Open Access **Baghdad Science Journal** **P-ISSN: 2078-8665**
2021, Vol. 18 No.2 (Suppl. June) **E-ISSN: 2411-7986**

DOI: http://dx.doi.org/10.21123/bsj.2021.18.2(Suppl.).0975

Community Perception on Smart Engagement: Case of Kubang Pasu Local Government

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Received 28/3/2021, Accepted 14/4/2021, Published 20/6/2021

Abstract:

Implementing smart community engagement should consider careful planning and collaboration with numerous stakeholders, including the community. The technology and program must be designed to frame its purpose and should link back to specific goals of implementing smart community engagement. Digital services do not guarantee a smart engagement between the community and the local government. This is the case for the Kubang Pasu local government where several online services have been provided in their attempt to implement the smart community concept. However, understanding on the preferences of features and requirements of existing web-based systems and the impact of these systems is lacking. Therefore, a perception study needs to be conducted to obtain information regarding smart community engagement implementation. This study aimed to discover the community's perceptions on smart community engagement, specifically for Kubang Pasu in terms of its local context. To achieve this, a combination of interview and online survey was employed involving stakeholders of several organizations and 309 respondents among the community in Kubang Pasu. Result of the interview and survey revealed moderate engagement between the community and organizations due to low awareness, moderate engagement between the community and local authorities, low exposure to online services, as well as the weaknesses of the current online systems. It can be concluded that the satisfaction level of the respondents with officers at the organizations was only moderate. The implementation of e-services could reduce face-to-face interactions, which could help to improve the satisfaction level. This could also help in moving toward the smart community engagement concept. Therefore, the smart communication method via social media, email, and website could be employed to increase the low rating of public engagement with the authorities. This move will foster the prompt implementation of smart community engagement.

Key words: Community engagement, E-services, Online system, Perception

Introduction:

The vision of smart community engagement is quickly becoming a reality with the advancement in telecommunication technologies. Advances in information and communication technology (ICT) will ease the lives of the community and increase efficiency and sustainability that can be capitalized by the local governments. Their aims are to increase operational effectiveness and satisfy the needs of their community. It is predicted by the United Nations that in 2020, 2.6 billion people will use smartphones worldwide and between 20 and 30 billion things will be connected. It is also predicted that by 2050, 66% of the global population will be well connected. The world is progressing toward the smart district or city or community concepts by implementing new technologies in different attributes of interests. The advantages of a smart community include higher quality of living, increased productivity through the use of ICT, and easy access to information.

The community is the main player in this smart concept besides technology because a smart

community is closely related to a smart city/district. The relevance of ICT and its applications should be in alignment with the citizens of the district when planning the smart district concept. Desouza and Bhagwatwar (2014) studied on how new technologies contributed toward the promotion of community engagement (1). Their findings showed that technologies could be used to foster community engagement by deploying technology-enabled participatory platforms for civic engagement. In this sense, smart engagement uses a combination of the Internet of things (IoT) devices, software solutions, user interfaces, and communication networks.

The concept of smart community engagement is widely and differently understood. The main elements of a smart community are ICTs, their successful implementation, and smart citizens. Understanding the concept of engagement between the community and local government is important for the local council/government in building relationship (2). Furthermore, the study highlighted that relationship should be established in solving management between the community and local government. Awareness of the society is always overlooked by the local council while trying to develop smart community engagement (3). Failure to examine the awareness will likely have a negative impact on the performance of any project. Therefore, the current status and expectations of the local community need to be examined and a clear action plan needs to be set by the local council in creating an effective community engagement.

The government of Malaysia has started to encourage all local authorities to generate new ideas and new modes of promoting smart planning, smart management services, and smart administration, which include smart community engagement. Scholars have identified the challenges that need to be met in moving toward smart community engagement (4). These include digital illiteracy, Internet accessibility, digital divide, data management, and institutional framework. In the Malaysian context, (5) stated that Malaysia is in the second place in terms of broadband usage in the ASEAN region. However, there are some challenges and problems faced by the community in ICT usage. According to Siti (2014), among the problems and challenges faced are limited infrastructures, incapability to buy ICT equipment, lack of knowledge on ICT use, lack of skills, and lack of training in ICT use (6). This somehow will influence the acceptance on the smart community engagement concept.

The application of ICTs in the smart community engagement concept involves the acceptance and willingness to use technologies by its community. Saunders and Baeck (2014) stated that "new technologies and data streams will only be beneficial if they are accompanied by changes in culture – a greater willingness to engage with data, incorporate new technologies into traditional workflows, and to embrace the potential of 'bottom–up' solutions" (7). Therefore, one of the main concerns in the context of this study is the current status of engagement between the community and Kubang Pasu local government, which needs to be changed toward the implementation of smart community engagement.

In implementing smart community engagement, it takes careful planning and collaboration with numerous stakeholders, including the community. There must be a purpose that frames each technology and program, and this purpose should link back to specific goals (8). These goals might include having systems for complaints and information dissemination, workshops for ICT training, and good ICT infrastructure. Not every local government can follow the same approach for smart community engagement transformation. However, it helps to study other smart community engagement initiatives to learn what works and what does not. Questionnaires can be used to gather information from the communities (2, 9-11). Nevertheless, not all questionnaires can be fully adopted if the communities are from different parts of the world with various types of local administration and communities alongside different cultures and practices.

This paper relates the finding of a study on the Kubang Pasu City Council (MPKP), Kedah in its effort to implement smart community engagement in the near future. The study attempts to answer several questions related to community engagement in the district, which are: i) what is the current status of community engagement?; ii) can the present e-services support the concept of smart engagement?; and iii) what is needed to provide the best communication channel to support the concept of smart community engagement? Therefore, one of the study's aims is to develop a questionnaire as an instrument to collect data, which can determine the requirements for smart community engagement. Findings from this study will provide insights into the current community engagement, which can be used in the planning of smart community engagement. It is also hoped that the developed questionnaire can be used by other similar local authorities to conduct studies in pursuing their smart community engagement. The rest of the paper is organized as follows. The next section focuses on studies related to community engagement and how

engagement is supported by technology. This is then followed by the method that has been adopted in carrying out this study. The results and findings are then presented, followed by the conclusion and recommendation for future research.

Background and Related Studies:

This section discusses previous research related to community engagement and the use of ICT in community engagement.

Community engagement

Promoting community engagement through the use of technology has been studied by Mehra, Sikes, and Singh (2020) to bridge rural digital divides (9). The respondents were rural librarians where the investigation was on their community engagement initiatives through the use of technology. Social media was found to be the most used technology in the community engagement between librarians and the community. A study by Corbett and Le Dantec (2018a) explored community engagement practices across municipal departments and agencies in a large United States city (2). Interviews were conducted across different departments, including elected and professional city employees to understand how different domains within the local government define and practice the work of engaging residents. One of the outputs of this study suggested that digital intervention could produce more productive participation from the residents. Raising awareness among the residence that a department exists in is also crucial in community engagement.

Corbett and Le Dantec (2018b) explored trust in digital civics. In this context, research on digital civics is to understand how technology can create new forms of relationships and services between public officials and citizens in governance (10). The study focused on the utilization of trust to support the work of community engagement. Crowdsourcing had been suggested by Haltofova (2018) to foster community engagement. The result of the study showed that crowdsourcing could facilitate participative processes (12). Moreover, crowdsourcing could significantly contribute toward the openness and accountability of decision-making. The results indicated that the crowdsourcing initiatives were able to foster community engagement and provided useful input data not only to public officers but also to the community.

Local governments have started to engage smart communities in the innovation of public services' delivery (13). Managerial and technological issues have to be considered by the public managers/local governments when planning a smart community. One of the issues is the importance of interacting and collaborating with the community to increase internal awareness and legitimation. Christensen and McQuestin (2019) presented the findings of a census probing community engagement practice in Australia's local government. Their study focused on the aspects of frequency of council engaging, council engaging approach, factors driving the council community engagement, engagement process, and council engagement method (14). These aspects were considered important in designing smart engagement between the council and the community. Cabitza and Locoro (2017) used a set of questionnaires that concentrated on gathering information related to preferences and requirements for web-based systems to promote community engagement (11). In their study, the impact of the online systems was also evaluated.

Technology and community engagement

Delitheou, Bakogiannis, and Krriakidis (2019) investigated the contribution of new technology in the promotion of community engagement (3). Their findings suggested that for improvement of the community communication method, the use of social media would allow better public information and suggestion. In the study on assessing the smart readiness of local councils in Mauritius, Gobin-Rahimbux et al. (2020) stated that the prospect of becoming smart required the services to become computerized, intuitive, and efficient. On that account, smart community engagement should be utilizing online systems provided by the local council (15). Wood and Fowlie (2013) highlighted the effectiveness of using community communicators to increase trust and positive perceptions of the local government amongst the community (16). Furthermore, policy makers and those involved in the delivery of public services are encouraged to consider how new social marketing approaches can benefit their community.

Lindskog (2004) stated that ICT and its applications could facilitate the involvement of all parties in the development of the community (17). ICT infrastructure and applications are prerequisites. Nevertheless, without real engagement and willingness to collaborate and cooperate between public institutions, private sector, voluntary organizations, schools, and citizens, there is no smart community. In this study, the phenomenon of smart community in Australia encompassed a higher order of community engagement. In the Australian approach, the role and roll-out of broadband infrastructure were

stressed as enablers for a much more sophisticated generation of smart community initiatives.

The growth of social media offers an opportunity to engage a broader geographic area or community. Social media platforms, such as Facebook, Twitter, and Instagram, are designed to connect people and to share information through many-to-many interactions. Social media provides channels not just for mass dissemination, but also for collaboration. In a study by Williamson and Ruming (2019), it was reported that social media channels were used to engage Sydney's citizens during the preparation of district plans (18). Therefore, the type of communication media is another aspect that needs to be taken seriously in the implementation of smart community engagement.

Internet-enabled communication technologies have been adopted in engaging with the public. However, questions remain unanswered regarding the capacity of Internet-based communication methods to reach a broad audience. Existing research illustrates how the value of Internet participation diffe rs considerably between population groups, depending on variables such as age, education level, and interest in the planning process (19). Therefore, the infrastructure for Internet access will need to be put in place to enable smooth communication between the local government and community. The city of Durham highlighted five steps in its blueprint toward building equitable community engagement (20). The steps are as follows: i) what is the level of engagement?; ii) who should be engaged?; iii) how should the engagement be?; iv) how to measure successful engagement?; and v) how to build long-term engagement? Emphasis on the use of technology was not highlighted. However, in developing smart community engagement, Internet technology elements will be of focus in enabling the local government to effectively communicate with the community.

Fifth generation mobile networks offer ultra-high speed and high capacity. Furthermore, they enable massive machine-to-machine communications, which have brought about the commercial launch of the fifth generation services and applications in Hong Kong in the year 2020. This digital communication infrastructure has been included in the Smart City Blueprint of Hong Kong, along with elements of smart government (21). It can be seen that the use of ICT in general, and social media in particular, will enhance the engagement between the community and the local authority.

Methodology:

The present study was carried out in three phases to achieve the objectives. The first phase was the questionnaire development, followed by the second phase where the pilot test was performed to validate the questionnaire. The third phase focused on the actual survey. The validated questionnaire was used to conduct the data collection. Once all the data had been collected, the process of obtaining the results, the analysis, and interpretation of the results were performed.

Questionnaire

A questionnaire was designed and developed to collect data on the current practice and expectation of the community in Kubang Pasu regarding community engagement. The questionnaire was constructed based on the analysis of similar studies found in the literature. Items in the questionnaire were adopted and adapted from (2, 9-11).

The questionnaire contained 21 items in four sections: i) demographic data of the respondents; ii) current practice of community engagement; iii) engagement status and feedback from MPKP; and iv) respondents' suggestion toward the smart community concept. Table 1 summarizes the sections of the questionnaire.

Table 1. Items in the questionnaire and corresponding number of questions

Section	Name	Number of questions
Section A	Demography	6
Section B	Current practice of community engagement	8
Section C	Engagement status and feedback	5
Section D	Smart community engagement	2
TOTAL		21

The questionnaire was designed in Bahasa Melayu (Malay language) to cater to the nature of the Kubang Pasu community, in which a majority of them speak in Malay. The questions in the first three sections were designed as close-ended, whereby the respondents could choose one of the given options. A five-point Likert scale was also employed for several questions. Open-ended questions were provided in Section D so as to allow the respondents to provide their suggestions on: i) enhancing the present online systems, and ii) new systems that can be provided for the community.

Pilot test

Online surveys were conducted on the Kubang Pasu community, stakeholders, and ICT service providers. In evaluating the reliability of the questionnaire, a pilot test was conducted in April 2020 involving 34 respondents who were randomly selected in the Kubang Pasu district. The questionnaire was implemented and launched online for two days through Google platform. Simple random sampling was employed in selecting the samples. Invitations to participate in the pilot study were sent to the Kubang Pasu community through MPKP's website and social media platform. Invitations were also channeled through other social media platforms such as the community's WhatsApp groups.

In order to ensure that the questionnaire functioned effectively, a reliability test on 14 items using Cronbach's alpha was conducted. The alpha value of this pilot study was 0.88. Sekaran (2013) suggested that a Cronbach's alpha reliability score of more than 0.8 is considered excellent (22). The questionnaire was improved for further clarity based on the information obtained from the pilot study before the data collection for the study could be implemented.

Actual Survey

In the actual survey, the data were collected using a combination of interview and Internet survey involving a total of 309 respondents. The collected data were coded into Microsoft Excel sheets. IBM SPSS Statistics Version 25 was used to analyze the data using descriptive and inferential statistics.

Result and Analysis

The collected data were coded into Microsoft Excel sheets. IBM SPSS Statistics Version 25 was used to analyze the data using descriptive and inferential statistics.

Results and Findings:

This section presents the results and analysis of the study that are divided into three main subsections, namely descriptive analysis, hypothesis testing, and discussion.

Descriptive Analysis

A total of 309 respondents participated in the study on voluntary basis, comprising 53% female and 47% male. About 91% of the respondents were aged between 20 and 59 years while less than 1% were below 20 years old, and about 8% were 60 years or older. This showed that the younger communities and the elderly were not the main player in community engagement. In terms of the town where they reside, about 59% of the respondents were from Jitra, followed by 18% from Changloon, and 12% from Bandar Darulaman. The remaining 11% were from other towns in the Kubang Pasu district. Figure 3 shows the distributions of the respondents' occupation, whereby almost half of them (141) were in the public sector. The respondents' education level was also analyzed. The results suggested that 118 (38.2%) of the respondents held a Bachelor degree as their highest qualification.

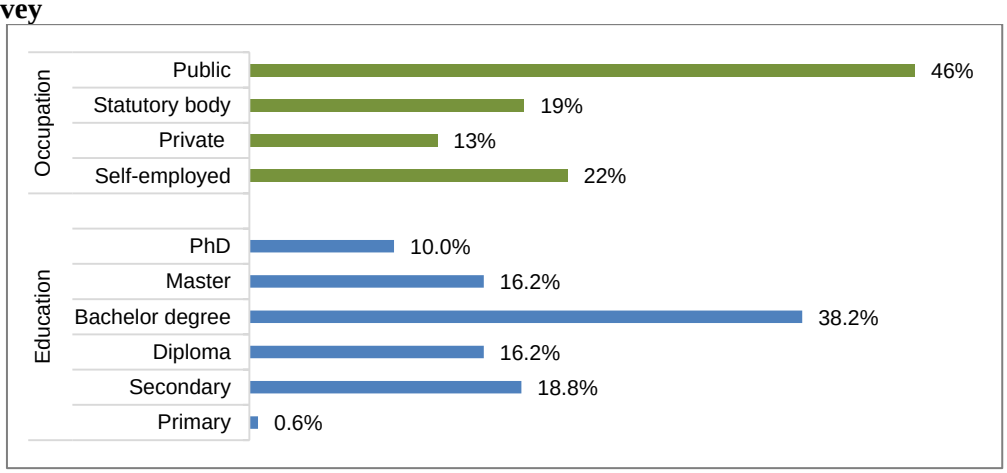

Figure 3. Respondents' background

In analyzing the smart community concept, about 56% (174) of the respondents indicated that they understood the concept. However, further analysis of the 174 respondents revealed that only about 22% (38) of them chose the correct definition of smart community. This indicated that they felt that they understand, but in actual fact, they did not truly understand the real concept of it. The following discussions describe the results of the survey, which are divided into two main subdivisions: the current status of community engagement in Kubang Pasu, and the communication status of the community in Kubang Pasu with organizations and service providers, particularly in the district. Discussions on these two aspects are to answer research questions 1 and 2, as well as achieving the third objective of this study.

i. Current status of community engagement

Among the important measures in determining the status of smart community engagement was to look at the methods utilized by the community in accessing and obtaining the information provided by organizations and service providers. This multi-answer question showed that social media were the most popular method, whereby approximately 87% (270 out of 309) of the respondents used social media platforms in obtaining information from organizations in Kubang Pasu. Figure 4 shows other methods used by the community.

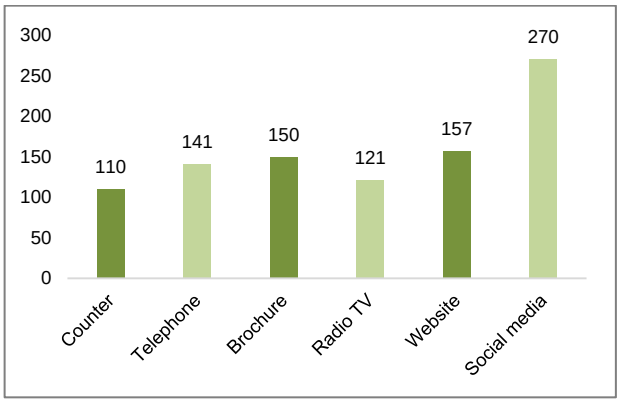

Figure 4. Methods of obtaining information

Communication method was also another important measure in determining community engagement with the organizations in Kubang Pasu. Since they were introduced, social media had become the best option for the community to communicate. The result for this multi-answer question revealed that social media outnumbered other verbal approaches such as telephone and direct communication at the counter in the communication between the community and organizations in Kubang Pasu. However, telephone as a means of communication still remained as one of the popular methods. The least popular type of communication was through writing letters. Other methods of communication are shown in Figure 5.

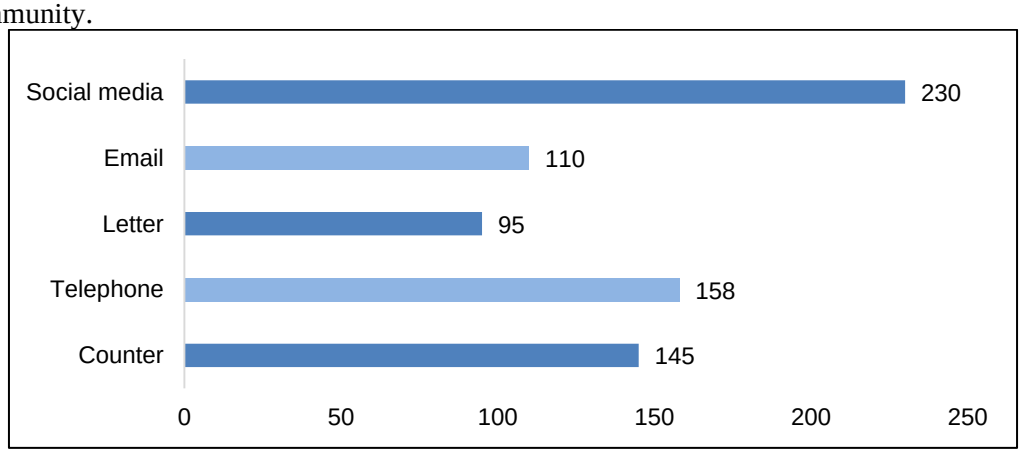

Figure 5. Communication methods

Questions were also asked on the effectiveness of the current communication method and awareness of the availability of e-services by the organizations in Kubang Pasu. About half of the respondents rated the current communication method as moderately effective and approximately 60% of the community were aware of the e-services provided by several organizations.

MPKP offers several online services through its official website. In this multi-answer question, the result showed that only one service offered, which is *e-Bayaran*, had been used by 50% of the respondents. Other services presented a low number of usage by the community as shown in Figure 6. The services were categorized as *Aduan & Maklumbalas* (general complaint), *e-Borang* (online form), *e-Bayaran* (online payment), *Taksir* (evaluation), One Stop Centre (OCS) Online, MyGovernment Mobile (mySMS), as well as *Aduan Sisa* (waste) and *Aduan e-Idaman* (complaint on waste management).

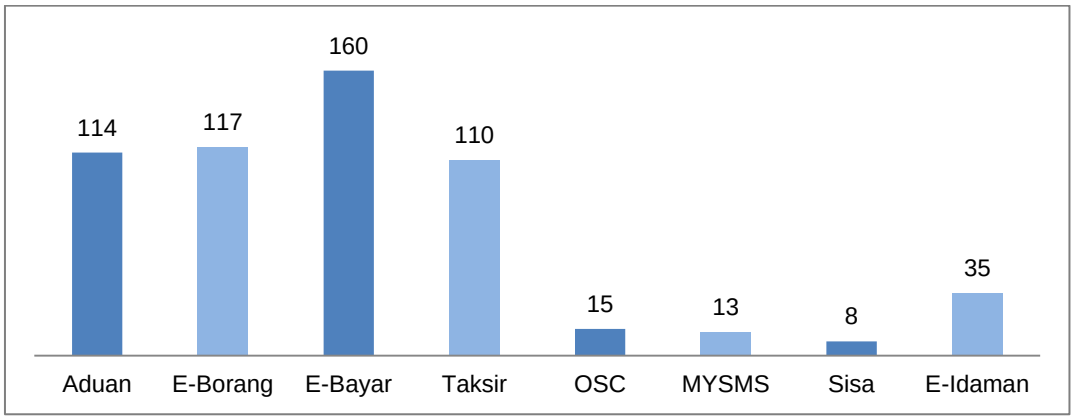

Figure 6. MPKP's online services

This number and trend might be influenced by their trust and confidence level of the offered services. Nevertheless, the study revealed that out of 309 respondents, 239 (83%) trusted and were confident of the offered services. Only 49 of them were having trust issues with the online services and still opted for the manual methods. Figure 7 shows the percentage of respondents on their trust and confidence of the online services offered in MPKP's website.

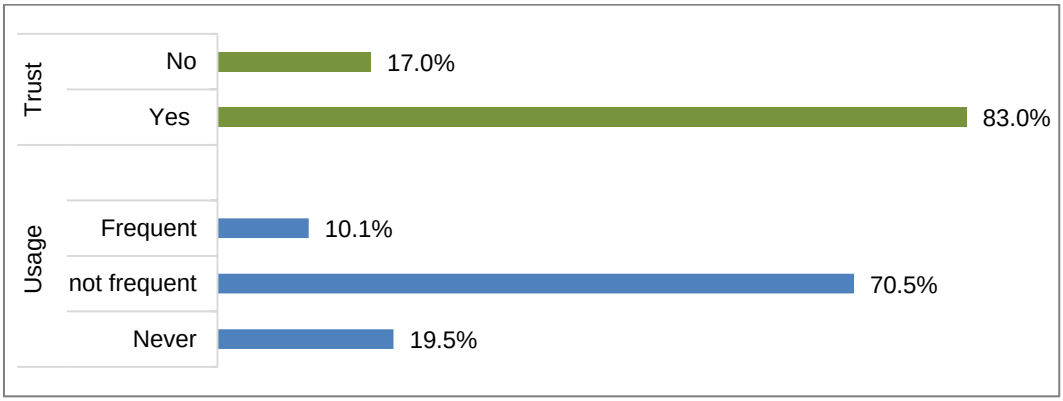

Figure 7. Trust, confidence, and usage of MPKP's e-services

Although a majority of the respondents were confident and trusted the online services, the online services were not frequently used. Most of the respondents (70.5%) reported that they did not use the services frequently. About 60 of them (19.5%) never used the services and opted for manual approaches. This might be influenced by their awareness of the existence of the services, quality of services, or probably the publicity and promotion of these services by MPKP. These numbers indicated that the usage of online services offered by MPKP was not convincing toward achieving smart community engagement in Kubang Pasu. More efforts need to be taken into consideration in achieving this aim.

ii. Communication status of the community in Kubang Pasu

Another important aspect in measuring the level of community engagement was by looking at the communication status between the community and the organizations in that particular area. This study tried to explore the satisfaction level of the community when dealing with officers at several organizations and service providers in Kubang Pasu. Figure 8 shows the data obtained from 309 respondents on their satisfaction level, which was categorized into three: low, moderate, and high. The respondents were asked to only provide answers to the organizations that they have dealt with.

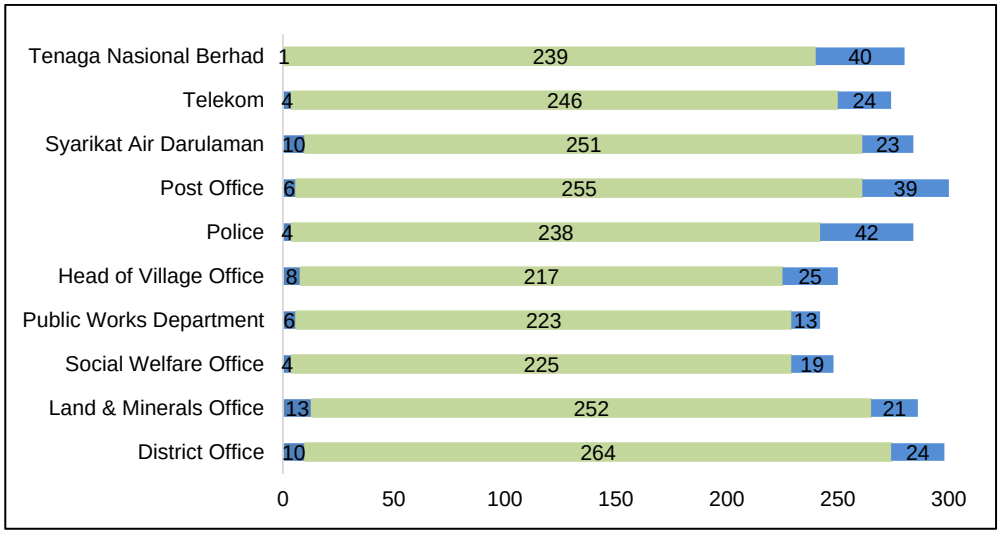

Figure 8. Satisfaction level toward officers at organizations in Kubang Pasu

The data illustrated that the community's satisfaction was only at a moderate level when dealing with officers at all organizations and service providers in Kubang Pasu. Nevertheless, Police, Tenaga Nasional Berhad, and Post Office were three organizations that received a high satisfaction rating among the respondents (13.6%, 12.9%, and 12.6%, respectively) for their services. In fact, only one respondent rated a low satisfaction level for Tenaga Nasional Berhad. The respondents rated a low satisfaction level when dealing with officers at Pejabat Tanah & Galian (Land & Minerals Office), Pejabat Daerah (District Office), and Syarikat Air Darulaman with percentages of 4.2%, 3.2%, and 3.2%, respectively.

The graph in Figure 9 shows the number of respondents who had the opportunity in meeting members of Parliament, state legislators, and organizations heads in Kubang Pasu.

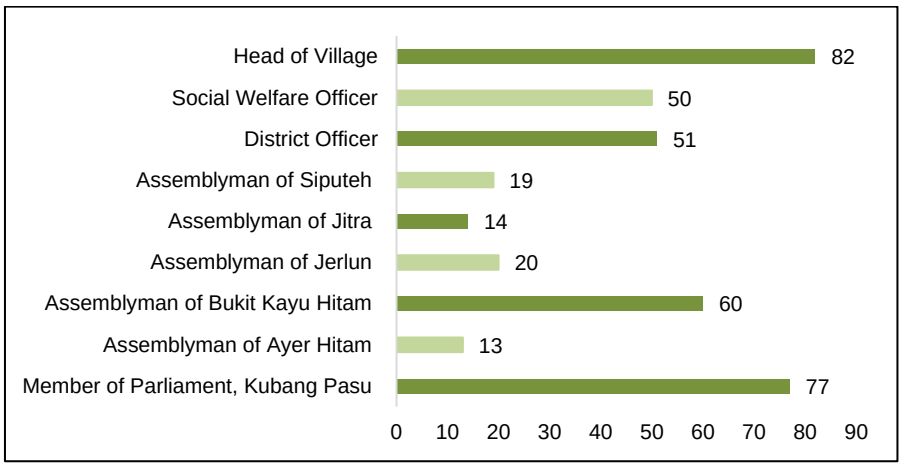

Figure 9. Opportunity to meet

The data presented that the most reachable individuals for face-to-face meetings were head of village, member of Parliament of Kubang Pasu, and state legislator of Bukit Kayu Hitam. Village head was the closest to the community, thus the high opportunity to meet them. Meanwhile, the high opportunity to meet members of Parliament and state legislators of Kubang Pasu might be influenced by their personality and approachable character.

Community engagement could also be measured in terms of interactions and responsiveness of the offered e-services by MPKP. A multi-answer question was used to measure this. The data on receiving feedback from the e-services offered by MPKP indicated that *e-Bayaran* was the most responsive to its users (31% of the respondents agreed that they received feedback after using this service). This was followed by Complaint & Feedback and Assessment Review (*Taksiran*) with 22.3% and 16.1%, respectively. The data for the rest of the services are shown in Figure 10.

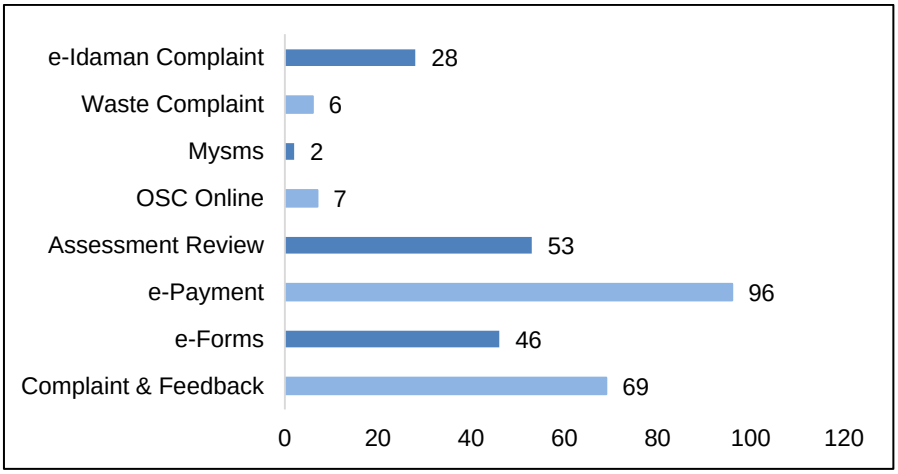

Figure 10. Getting feedback from MPKP online systems

The respondents were also asked to rate the engagement level between the authority and community in Kubang Pasu. Based on their feedback, 46.9% of the community in Kubang Pasu concluded that the engagement level with the authorities was still at a moderate level. Although 27.5% of them suggested that the engagement level was high, the data on low engagement should be considered in improving how authorities should engage more with the community. Figure 11 shows how the community in Kubang Pasu concluded their engagement level with the authorities in utilizing and obtaining the offered services.

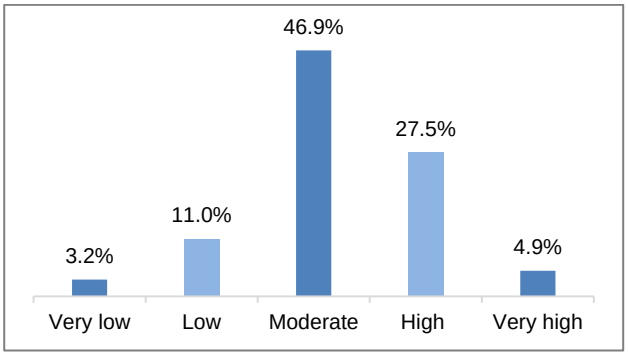

Figure 11. Engagement level of community with authorities

This trend might be influenced by different levels of education and exposure to technology among the community in Kubang Pasu. Educated pensioners who were technology literate might engage more with e-services while those residing in the rural area were still in need of better exposure and awareness in ensuring better engagement in a smarter way could be achieved.

Hypothesis Testing

A series of Pearson's Chi-Square tests of independence with α=0.05 were conducted to evaluate the association between variables in the study. The analyses were divided into seven parts that covered the understanding of smart community concept, method of obtaining information, methods of communication, awareness, trust and confidence of online services, respondents' satisfaction level on tracking and feedback of the online systems, and system usage frequency. Each part had hypotheses that guided the analysis.

i. Understanding smart community concept

The study analyzed the respondents' understanding of the smart community concept. Specifically, it intended to explore if any relation existed between choosing the correct definition of smart community and age, gender, education level, and occupation of the respondents. Table 2 shows the hypotheses that guide the analysis. The results indicated that all hypotheses were not supported since $p>0.05$. The analysis of the data highlighted the relation between choosing the correct definition of smart community and age, gender, occupation, and education level of the respondents.

Table 2. Hypotheses related to smart community concept

H1	Choosing the correct definition of the smart community concept is related to age group ($\chi^2_{(1)} = 0.526$, p-value: 0.463)
H2	Choosing the correct definition of the smart community concept is related to gender ($\chi^2_{(1)} = 0.261$, p-value: 0.609)
H3	Choosing the correct definition of the smart community concept is related to occupation type ($\chi^2_{(3)} = 0.662$, p-value: 0.882)
H4	Choosing the correct definition of the smart community concept is related to education level ($\chi^2_{(4)} = 4.254$, p-value: 0.373)

ii. Obtaining information

The method used or adopted by the respondents in obtaining information from organizations in the district was also analyzed. Table 3 lists the hypotheses that guide the analysis. The results indicated that none of the respondents' age, gender, occupation, and education level influenced how information was obtained either through counter, letter, email, or other means.

Table 3. Hypotheses on obtaining information

H5	Obtaining information is related to age ($\chi^2_{(5)} = 6.396$, p-value: 0.269)
H6	Obtaining information is related to gender ($\chi^2_{(5)} = 0.877$, p-value: 0.971)
H7	Obtaining information is related to occupation type ($\chi^2_{(15)} = 7.358$, p-value: 0.946)
H8	Obtaining information is related to education level ($\chi^2_{(20)} = 4.808$, p-value: 0.999)

iii. Method of Communication

The respondents' communication methods with the organizations in the district were analyzed based on their age, gender, occupation, and education level. The hypotheses are listed in Table 4. The results showed that only occupation type was related to the respondents' method of communication with the organizations in Kubang Pasu ($p<0.05$).

Table 4. Hypotheses on communication method

H9	Method of communication is related to age ($\chi^2_{(5)} = 1.074$, p-value: 0.956)
H10	Method of communication is related to gender ($\chi^2_{(5)} = 2.306$, p-value: 0.805)
H11	Method of communication is related to occupation type ($\chi^2_{(12)} = 53.531$, p-value: 0.000)
H12	Method of communication is related to education level ($\chi^2_{(16)} = 8.496$, p-value: 0.932)

iv. Online service

The awareness of online services and their relation to respondents' demographic background was analyzed (refer Table 5). The results indicated that none of the respondents' age, gender, occupation type, and education level were related to the awareness of the online services provided by organizations in the district. Further analyses were performed to investigate if trust and confidence of the respondents had any relation to using the online services provided by MPKP (refer Table 6). Once again, trust and confidence were not the factors that contributed toward the respondents using the online services.

Table 5. Hypotheses on awareness

H13	Awareness is related to age ($\chi^2_{(1)} = 0.001$, p-value: 0.977)
H14	Awareness is related to gender ($\chi^2_{(1)} = 0.201$, p-value: 0.654)
H15	Awareness is related to occupation type ($\chi^2_{(3)} = 3.231$, p-value: 0.357)
H16	Awareness is related to education level ($\chi^2_{(5)} = 06.917$, p-value: 0.227)

Table 6. Hypotheses on trust and confidence

H17	Trust and confidence of online services is related to age ($\chi^2_{(1)} = 2.530$, p-value: 0.112)
H18	Trust and confidence of online services is related to gender ($\chi^2_{(1)} = 3.719$, p-value: 0.054)
H19	Trust and confidence of online services is related to occupation type ($\chi^2_{(3)} = 3.087$, p-value: 0.378)
H20	Trust and confident of online services is related to education level ($\chi^2_{(5)} = 3.154$, p-value: 0.676)

v. Usage satisfaction level

The respondents' satisfaction level of using MPKP's online systems was also investigated. The hypotheses used in the tests are listed in Table 7. Factors that were analyzed were the system's feedback and tracking. The results indicated that both factors were not related to the satisfaction level of the respondents.

Table 7. Hypotheses on satisfaction level

H21	Respondents' usage satisfaction level is related to the system's feedback ($\chi^2_{(28)} = 19.13$, p-value: 0.894)
H22	Respondents' usage satisfaction level is related to availability of system tracking ($\chi^2_{(28)} = 18.83$, p-value: 0.903)

vi. Usage frequency

The usage frequency of MPKP's online systems was analyzed based on trust and confidence of the respondents as well as the systems' effectiveness. Both hypotheses that were used in Table 8 were supported. This implied that the systems would be frequently used if the community had the trust and confidence in using the systems in addition to the fact that the systems were effective.

Table 8. Hypotheses on usage frequency

H23	Usage frequency is related to trust and confidence of online services ($\chi^2_{(2)} = 40.726$, p-value: 0.000)
H24	Usage frequency is related to system effectiveness ($\chi^2_{(8)} = 45.43$, p-value: 0.000)

Discussion:

All 24 hypotheses were tested, whereby only three hypotheses (H11, H22, and H23) were supported. The results from the study did not support H1–H4 because the concept of smart community needs to be experienced. The smart community concept is considered new in Malaysia and thus, it is not widely practiced. To the respondents, the usage of ICT in terms of communication and using several online services are considered 'smart'. Therefore, for the community of Kubang Pasu district, awareness of the smart community concept has to be promoted and provided to them for their understanding and to embrace the smart communication and engagement concept.

Living in Kubang Pasu is not like living in big cities where travelling from one place to another from one's home to any organization to obtain information is a hustle. Therefore, obtaining information can be done through many ways, either manually or online, and just about by any person. In fact, obtaining information through online (website and social media) were the two most popular methods. This shows that the community is moving toward adopting digital media. This is also supported by the findings that social media were the main communication method between the community and organizations in Kubang Pasu district. This result is in accordance with the study by Mehra, Sikes, and Singh (2020), whereby social media are linked to technology-related activities in rural libraries. The method of communication is also related to the occupation type of the respondents. The data illustrated that social media are the most popular method among the public sector respondents. Therefore, MPKP should adopt social media and website as the main communication method in place of a measure in moving toward smart community engagement. Staff at the counter can be shifted to manage the social media platform.

Online services have been provided by organizations in Kubang Pasu district. Nevertheless, only half of the respondents were aware of this facility. This resulted in the respondents seldom using the online systems provided by MPKP. A majority of the respondents trusted and were confident of using the online systems. A study by Corbett and Le Dantec (2018b) showed that the role of trust is important in various efforts to engage the community. This is a good sign that MPKP should increase the number of online systems to be used by

the community. However, those online systems need to be enhanced to become more effective as system effectiveness is related to frequency of use. Receiving feedback from the system is one of the ways to increase its effectiveness and the community's confidence.

The satisfaction level of the respondents with officers at the organizations in Kubang Pasu was only moderate. The implementation of e-services could reduce face-to-face interactions, which could help to improve the satisfaction level. This could also help in moving toward the smart community engagement concept. About three quarters of the respondents seldom used the online systems provided by MPKP. This could be due to the low satisfaction level when using the systems. Therefore, enhancement of the systems should be taken into consideration. MPKP should also look into increasing the awareness of all the online systems that are now provided to the community.

Furthermore, there is the issue of engagement between the community and the authorities (State Legislators, Heads of Department). It is not easy to engage in face-to-face communication with the community. Accordingly, the smart communication method (social media, email and website) could be employed to increase the low rating of public engagement with the authorities. This move will foster the prompt implementation of smart community engagement.

Conclusion:

Many countries are now aware of the importance of community engagement to be implemented in a smart manner. Findings revealed that MPKP is yet to practice smart community engagement. In moving toward smart community engagement to be competitive with other smart communities, in parallel with the advancement of technology, there is a need of a blueprint as a guideline in the implementation of smart community engagement. Therefore, findings from this study can be partly used in developing a blueprint for smart community engagement in Kubang Pasu context.

It is believed that with the implementation of smart community engagement, the community in Kubang Pasu district will achieve higher quality of living and increased productivity. For MPKP, the benefits will be in terms of smart planning, smart management services, and smart administration.

There is no doubt that several limitations exist in this study. The survey was conducted online during the implementation of the Movement Control Order due to the COVID-19 pandemic. As a result, only respondents without Internet access were unable to participate in providing the feedback. For that reason, future research are suggested to examine this topic for further validation or improvement of the overall present study. Future studies should consider the involvement of a larger group of respondents and cover more organizations in Kubang Pasu as well as the suggestion of more e-services to be offered for the Kubang Pasu community.

Acknowledgment:

This research is funded by the Ministry of Finance (MOF) through *Dana Awam* Grant (SO code: 14686). The authors fully acknowledge MOF for the approved fund, which has made this important research viable and effective.

Authors' declaration:

- Conflicts of Interest: None.
- We hereby confirm that all the Figures and Tables in the manuscript are mine ours. Besides, the Figures and images, which are not mine ours, have been given the permission for re-publication attached with the manuscript.
- Ethical Clearance: The project was approved by the local ethical committee in Universiti Utara Malaysia.

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تصور المجتمع للمشاركة الذكية: حالة حكومة كوبانغ باسو المحلية

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الخلاصة:

يجب أن يأخذ تنفيذ المشاركة المجتمعية الذكية في الاعتبار التخطيط الدقيق والتعاون مع العديد من أصحاب المصلحة ، بما في ذلك المجتمع. يجب أن تكون التكنولوجيا والبرنامج مصممين لتأطير الغرض منه ويجب أن يربطوا مرة أخرى بأهداف محددة لتنفيذ المشاركة المجتمعية الذكية. لا تضمن الخدمات الرقمية المشاركة الذكية بين المجتمع والحكومة المحلية. هذا هو الحال بالنسبة لحكومة كوبانج باسو المحلية حيث تم تقديم العديد من الخدمات عبر الإنترنت في محاولتهم تنفيذ مفهوم المجتمع الذكي. ومع ذلك ، هناك نقص في فهم تفضيلات الميزات والمتطلبات للأنظمة القائمة على الويب وتأثير هذه الأنظمة. لذلك ، يجب إجراء دراسة التصور للحصول على معلومات تتعلق بتنفيذ المشاركة المجتمعية الذكية. هدفت هذه الدراسة إلى اكتشاف تصورات المجتمع حول المشاركة المجتمعية الذكية ، وتحديداً لكوبانغ باسو من حيث سياقها المحلي. لتحقيق ذلك ، تم استخدام مزيج من المقابلات والاستطلاع عبر الإنترنت بمشاركة أصحاب المصلحة من العديد من المنظمات و 309 مشاركين من المجتمع في كوبانغ باسو. كشفت نتيجة المقابلة والاستطلاع عن مشاركة معتدلة بين المجتمع والمنظمات بسبب قلة الوعي والمشاركة المعتدلة بين المجتمع والسلطات المحلية وانخفاض التعرض للخدمات عبر الإنترنت ، فضلاً عن نقاط الضعف في الأنظمة الحالية عبر الإنترنت. يمكن الاستنتاج أن مستوى رضا المستجيبين عن الضباط في المنظمات كان متوسطًا فقط. يمكن أن يؤدي تنفيذ الخدمات الإلكترونية إلى تقليل التفاعلات وجهاً لوجه ، مما قد يساعد في تحسين مستوى الرضا. يمكن أن يساعد هذا أيضًا في التحرك نحو مفهوم المشاركة المجتمعية الذكية. لذلك ، يمكن استخدام طريقة الاتصال الذكية عبر وسائل التواصل الاجتماعي والبريد الإلكتروني والموقع الإلكتروني لزيادة التصنيف المنخفض لمشاركة الجمهور مع السلطات. ستعزز هذه الخطوة التنفيذ الفوري للمشاركة المجتمعية الذكية.

الكلمات المفتاحية: مشاركة المجتمع، الخدمات الإلكترونية، نظام الإنترنت، الإدراك.