 era; pragmatic competence in multicultural literacy, in social skills, and in global awareness. These literacy, skills, and awareness are important to face the challenge of industrial revolution 4.0.

4.1.1 Pragmatic Competence in Multicultural Literacy

Along with the development progress of industry 4.0 in some countries and region (Liao et al., 2018), the industrial revolution 4.0 provides potential impact on the economy, business, governments and countries, society and individuals (Schwab, 2016: 31). As supported by Hobsbawm (Penprase, 2018: 208) that industrial revolution is not only

acceleration of economic growth, but it is rather an acceleration of growth triggered by economic and social transformation. It can be seen nowadays that how society reacts to the development of technologies, and how they make use of these technologies.

In the era of fourth industrial revolution, the need of human resources, who are literate, is one of the demand in most of industries. The 21st century requires people to have multiple literacies and to apply them as needs arise (Marope in International Bureau of Education, 2017: 87). Despite the ability of reading, writing and counting, there are several literacies that are required for people to participate fully in industrial revolution 4.0, such as, digital literacy, information literacy (Aberšek, 2017: 28), and multicultural literacy. Schroeder (2011: xvii) emphasizes that multicultural literacy is the ability to engage and understand the world from diverse perspectives, or in other word, diversity. Therefore, multicultural or multilingual literacy plays important role in industrial revolution since it reflects how human interaction is (Mayuni, 2019).

According to Schwab (2016: 95), despite the more digital and high-tech which are offered by fourth industrial revolution, the greater need of human interaction maintained by close relationships and social interactions. In this fourth industrial revolution era, social relationships seems are without boundaries. Through social media and other internet features people can interact with people from different time and places. Moreover, the quality of social interactions and relationships can be influenced by the level of multicultural literacy possessed by the people in the community. According to Skiba (2017: 35), the peaceful in multicultural environment is supported by knowledge learned from other culture. Regarding this, pragmatic competence shows important role in developing multicultural literacy, since pragmatic competence deals with the knowledge of different cultures. Therefore, pragmatic competence is important in developing multicultural literacy to create strong relations in facing the challenge of industry 4.0.

4.1.2 Pragmatic Competence in Social Skills

Despite the impact on society and economy, industrial revolutions also impact on education (Aberšek, 2017; International Bureau of Education, 2017; Penprase, 2018; Shahroom & Hussin, 2018). The fourth industrial revolution demands different quality of workers. Hence, according to Aberšek (2017: 18 – 20) education needs to develop model of the 21st century education that can produce hardworking and self-educated human resources with critical thinking, creative and emotional intelligence skills.

Furthermore, according to World Economic Forum (2016: 20 – 21), industrial revolution 4.0 has also impacted on core work-related skills. One of the crucial skills are social skills. Social skills are part of cross-functional skill that is crucial in facing the disruptive change triggered by industry 4.0. These social skills cover several elements; emotional intelligence, coordinating with others, negotiation, persuasion, service orientation, training and teaching others.

Emotional intelligence encompasses four elements; self-awareness, self-management, social-awareness, and relationship management (Aberšek (2017: 39 – 40). Self-awareness involves emotional self-awareness which is the ability to recognize and understand individual's emotion (Riedi, 2014). Second element is self-management which involves achievement orientation, adaptability, emotional self-control, positive outlook. Third element is social awareness which covers empathy and organizational awareness. The last element, relationship management, encompasses conflict management, coach mentor, positive influence, inspirational leadership, and teamwork.

These four elements of emotional intelligence are part of social skills, which means people play role as human beings in society. Another elements of social skills, such as, coordinating with others, negotiation, persuasion, service orientation, training and teaching others, also play important role in human interaction. Marope (International Bureau of Education, 2017: 87) also adds that interaction with others, especially, working with others is required in 21st century skills, and "this is also a key competence for social cohesion, harmony, justice…and ultimately for a peaceful and reconciled future." These elements of social skills will be in higher demand across industries (Consumer; Energy, Financial Services and Investors, Healthcare, Information and Communication Technology (ICT), Media, Entertainment and Information, Mobility, and Professional Services) than technical skills, such as programming or equipment operation and control (World Economic Forum, 2016: 22).

Hence, pragmatic competence helps people develop social skills, because one of the components of pragmatic competence is sociopragmatics which focuses on culture-specific involving the knowledge of what is considered appropriate in a given specific

context (Sickinger & Schneider, 2015: 116). It is supported by Penprase (2018: 222) who claims that social relations and interactions are crucial elements in fourth industrial revolution. Henceforward, pragmatic competence, which deals with social interaction in intercultural context, facilitates people to gain knowledge of given context, and to react and express themselves as social actors by using appropriate language in that particular context (Deda, 2013: 69). Regarding these theories, pragmatic competence plays important role to develop social skills of people in facing industrial revolution 4.0.

4.1.3 Pragmatic Competence in Global Awareness

The ability to recognize and understand interrelationships among international community, regions, public and private economic entities, sociocultural groups, and individual across the globe is called as global awareness (The North Central Regional Educational Laboratory and the Metiri Group, 2003: 30). To develop global awareness, one should understand the every key elements of target culture or community. It has been mentioned before by Kasper (Wyner & Cohen, 2015: 521) that pragmatic competence provides "knowledge of how to use language to achieve goals in language interaction, or rather, competence of language interaction in a sociocultural context." Pragmatic interpretation is also involved in the understanding of human action in general (Horn & Ward, 2001: 451). Hence, learning pragmatic competence offers understanding of different cultures, and provides the learners to react to the communication acts employed by targeted cultures.

Other than understanding how national cultural differences impact the interpretation of events at the global level, and understanding the impact of ideology and culture on national decisions about access to and use of technology, one of crucial elements in developing global awareness is to participate in the global society by staying current with international news and by participating in the democratic process (The North Central Regional Educational Laboratory and the Metiri Group, 2003: 30). To participate in the global society, language is used as medium to connect people and share ideas. Since language is a medium to help people perform social functions and develop interpersonal relationships in global society,

pragmatic competence, which is the ability to convey and interpret appropriate meaning in social communication, is important to be developed by people to be competent speakers in international community (Taguchi, 2009: 2). It has been proved by research in linguistic anthropology and language socialization that claims "pragmatic competence is part of human social cognition and develops naturally as linguistic and cognitive abilities mature," (Taguchi, 2009: 4). Thus, to develop these awareness, pragmatic competence is important to help people achieve awareness and knowledge of varied culture required for facing industrial revolution 4.0.

5 CONCLUSION

Despite the important role of pragmatics in education as a tool for learners that enables them to understand meaning from different perspective of intercultural view, to learn the target language and use specific appropriate features in different contexts, namely pragmatic competence, and how pragmatic competence affects language users' behaviors, it is unclear that pragmatic competence shows important role in industrial revolution 4.0 era. However, this paper suggests that pragmatic competence has important role in the fourth industrial revolution.

One of the role of pragmatic competence in fourth industrial revolution is in multicultural literacy. In this fourth industrial revolution era, social relationships seems are without boundaries, making people can have interaction with others without concerning time and geographical distance. Through digitalization and new technology, they fade the geographical boundaries in society around the world. It can be seen nowadays that how society reacts to the development of technologies, and how they make use of these technologies to participate in social interactions in sociocultural environments. The development of this intercultural relationships demand the need of multicultural literacy to avoid misinterpretation and miscommunication. Pragmatic competence offers interpretation and understanding of different cultures. By developing pragmatic competence, it allows people to have different perspective of targeted culture.

The other domain of the important role of pragmatic competence is in social skills. In industrial revolution 4.0 era, interaction with people from different countries is very possible through online communication features. Moreover, interacting with others has become important skill

required in 21st century skills. The role of pragmatics competence is important to help people have a successful communication acts in sociocultural context.

Pragmatic competence also plays important role in global awareness. To develop the ability to recognize and understand interrelationships among international community, pragmatic competence provides learners to not only develop awareness and understanding, but also provide learners with appropriate language features that help them participate in every social process. Participating in the social context is an important element in developing global awareness for facing fourth industrial revolution era.

As stated by Schwab (2016: 92), "the fourth industrial revolution is not only changing what we do but also what we are." Thus, developing pragmatic competence holds critical role in facing the challenge of industrial revolution 4.0. Pragmatic competence helps people develop critical skills, literacy and awareness required to be fully participated in this rapid growth triggered by fourth industrial revolution.

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