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Analysis of learning innovation in madrasah ibtidaiyah (A diffusion study)

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Abstract: This study describes the diffusion process of thematic learning innovation in elementary schools. The research approach used is quantitative with diffusion research methods. Data collection techniques used are questionnaires. The data analysis used is a descriptive analysis technique. The subject of this research is elementary teachers in South Tangerang, Indonesia, which consists of elements from the Head of the Ibtidaiyah Madrasah, the Deputy Head of the Ibtidaiyah Madrasah, the Curriculum Section, Class Teachers and Subject Teachers. Among them *some teach* teach at State and Private Madrasah. The results showed a diffusion process of thematic learning innovations in Madrasah Ibtidaiyah from 2013-2019. This process is proven by 85% who perceive the attributes of thematic learning innovations as relatively positive innovations, so they are positively related to the rate of adoption of thematic learning innovations. Furthermore, various types of communication in the thematic learning innovation-decision process at Madrasah Ibtidaiyah. These findings recommend the application of thematic learning innovations at Madrasah Ibtidaiyah, South Tangerang, and optimizing the development of its implementation through various activities involving the synergy of practitioners, academics, and madrasah services.

Keywords: learning innovation, thematic learning, diffusion study

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INTRODUCTION

Learning is an interaction between educators, students, and the environment (Chumdari et al., 2018). The interaction planned by an educator with students and their environment is undoubtedly carried out by prioritizing the paradigm of learning to know, learning to do, learning to be, and learning to live together. Moreover learning is carried out at the basic education level, with its golden age, this sustainable paradigm requires experiencing, requires experiencing not transferring learning experiences.

Learning with a paradigm principle that is relevant to elementary school-age children is thematic. Thematic learning as a learning innovation is developed based on philosophical, psychological, socio-cultural principles and educational characteristics that mainstream the character building of students. Elementary school-age children can construct their experiences holistically and authentically by implementing thematic learning. Because thematic learning is psychologically following the ability of students to manage their holistic learning experiences between the knowledge learned and life experiences experienced in everyday life,it becomes meaningful and fundamental learning for students (Retnawati et al., 2017).

This advantage becomes the theoretical basis that thematic learning can be assumed to be quickly accepted and implemented in an elementary school social system This is what Rogers (2003) generalized that an innovation that has high advantages can be a factor that affects the speed with which an innovation is adopted.

The diffusion of thematic learning innovations is related to the acceptance and sustainability of innovation in a social system within a certain period that is still or has not been implemented. Thematic learning is a curriculum innovation that is applied to elementary school-age children and is implemented in Indonesia for the orientation of the development of the national character of students, meaningful learning, and the achievement of students' abilities which are higher-order thinking skills.

Rogers (2003) explains it is necessary to have innovation attributes in the diffusion process of innovationBased on this definition, it is known that there are four elements in the diffusion process, namely innovation, communication channels, time, and social systems. These four elements are used as measurement tools in this diffusion research process.

Innovation is something new, the novelty of something that can be in the form of objects, ideas, practices that are promoted by certain groups (Dibra, 2015). Rogers (2003) explains that in the diffusion process of innovation, it is necessary to have innovation attributes. The innovation attributes consist of relative advantage, compatibility, complexity, trialability, and observability. Relative advantage is the high advantage of thematic learning innovations from an economic perspective, valuable, and useful. Compatibility is the level of suitability of thematic learning innovations with teacher competence, character, and learning norms implemented in schools. Complexity is the difficulty level of thematic learning innovation in its implementation, the more accessible thematic learning is to be learned, and implemented the faster the diffusion of thematic learning innovations. Trialability is the trial level of thematic learning innovation in an elementary school, the more schools can try to implement it the faster thematic learning innovations are accepted in elementary schools. Observability is the level of f the implementation of thematic learning, whether the more it can be observed, noticed, and implemented, the more interesting thematic learning is for everyone in a particular social system, and the faster thematic learning innovations are accepted.

Communication channels used in the diffusion process of innovation, as described by Rogers (2003) consist of mass media and interpersonal channels. The mass media channel can be necessary for the diffusion process of thematic learning innovations. The interpersonal channel is a communication channel that occurs in the process of direct interaction between individuals, this channel can be effective if there is homophily

between one another. Communication channels can be effectively used depending on the purpose of acceptance by a social system. The purpose of accepting a thematic learning innovation can be categorized into five processes for recognizing an innovation, namely knowledge, persuasion, decision, implementation, and confirmation.

The time needed in the diffusion process of innovation can be fast or slow depending on the characteristics of the innovation or innovation recipient. The characteristics of innovation recipients are grouped by Sasaki (2018) into innovators, early adopters, early majority, late majority, and laggards. People with innovator characters have venturesome behavior or seek and find innovations. Early adopters have a respectful attitude towards a thematic learning innovation. The early majority being deliberate or not in a hurry full of caution towards an innovation. The late majority have a skeptical attitude or doubt about an innovation. Laggard has a traditional perspective on innovation. From the character possessed by a person towards innovation, it can affect the diffusion process of thematic learning innovations both from the process of knowledge, persuasion, decision, implementation, and confirmation.

The social system in the diffusion of innovation is a member of society who has an orientation and views innovation as important. The social system in the diffusion process of thematic learning innovation is social members in elementary schools such as the principal, teachers, and students. In the diffusion of innovation in a social system in elementary schools, change agents can play a role in the diffusion process of thematic learning innovations. The role of change agents is explained by Ntemana (2012) consisting of developing a need for change, establishing an information exchange relationship, diagnosing problems, creating an intent to change, translating intent into action, stabilizing adoption and preventing discontinuance, and achieving a terminal relationship.

An elementary school social system to innovation can be grouped into groups that are resistant to innovation and a group that is a barrier to innovation, Some are venturesome and innovative.. Groups that are resistant to innovation generally do not easily accept an innovation, schools like this find it difficult to accept thematic learning innovations as the future needs of students. Groups that are barriers to thematic learning innovations have several reasons for rejecting thematic learning as innovation even though there is some support for implementing it. Groups that are venturesome towards an innovation usually have an innovator spirit so that thematic learning innovations can be quickly accepted and even implemented by the guidelines for implementing thematic learning or modified according to basic school needs. Based on the above theoretical assumptions, it is interesting to conduct a research study describing the diffusion process of thematic learning innovations in primary schools. Therefore, this study describes the diffusion process of thematic learning innovation in elementary schools.

METHODS

Research design

To measure the diffusion process of the thematic learning innovations above, a mixed-methods is used with the type of explanatory design. Data were collected using questionnaires with a Likert scale which included strongly agree, agree, neutral, disagree, and strongly disagree. The questionnaire was distributed to class teachers at Elementary School in Tangerang Selatan, Indonesia. Furthermore, the data obtained with the questionnaire was deepened utilizing a research sample. The research design used refers to the research process cycle of Cresswell (2012) whose process is illustrated in the design as follows:

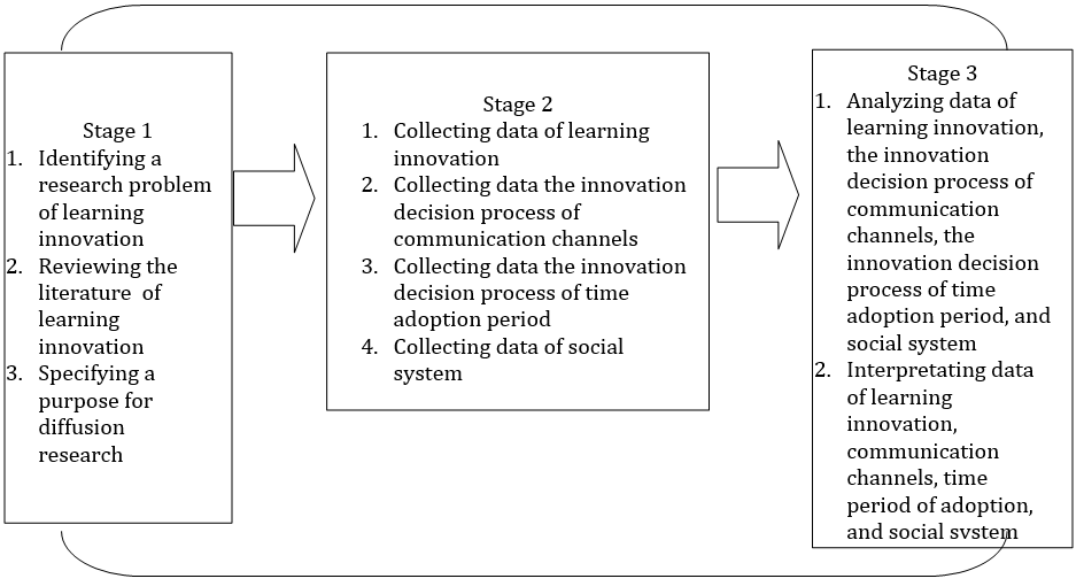

Figure 1. *Research design*

Based on **Figure 1** above, the diffusion research process takes place within the framework of examining innovations that are channeled using certain types of communication, within a certain time span to certain social systems with a research process using a design that includes three main stages, namely in the first stage research activities are carried out consisting of: 1) identifying a research problem of learning innovation, which consists of a) activities to determine research problems, in this case problems related to thematic learning innovations, b) activities to justify the importance of adopting learning innovations using relevant research results related to thematic learning innovations , based on theoretical explanations from the relevant literature and based on research places where members of the social system adopt thematic learning innovations, c) suggesting the need for research on diffusion of thematic learning innovations, in this section it is emphasized that the diffusion of thematic learning innovations as research needs to be done so that the process of adopting learning innovations Thematically at Madrasah Ibtidaiyah are known empirically as innovations that are accepted based on needs based on knowledge, conformity to needs, and there is a clear relationship between the ability of adopters and learning innovations n thematically applied that can overcome the gap, there are even benefits that can be observed from the success of the practice 2) reviewing the literature, the next step is to review the relevant literature with the focus of the study of thematic learning innovations, namely that which is carried out by the process of a) searching for literature, b) chose the primary source of this research, namely Diffusion of Innovation (M. E. Rogers, 2003), c) then examines the literature by evaluating the quality of the sources used, accuracy with research focus, relevance of sources with research focus, organizing, critically constructing and conducting summaries in accordance with the focus of research studies on diffusion of thematic learning innovations . 3) specifying a purpose for diffusion research, in this step make a research question statement and a statement of research objectives. It is important to guide research, and the research process, identify the most appropriate technique for data collection and define the main components of research results.

The second stage consists of activities 1) collecting data of learning innovation, at this stage the researcher collects data about the thematic learning innovation attributes with reference to the characteristics of the innovation developed by Rogers. 2) collecting data on the innovation decision process of communication channels, after data on the level

of learning innovation is collected, data on the communication channels used in the innovation decision process that occurs in the social system of Madrasah Ibtidaiyah South Tangerang is collected to find out that the innovation decision process is not only determined by the level of innovation in learning but can also be determined by the communication channels used. 3) collecting data on the innovation decision process of time adoption period, after knowing the communication channel used, proceed with data collection about the time required for the adoption of thematic learning innovations at Madrasah Ibtidaiyah. 4) collecting data of social system, and in the last stage in this phase data collection about the role of teachers in adopting thematic learning innovations to prove the involvement of individual teachers in adopting thematic learning innovations. The process of a carries out the data collection process at this stagea) determining the unit of analysis (population and sample), the unit of analysis in this study is the member of the social system of the Madrasah Ibtidaiyah Education unit in South Tangerang, b) obtaining research permission from the research target institution, namely a member of the system. Madrasah Ibtidaiyah social c). determining the type of data, this research data is research data consisting of quantitative and qualitative data d). develop research instruments, based on the data, the instrument used is a questionnaire e) administering data collection, this process is carried out by taking into account the standards of data collection and ethics of collection.

In the third stage the research process is carried out by 1) Analyzing data of learning innovation, the innovation decision process of communication channels, the innovation decision process of time adoption period, and social system. used, then carried out descriptive processing by determining the average score, and frequency, and 2) interpreting data of learning innovation, the innovation decision process of communication channels, the innovation decision process of time adoption period, and social system, in this activity the process of displaying data through pictures, tables and explanations or explanations from pictures and tables, then interpreting the data by doing a summary, and making comparisons with the results of research and relevant theories.

Sampling Technique

The sampling technique was used by using the purposive sampling technique. This sampling technique includes non-probability sampling with an error rate of 5% based on the Herry King Nomogram table (Sugiyono, 2012). The sample was determined was determined based on the area of the elementary working group consisting of the Serpong, Pondok Aren, Ciputat, East Ciputat, and Pamulang elementary working groups from the region, a total sample of 279 elementary teachers in South Tangerang, Indonesia was obtained. The profile of the respondents who became the research sample is illustrated in the **Table 1**.

TABLE 1. *Respondent profile*

No	Position	Total Number	Region	Total Number	Madrasah Status	Total Number
1	Principal	50	Ciputat	66	Negeri	30
2	Vice Principal	17	Ciputat Timur	38	Swasta	249
3	Curriculum section	6	Pamulang	39		
4	Classroom teacher	177	Pondok Aren	90		
5	Subject teacher	29	Serpong	46		
Total				**279**		

TABLE 2. Validity expert judgment aiken content validity coefetion (CVC)

V-Value Aiken Content Validity Coeficient (CVC)								
Item Indicator Innovation		**Item Indicator Communication Channels**		**Item Indicator Time of Adoption**		**Item indicator Social System**		**Status**
1	0.87	1	1	1	1	1	1	Valid
2	1	2	1	2	1	2	0.87	Valid
3	1	3	1	3	0.87	3	1	Valid
4	1	4	1	4	1	4	0.87	Valid
5	1	5	1	5	1	5	1	Valid
6	0.87	6	1	6	1	6	1	Valid
7	0.87	7	1	7	1	7	1	Valid
8	1	8	1	8	1	8	1	Valid
9	0.87	9	1	9	1	9	1	Valid
10	1	10	1	10	1	10	1	Valid
11	0.87	11	1	11	1	11	1	Valid
12	1	12	1	12	0.87	12	1	Valid
13	0.87	13	1	13	0.7	13	0.87	Valid
14	1	14	1	14	1	14	1	Valid
15	1	15	1	15	1	15	1	Valid
16	0.87	16	0.87	16	1			Valid
17	1	17	1	17	0.87			Valid
18	1	18	1	18	1			Valid
19	0.87	19	1	19	1			Valid
		20	1	20	1			Valid
		21	1	21	0.7			Valid
		22	1	22	0.87			Valid
		23	1	23	0.87			Valid
		24	1	24	0.87			Valid
		25	1	25	1			Valid
		26	1	26	1			Valid
				27	1			Valid
				28	0.87			Valid
				29	1			Valid
				30	0.62			Valid

TABLE 3. *Case processing summary and reliability statistics*

Case Processing Summary			**Reliability**	
Case	N	%	Cronbach's Alpha	N of items
Valid	90	100.0		
Excluded*	0	0.0	0.839	19
Total	90	100.0		

TABEL 4. *Indicator of research instrumen*

	Indicator of Innovation	Item		Indicator of communication channels	Item		Indicator of time period	Item		Indicator of social system	Item
1	Relative Advantage	6	1	Knowledge	4	1	Knowledge	4	1	To developep a need for change	4
2	Compatibility	3	2	Persuation	5	2	Persuation	9	2	To establish an information exchange relationship	5
3	Complexity	4	3	Decision	5	3	Decision	5	3	To diagnose problems	3
4	Triability	3	4	Implementation	6	4	Implementation	6	4	To create an intent to change	2
5	Observability	3	5	Confirmation	6	5	Confirmation	6	5	To translate an intent into action	4
									6	To stabilize an adoption	4
									7	To achieve a terminal relationship	3
	Total	**19**		**Total**	**26**		**Total**	**30**		**Total**	**25**

Based on **Table 1**, it is known that the profile of the research sample data based on the respondent's position is known to have 50 teachers of Madrasah Ibtidaiyah South Tangerang as head of Madrasah, 17 teachers as Deputy Head of Madrasah, six teachers as part of the curriculum, 177 people as classroom teachers, and 29 people as eye teachers. Meanwhile, based on the area of the Madrasah Ibtidaiyah Education Unit, South Tangerang, it is known that there are 66 respondents from Madrasah Ibtidaiyah in the Ciputat area, 38 respondents from Madrasah Ibtidaiyah in the East Ciputat area, 39 respondents from Madrasah Ibtidaiyah in the Pamulang area, 90 respondents from Madrasah Ibtidaiyah in the Pondok Aren area, and 46 respondents from Madrasah Ibtidaiyah in the Serpong area. Thus the total respondents from Madarah Ibtidaiyah, South Tangerang, consisted of 279 respondents.

Material and Indicator

The instrument for thematic learning has been declared valid by expert judgment consisting of two innovation diffusion content experts and one linguist, and one basic education expert. All research instruments that have been tested by expert judgment are declared valid in processing the Aiken Content Validity Coeficient (CVC) with a V value of 0.68 – 1.00, as illustrated in the table as follows:

Furthermore, specially for innovation indicator have been an external test was carried out on 90 respondents who had a high-reliability level of Cronbach's alpha with the results presented in Table 3.

Data Collection

The data in this study were collected using a quetionary technique, the nature of which consisted of ordinal and nominal data. Ordinal data was obtained from the indicator of innovation with measurements using the Likert scale consisting of the choices strongly agree, agree, neutral, disagree and strongly agree, meanwhile nominal data were obtained from research indicators of communication channels, period, and social system. In this nominal data, answer choices are presented that allow respondents to determine their answers choices allow respondents to determine their answers and provide answersfreely according to the questions asked based on their experiences in the process of adopting thematic learning innovations. The number of research items developed based on the indicators of each research focus above is illustrated in the **Table 4**.

Data Analysis

The data analysis process in the first stage is carried out by processing raw data through a data tabulation process, both ordinal data and nominal data, then doing descriptive processing by determining the average score, and frequency using the SPSS application, then classifying based on the aspects of each indicator. The research obtained from the indicators of learning innovation, the innovation decision process of communication channels, the innovation decision process of time period, and social system. In the next stage, the data display process is carried out through pictures, and tables and provides an explanation and summary of the data that has been analyzed. In the last stage, the interpretation process is related to the research question by comparing the results of other research and generalizing Rogers' diffusion theory of innovation and other relevant innovation diffusion theories.

RESULTS

Based on the research results above, it can be stated that there is a diffusion process of thematic learning innovations at Madrasah Ibtidaiyah South Tangerang in 2013-2019. The

following describes the results of research that have been carried out based on each aspect of the process of diffusion of learning innovations at Madrasah Ibtidaiyah.

Learning Innovation

The level of thematic learning innovation for a particular social system will differ depending on the perception. In this research, the level of innovation in thematic learning is based on the perceptions of members of the social system of the Madrasah Ibtidaiyah Education Unit, South Tangerang. In measuring the level of innovation, thematic learning refers to the perceptual framework developed by Rogers (2003) which consists of the innovation attributes of relative advantage, compatibility, complexity, triability, and observability. Based on the results of research on the attributes of thematic learning innovations, it can be stated that they are perceived as learning innovations with a relatively positive level of innovation. As can be seen in **Figure 2**.

Based on **Figure 2** above, it is known that the perceptions of members of the South Tangerang Madrasah Ibtidaiyah social system towards thematic learning innovations are 176 people (85%) stated that they are relatively positive. In comparison30 people (15%) who are relatively negative about thematic learning innovations. This means that members of the community's social system perceive relatively positive thematic learning innovations, so that this fact will be positively related to the rate of adoption of thematic learning innovations at Madrasah Ibtidaiyah, South Tangerang in the 2013-2019 period. So in that time span, those who have a positive perception of thematic learning innovations are faster to adopt than those who have negative perceptions, this can mean that thematic learning innovations are believed to have the benefits of preventive and incremental innovation. For those who have a negative perception it also means not adopting, only late adopting, but maybe adopting it because of the thematic learning innovation factor as an overadoption innovation; must be adopted, and it could also be because of the organizational innovation-decision process that is authoritative which requires its members to adopt thematic learning innovations. Meanwhile, the level of positive perception of the thematic learning innovations above can also be seen from various aspects of the attributes of thematic learning innovations, as the research results can be seen in **Figure 3**.

Based on the results of the study, it can be explained that the level of relative advantage of thematic learning innovations is perceived positively (with an average score of 4.00), which means that there are 94% (193 of 206 people) members of the social system of the Madrasah Ibtidaiyah Education Unit, South Tangerang. better quality, more fun, more challenging, more effective and can encourage the achievement of students' higher order thinking skills and relatively requires not too much cost.

Communication Channels

The communication channel used in the innovation-decision process is explained by Everet M Rogers (2003) consisting of the knowledge, persuasion, decision, implementation and confirmation processes. This decision process includes a decision process that is commonly used by individuals as described by Kristiawan & Et.al., (2018) that in the innovation-decision process experienced by an individual begins first knowing the existence of innovation, then agreeing, deciding to accept or reject, implementing and until the end of confirming the acceptance or rejection of innovation, continued or changed. Meanwhile, the communication channels may consist of mass media, interpersonal, cosmopolite, and local channels (M. E. Rogers, 2003). The presentation of the effectiveness of using communication channels in the thematic learning innovation-decision process at Madrasah Ibtidaiyah seems to use mass media communication channels as illustrated in Figure 4 as follows:

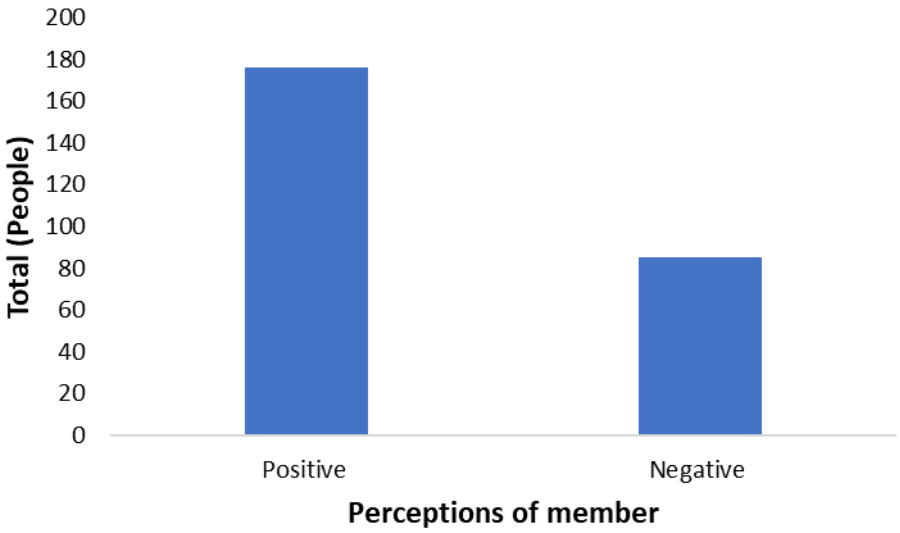

FIGURE 2. *Thematic learning innovation level*

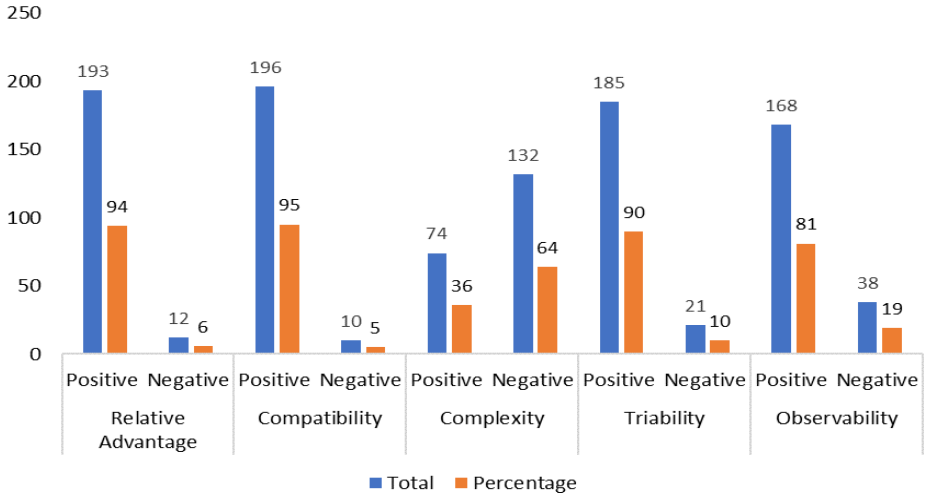

FIGURE 3. *Learning innovation attributes*

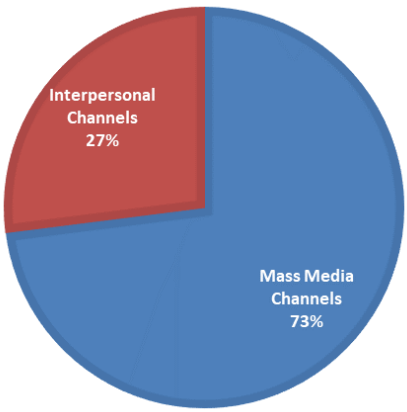

FIGURE 4. *Percentage Use of communication channels*

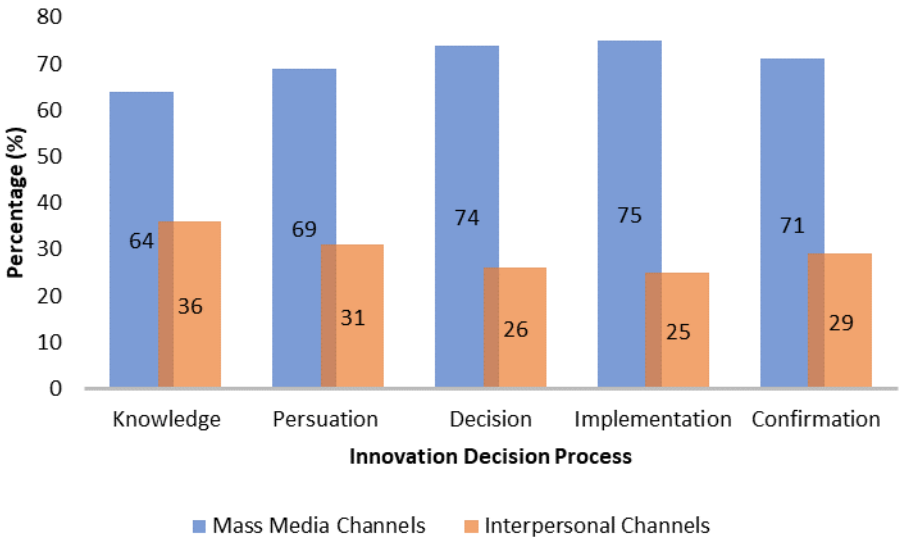

FIGURE 5. *Communication channels in the innovation decision process*

Based on Figure 4 above, it shows that there are more spread or acceptance of thematic learning innovations, there are 73% of members of the Madrasah Ibtidaiyah social system using mass media communication channels in the innovation decision process, and 27% of members of the Madrasah Ibtidaiyah social system using interpersonal communication channels in the innovation decision process thematic learning. This confirms that the use of mass media can encourage members of the Madrasah Ibtidaiyah social system to carry out the innovation decision process. The use of communication channels in the innovation decision process at Madrasah Ibtidaiyah Tangerang is as shown in Figure 5 as follows:

Based on Figure 5 above, it is known that there are factors arising from the use of communication channels in the thematic learning innovation decision process. At the knowledge stage, it is known that the communication channel used by 64% of teachers is the use of mass communication channels, and 36% of teachers use interpersonal communication channels in order to find information about thematic learning, understand the need for thematic learning, agree on the need for thematic learning, and determine the effectiveness of thematic learning.

At the persuasion stage, it is known that 69% of teachers use mass communication channels, and 31% use interpersonal communication channelsBy using this communication channel, the teachers of Madrasah Ibitidayah South Tangerang expressed interest in liking thematic learning, interested in discussing thematic learning, adopting thematic learning, forming a positive image of thematic learning, and supporting the application of thematic learning. The interest generated by the use of these communication channels is emphasized in the generalization of M. E. Rogers (2003) that mass media channels are relatively more important at the knowledge stage, and interpersonal channels are relatively more important at the persuasion stage in the innovation-decision process (Generalization 5- 13), that mass media channels are relatively more important at the knowledge stage, and interpersonal channels are relatively more important at the persuasion stage in the innovation decision process. However, at Madrasah Ibtidaiyah, South Tangerang, the use of mass communication channels is the majority choice at this persuasion stage, but also the interpersonal stage makes an important contribution to decision-making for thematic learning innovations. This can happen because the communication process occurs between heterophilous groups, so that there is no equality in communication which causes the messages communicated in the interpersonal interaction process cannot be understood in depth by

other individuals who are invited to interact. Likewise, it is also explained (Hart et al., 1997) that in interacting social status equality can be a success factor in the innovation communication process.

At the decision stage, the communication channel used at Madrasah Ibtidaiyah aims to decide to engage in activities that lead to the choice of implementing thematic learning, decide not to apply thematic learning, decide to intend to seek additional information about thematic learning, decide whether to try to practice thematic learning, and decide intend not to continue to adopt thematic learning. Based on the results of the study, it is known that to achieve these goals, it is known that there are 74% of teachers use mass communication channels, and 26% of teachers use interpersonal communication channels to decide to accept thematic learning innovations. The channel used above confirms that the adoption process was a part of the decision stage as emphasized (Sa'ud, 2013) that the decision process is a process to accept or reject an innovation;accepting means implementing innovation and vice versa, those who refuse will not implementing an innovation, both active and passive repellent.

In the use of communication channels, it is not the only factor that can encourage an individual to decide to accept an innovation, but other factors also have an important influence on the innovation decision process, so even though it is known that mass communication channels make a greater contribution than interpersonal communication channels. In the innovation decision process at Madrasah Ibtidaiyah, South Tangerang, other factors that can be used as an explanation for the innovation decision process that occurs. This is explained by Smith (2012) that there is an influence on the innovation decision process, such as prior conditions, characteristics of decision-making units, perceived characteristics of innovation, and communication channels.

At the implementation stage, the communication channels used at Madrasah Ibtidaiyah are intended be used to implement thematic learning, focus on training yourself in the application of thematic learning, continue to add information about the application of thematic learning, regularly apply thematic learning, not continuously apply thematic learning, and modify the application of thematic learning. Based on the results of the study, it is known that there are 75% of teachers usemass communication channels, and 25% of teachers use interpersonal communication channels to be able to apply thematic learning innovations. Based on these results, it is clear that thematic learning has been implemented in Madrasah Ibtidaiyah using various communication channels and this means that the thematic learning innovation process applied involves ongoing mental and action activities, so that the process innovation can become something that is routine and can be used. only an innovation has undergone a re-investment (Sa'ud, 2013)..

At the confirmation stage, the communication channel used by the teacher is aimed at recognizing the benefits of thematic learning, making learning a routine activity, promoting the application of thematic learning, intending to stop adopting thematic learning, feeling that thematic learning needs to be replaced with other better learning, and feeling dissatisfaction with application of thematic learning. Based on this objective, it is known that 71% of teachers use mass communication channels and 29% of teachers in Madrasah Ibtidaiyah South Tangerang use interpersonal communication channels to state that the application of thematic learning can be continued by making various adjustments to the need for strengthening the depth of the subject matter. This process is explained by Sa'ud (Sa'ud, 2013) as a stage forseeking reinforcement of innovation decisions, at this stage also usually dissonance occurs, namely that an innovation is felt to be inappropriate or not in line with needs, so it could be the application of an innovationis no longer needed, so in conditions like this, adjustments are usually made by trying to eliminate or reduce them by changing their knowledge, attitudes and actions to re-balance the need for thematic learning innovations. **Time of adoption period**

The time dimension plays a role in the innovation decision process required by a member of a particular social system. Based on the results of research at Madrasah Ibtidaiyah, South Tangerang, it is known that the time required in the innovation decision

process for the knowledge, persuation, decision, implementation and confirmation stages is in the 2013-2019 timeframe as shown in **Figure 6**.

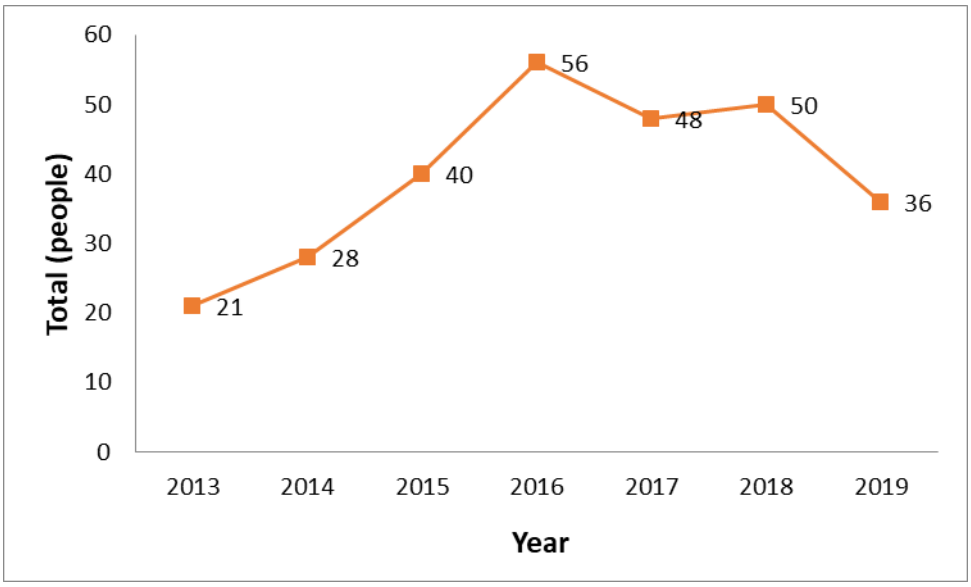

FIGURE 6. *Innovation adoption time rate*

Based on **Figure 6** above, it is known that the rate of adoption of thematic learning innovations at Madrasah Ibtidaiyah in the 2013-2019 period shows the number of different distributions or acceptances or adopters each year from the total number of adopters of thematic learning innovations consisting of 279 members of the social system. Madrsah Ibtidaiyah South Tangerang, consisting of 21 people (8%) in 2013, 28 people (10%) in 2014. 40 people (14%) in 2015, 56 people (20%) in 2016, 48 people (17%) in 2017, 50 people (18%) in 2018, and 36 people (13%) in 2019. This means that it shows that there are differences in the speed in adopting thematic learning innovations for each individual as a member of the social system at Madrasah Ibtidaiyah, although it is known that innovation Thematic learning is perceived by members of the social system of the Madrasah Ibtidaiyah Education Unit as having a positive level of thematic learning innovation attributes such as which has been explained in the innovation attributes section above, and so also although the communication channels used by each individual member of the social system of the Madrasah Ibtidaiyah Education Unit are multi-step flow models that involve the use of mass communication channels and interpersonal communication channels in the innovation decision process.

Social System

There is an active role of reformer agents as part of the social system in adopting thematic learning innovations at Madrasah Ibtdiaiyah, South Tangerang. The active role of this change agent can be classified as an individual innovation process as well as an organization. The individual innovation process means the individual process of members of the social system of the Madrasah Ibtidaiyah Education Unit who adopts thematic learning innovations freely without being bound by organizational provisions. Individuals as members of the social system of the Madrasah Ibtidaiyah education unit can play an active role in the process of adopting thematic learning innovations in South Tangerang, in addition to the role of organizations in encouraging individuals to adopt thematic learning innovations. The following are reform agents who play an active role in the adoption process of thematic learning innovations at Madrasah Ibtidaiyah, South Tangerang:

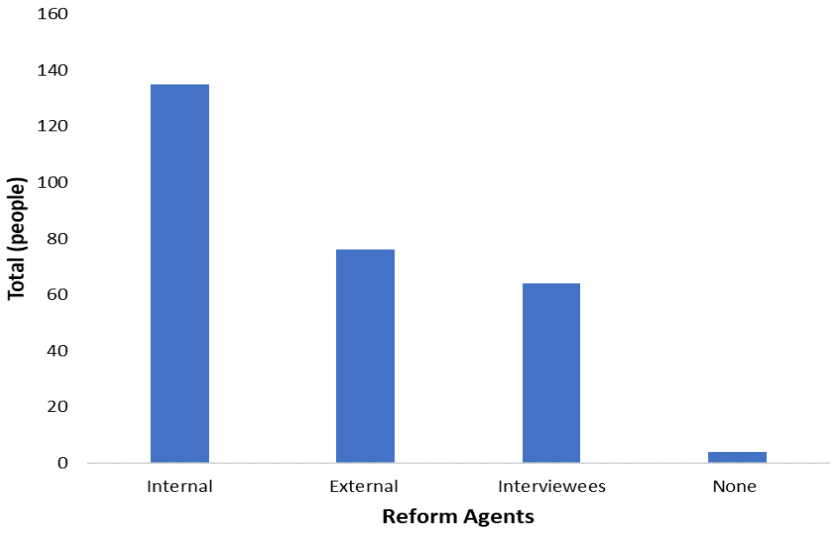

FIGURE 7. *Thematic learning innovation reform agent group*

Based on Figure 4.49 above, it is known that the active role of reformer agents in the process of adopting thematic learning innovations at Madrasah Ibtidaiyah South Tangerang consists of reformer agents from the internal group of Madrasah Ibtidayah who successfully disseminate and or encourage acceptance of thematic learning innovations to 135 people (48%) members of the Madrasah Ibtidaiyah social system, there are 76 people (27%) spread by external reformer agents, there are 64 people (23%) spread by reformer agents from the resource group an activity related to thematic learning innovations, and there are 4 people (1%) who accept thematic learning innovations do not need a reforming agent in the process of adopting thematic learning innovations. Based on this, it can be stated that reformer agents from internal education units are more effective in disseminating and or encouraging the acceptance of thematic learning innovations.

Meanwhile, the active role of reformer agents in the diffusion process of thematic learning innovations at Madrasah Ibtidayah is because they actively carry out their roles as illustrated in the following figure:

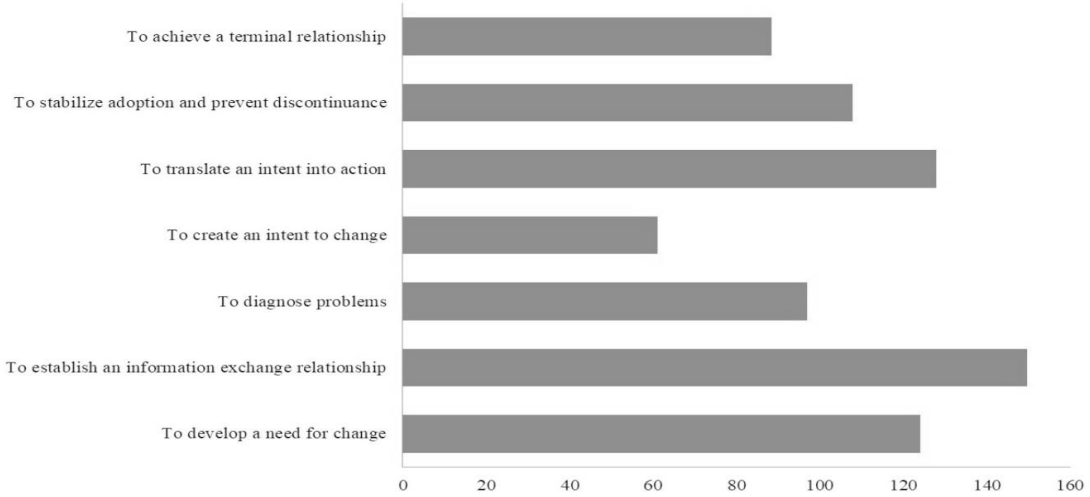

FIGURE 8. *Role of thematic learning innovation change agents*

Based on **Figure 8** above, it shows the active role of the reformer agent in the process of adopting thematic learning innovations at Madrasah Ibtidaiyah by carrying out its active role as a reformer agent based on the active role of Rogers' reform agent (Everet M Rogers, 2003) which consists of to develop a need for change, to establish an information

exchange relationship, to dialogue problems, to create an intent to change, to translate an intent into action, to stabilize adoption and prevent discontinuance, and to achieve a terminal relationship in the process of adopting thematic learning innovations in Ibtiaiyah Madrasa. Therefore, it was evident that the role of the change agent mentioned above can encourage the adoption of thematic learning innovations at Madrasah Ibtidaiyah, South Tangerang. The seven active roles of the reformers are a simultaneous process to arrive at the success and sustainability of the application of thematic learning innovations. This is as explained by Rogers (2003) that an innovation reformer is an individual who influences clients' innovation-decisions in a direction deemed desirable by a change agency, meaning someone who influences others about the innovation decision process.

DISCUSSION

Based on the results of the research above, there is a diffusion process of thematic learning innovations at Madrasah Ibtidaiyah South Tangerang because thematic learning innovations are perceived to have a positive level of innovation as better learning compared to previous learning. Also,the process of spreading innovation using various communication channels, multistep flow models that consisting of mass media and interpersonal communication channels, in terms of the timing of innovation adoption, the rate of innovation adoption occurred from 2013 to 2019 and every year it continues to grow with a relatively increasing number of adopters, Besides the social system's role as an agent of change in Madrasah Ibtidaiyah Education Unit during the innovation adoption process.

Thematic learning is implemented as an an innovative product of a curriculum oriented toward achieving students' process and competence (Haji, 2015). Thematic learning innovations as integrated learning innovations are innovations in the form of ideas, practices or objects that are considered new for a particular social system (Rogers, 2003). The perception of thematic learning as an innovation in this study refers to the standard theory from Rogers (2003) which consists of relative advantage, compatibility, complexity, trialability, and observability. Furthermore, it was developed into a research instrument using a Likert scale of very agree, agree, neutral, disagree, and strongly disagree.

Relative advantage means thematic learning at Madrasah Ibtidaiyah (Islamic Elementary School) is neutral with the use of many costs, agrees as quality learning, is more fun, more challenging, more effective, and encourages the achievement of high-level abilities of students . Compatibility means that the teacher agrees that the thematic learning matches the expected character values, supports the achievement of positive character values, the use of thematic books is suitable for improving the quality of the implementation of learning. Trialability means agreeing to use thematic books more effectively, agreeing to be implemented creatively as needed, and disagreeing that thematic learning cannot be implemented without using thematic books. Meanwhile, thematic learning in elementary schools is perceived to have a low level of complexity, this means that thematic learning can be easily learned from various subject matter content, can combine various content in subject areas, can easily use teacher and student thematic books, and can be learned in a short time. Observability means that thematic learning is distinguished from field-based learning planning. It is neutral that it is difficult to observe differences between thematic learning activities with field-based learning activities, and admittedly assessing thematic learning outcomes can describe the authentic abilities of students.

Thus, thematic learning innovations are seen by teachers in South Tangerang is an innovation that has a high level of relative advantage, compatibility, trialability, and observability Also, teachers were easy to implement thematic learning. Therefore, the primary school social system in South Tangerang. Rogers (2003) asserts that these five qualitative attributes are important characteristics that can explain the speed of

acceptance of an innovation, especially for the attributes of relative advantage, and its compatibility.

As perceived by members of a social system, the relative advantage of an innovation is positively related to its rate of innovationby Rogers (2003). adoption (Generalization 6-1) means that if an innovation has many advantages and benefits, then it is perceived to be positively related to the rate of acceptance of the innovation. It is also agreed by (Sa'ud, 2013) that the level of relative advantage in innovation can accelerate the innovation adoption process. Based on the results of research by Ntemana & Olatokun (2012) also confirms that relative advantage has a positive influence on a social system to quickly adopt an innovation, as well as research results (Araújo Leal & Luiz Albertin, 2015) showing that relative advantage can encourage an accelerated increase in the number of adopters. innovation.

At the compatibility level, thematic learning innovations are perceived positively (with an average score of 4.00) which means that there are 95% (196 of 206 people) members of the social system of the Madrasah Ibtidaiyah Education Unit, South Tangerang, admitting that thematic learning innovations are innovations that are in accordance with character development efforts. students, and the need to improve the quality of learning implementation. Thematic learning matches the character of learning at Madrasah Ibtidaiyah, supports the achievement of positive character values as expected in quality learning. The thematic books are used to match the needs to improve the quality of learning implementation.. The integration of character into thematic learning is indeed in accordance with the holistic principle which is the advantage of thematic learning, and it is stated (Dianti, 2017) that character integration can be carried out in the learning process, and after the learning process takes place. Akbar (2017) suggests that thematic learning in elementary schools can be integrated with character education by implementing active learning. Chumdari et al., (2018) thematic learning can be effective in growing students' character if all the prepared devices are designed to foster students' character.The facts above that make thematic learning acceptable at Madrasah Ibtidaiyah because a level of adoption of innovation based on conformity with existing values in a social system, conformity with the experience of a social system and the needs of the adopters of an innovation will be easily accepted (Rogers, 2003, Dibra 2015). The importance of conformity of innovation with the values and norms of a social system is also stated by Syafaruddin, Asrul, Mesiono (2012) that the level of conformity of innovation with the needs of a social system can facilitate the acceptance of an innovation. Jwaifell & Gasaymeh (2020) also explained that the consistency of innovation in accordance with existing values and practices, past experience, and the needs of a particular social system can facilitate innovation adoption. Likewise Rogers (2003) generalization that the compatibility of an innovation, as perceived by members of a social system, is positively related to its rate of adoption (Generalization 6-2), so that with a positive level of conformity that has been perceived by the Madrasa social system Ibtidaiyah between values and norms with learning needs has been able to become a fast driver for the acceptance of thematic learning innovations at Madrasah Ibtidaiyah. Likewise, as described by Satori, Djam'an & Sa'ud (2017) that innovations that are not in accordance with the values or norms believed by the recipient will not be accepted as quickly as innovations that are in accordance with the existing values.

At the level of complexity, thematic learning innovations are perceived negatively (mean score 3.48) which means that 64% (132 out of 206 people) members of the social system of the South Tangerang Madrasah Ibtidaiyah Education Unit admit that thematic learning innovations as innovations are relatively not difficult to implement or relatively easy to learn especially with the use of teacher thematic books and thematic books as learning guides. This means that the level of complexity of thematic learning innovations is perceived negatively, which means that thematic learning innovations are learning innovations that are simplicity and means that they have a positive level of innovation attributes, so with this thematic learning innovations can be accepted at Madrasah

Ibtidiyah, which is perceived that thematic learning themes can integrate all the concept of subjects, can carry out thematic learning activities that can combine various content in the field of study, especially when thematic learning uses teacher and student thematic books it is stated that all teachers can use teacher and student thematic books so as to facilitate the implementation of thematic learning, and thematic learning can be learned. Prastowo (2014) explains that the key to easy thematic learning to learn lies in the function of language as an integrator. Sumantri (2016) states that language processing skills can be a tool to help implement thematic learning. Sundayana (2014) also explained that thematic learning is a content-based language teaching variant that involves integrated language skills so that it is easy to carry out an integrated learning process with a theme as the center of discussion of various subject content that has been combined. However, among these conveniences, there are indeed experiences from research results for several aspects of thematic learning that are perceived as difficult to apply, such as research results (Retnawati et al., 2017) which explains that the application of thematic learning is difficult to implement, especially in aspects of scientific application with problem based learning models, project based learning and implementation of assessment in each process.

Meanwhile, an innovation that is perceived to have a high level of difficulty in its use, it will be increasingly difficult to be accepted quickly;as confirmed by Rogers (2003) the complexity of an innovation, as perceived by members of a social system, is negatively related to its rate of adoption (Generalization 6-3). That the level of difficulty of innovation perceived by members of a social system is negatively related to the rate of speed of adoption of innovation. Likewise, Suciati (2015) emphasized that an innovation that is difficult to understand or implement by recipients will be slow in to spread. Thus, thematic learning is easy to learn and implement, especially with the use of teacher thematic books and student thematic books. Hinkemeyer (2015) also agrees that the difficulty level of implementing an innovation can slow down the spread of an innovation. However, the principle of complexity-simplicity continuum, will always exist in an innovation, and depends on the handling as suggested by She & Pickett (2005), namely scaffolding is needed to reduce the difficulty of an innovation, as well as the level of thematic learning innovation which is mostly perceived as easy and at the same time. Others are perceived as complex, meaning that most thematic learning innovations can be implemented, especially using teacher and student thematic books that can be used as guidelines for implementing thematic learning.At the triability level, thematic learning innovations are perceived (with an average score of 3.52), which means 90% (185 of 206 people) members of the social system of the Madrasah Ibtidaiyah Education Unit recognize thematic learning innovations as relatively effective learning carried out using teacher thematic books and books. Thematic and can be creatively developed according to learning needs. This means that thematic learning has a positive triability level with the effectiveness of using thematic books, and the implementation of learning that can be developed creatively as needed. This is in accordance with the characteristics of thematic learning as described by Sumantri (2016) as flexible learning that the learning process can be adapted to the environmental conditions where teachers and students interact in the learning process.

Meanwhile, Stošić & Stošić (2013) explain that the easier an innovation can be tried out, the faster it will spread. Likewise, the explanation of Kristiawan & et.al. (2018) a positive trial rate of innovation can facilitate the spread of an innovation. Likewise, Rogers (2003) emphasized the trialability of innovation, as perceived by the members of a social system, is positively related to its rate of adoption (Generalization 6-4), and that the triability of innovation as perceived by members of a system certain social factors can be positively related to the rate of innovation adoption rate.

At the level of observability, thematic learning innovations are perceived (with an average score of 3.78), which means that 81% (168 of 206 people) members of the social system of the Madrasah Ibtidaiyah Education Unit admit that it is a relatively observable, measurable, assessed and evaluated learning innovation. , the implementation and

learning outcomes are authentically integrated with the activities and can be distinguished from learning based on the field of study. Thematic learning innovation is stated as learning that can be distinguished from study-based learning from the planning aspect, it can be observed that the differences between thematic learning activities and study-based learning activities and the assessment of thematic learning outcomes can describe the authentic abilities of students. The authentic ability of students can be measured in the framework of assessment as learning, for learning and of learning (Wildan, 2017). Likewise, as explained by Razmawaty & Othman (2017) that the integration of the assessment process in learning activities can help students to achieve competent learning outcomes up to the level of higher order thinking skills.

Meanwhile, the level of observability of thematic learning that is perceived positively by members of the Madrasah Ibtidaiyah social system can be stated as evidence of acceptance of the Madrasah Ibtidaiyah social system for thematic learning innovations. Rogers (2003) emphasized that the idea of an innovation is easy to observe and communicate to others, it will be successfully accepted, while innovations that are difficult to observe and even describe to others will be challenging to accept. It is also described by Latiff et al. (2017) that an innovation whose results are easy to observe will be faster to be accepted, on the contrary, those that are difficult to observe will take longer to be accepted by a particular social system. Thus, Rogers (2003) generalized the observability of an innovation, as perceived by members of a social system, is positively related to its adoption rate (Generalization 6-5). Members of a social system can observe that the perceived innovation can be positively related to the rate of adoption of an innovation.Thus, the thematic learning innovation is perceived positively (with an average of 3.76) which means that 85% (176 of 206 people) of the members of the Madrasah Ibtidaiyah Education unit members admit that they have attributes of thematic learning innovation. Positive perceptions of the attributes of thematic learning innovations can encourage accelerating of the adoption process of thematic learning innovations. Adopting innovation in a social system either as an organization or an individual can take place in the innovation-decision process. Sustainability of innovation adoption in the innovation-decision process takes time, fast and it can be slow in deciding to adopt an innovation. With the findings of this study, the attributes of thematic learning innovations that are perceived positively by members of the social system of the Madrasah Ibtidaiyah education unit in South Tangerang can be a factor that determines the acceleration of the decision process for the adoption of thematic learning innovations, as explained by M. E. Rogers (2003) that the level of innovation attributes can be One of the factors that influence interest in an innovation in the innovation decision process. Likewise, what is described by (Sa'ud, 2013) that positive perceptions of the attributes of thematic learning innovations can affect the innovation decision process, especially for persuasion, which is a stage in which a person forms an attitude of liking an innovation, as emphasized by Wahyudin, (n.d.) that the process of Innovation decisions can be determined based on the level of the attributes of an innovation.

However, the effect of the level of innovation attributes requires effective communication channels for the innovation adoption decision process. Effective communication channels are described by Sa'ud (2013), namely the communication channels used are based on homophily and heterophily. The principle of homophily means communication to groups or individuals with the same perception of an innovation, while the principle of heterophily means the communication process of empathy towards different groups of people but requires information on an innovation. Therefore, an effective communication channel is needed to be used as a follow-up to the positive perception of the attribute level of thematic learning innovations so that the Madrasah Ibtidaiyah social system can decide to adopt thematic learning innovations. Besides the need for a positive level of innovation attributes to be able to influeninnovation-decisionecision process, it is also necessary to have the participation of the social system as an organization and an active role of change torder to maintain the sustainability of the

adoption of an innovation, because the level of positive innovation attributes cainfluence on the decision process. Innovation reaches the persuasion stage, meanwhile to arrive at the implementation stage it is necessary to use communication channels (Sugiarto, 2015). This means that if there is no particular communication channel, there is no participation of the social system as an organization and agent of change which conveys that thematic learning innovations as innovations that have a positive level of innovation attributes will of course not accelerate the decision process for the adoption of thematic learning innovations.

As an essential part of the innovation diffusion process, communication channels have the meaning of the process by which participants create and share information to reach a mutual understanding (M. E. Rogers, 2003). Related to this, Mihelich (2013) also agrees, as well as Alshmrany & Wilkinson, (2017) use the concept, as well as Sa'ud (2013) provides an explanation that communication in the diffusion of innovation means the process of certain individuals or groups exchanging information between one another. others to understand each other about an innovation.

An innovation contains the nature of uncertainty or uncertainty if it has not been communicated, so that the communication that exists between those who already understand about the innovation and groups of people who do not understand it will share information about the innovation so that the uncertain innovation will be clearer and understandable even. can come to a decision to implement an innovation (Li, 2012). Therefore, communication channels become an important part to be used in the innovation decision process. Communication channels become a tool to convey information from someone to others who do not know. The communication process between the two parties will affect the selection or use of the right channel to streamline the communication process (Sa'ud, 2013).

Satori and Saud (2017) explain that communication is an important part of the diffusion process of innovation to convey a new idea. In the process of conveying new ideas, it will involve new ideas as an innovation, in this case, is thematic learning, individuals or groups who have adopted an innovation or have experience about thematic learning innovations, individuals or groups who have not received innovation with individuals or groups who are already using Thematic.Final learning innovations involve a communication channel that connects two individuals or groups that aim to communicate thematic learning innovations.

The communication channels used to consist of mass and interpersonal communication channels. The mass communication channel is called Rogers (2003) as a channel that uses the hypodermic needle model, while the interpersonal communication channel uses the two-step flow model, which success is influenced by the level of homophility of one individual to another. Emphasized by Rogers (2003), followed by Sasaki (2018) as well as Kristiawan et al. (2018) that the diffusion model of innovation that occurs in South Tangerang is the hypodermic needle model and also the two-step flow model. This means that the diffusion process of thematic learning innovations in addition to the use of mass media to be accepted requires an opinion leader to be used as an effective step in the diffusion of thematic learning innovations.

Thus the data above confirms that the communication channels used in Madrasah Ibtidaiyah are diverse and confirms that the communication process for thematic learning innovations takes place spontaneously, centrally and/or divergently. Spontaneous communication means an unintentional exchange of information between change agents and the social system without formal events. Convergent communication means that the interaction process is carried out intentionally by a team of innovators in a formal event. Diffuse or divergent communication means that formal or informal change agents carry out the interaction process for the diffusion of innovation to a social system (Sa'ud, 2013).

The use of communication channels and the level of innovation in thematic learning can affect the innovation-decision process, as happened in Madrasah Ibtidaiyah based on the results of this study described above. In addition, in the innovation diffusion process,

the time dimension is a significantelement in the communication process which has an important role in the innovation-decision process, a person's sensitivity to innovation, and the speed of innovation adoption (Everett M. Rogers & Singhal, 2003). It is also explained by Sa'ud (2013) that in the innovation decision process, the time dimension is used to explain the time span required at each stage of the innovation decision, starting from knowledge, interest, decision, implementation and up to the confirmation stage. Likewise, the aspect of a person's sensitivity to innovation has a different time sequence, not everyone in a social system accepts innovation simultaneously. This gives rise to the classification of people who adopt innovations based on their sensitivity to innovation as grouped by Rogers (Bakkabulindi, 2014) which consists of groups of innovators, early adopters, early majority, late majority, and laggards. This group is also mentioned by (Rusdiana, 2014) which consists of innovators, beginners, early majority, majority, and late. The time dimension also has a role in determining the speed with which innovation is accepted. Hinkemeyer (2015) describes the speed in question as a relative speed measured by the length of time it takes to reach a certain percentage of the time people accept an innovation. Therefore, c an empirical study of the time rate of innovation adoption becomes an important part of the innovation diffusion process. The time component is the third element in the diffusion process of innovation. Rogers (2003) explains that the time aspect in the thematic learning innovation diffusion process is an important aspect, as well as what Suyantiningsih (2010) admits as well as Warford (2010) agrees. The time dimension in the innovation diffusion process involves the innovation-decision process from the individual's initial knowledge to acceptance or rejection of the innovation, acceptance of innovation by a group or individual can be the fast or the slowest recipient compared to other social groups, and the last is the rate of speed of innovation. Innovation accepted by a group is determined by the number of members who accept the innovation in a certain period.

Thematic learning innovation in South Tangerang primary schools refers to the five main stages of the innovation-decision process proposed by Rogers (2003) which consists of the stages of knowledge, persuasion, decision, implementation, and confirmation, it can be stated that in each period there is acceptance of thematic learning innovations but there is also resistance to them. Thematic learning innovations, meanwhile, based on the number of adopters of thematic learning innovations in each period, the most adoption of thematic learning innovations in primary schools was in 2016. When viewed from the speed of innovation accepted in South Tangerang elementary schools based on the categories grouped by Rogers (2003), O'Neal (1998) also agreed with Sasaki (2018), which consists of groups of innovators, early adopters, early majority, late majority, and laggard, but in this study, it cannot be stated as a specific group because there is no comparison with groups at other primary schools.

The social system is a set of interrelated units engaged in joint problem-solving to fulfill a common goal (Rogers, 2003). This is explained by Alshmrany and Wilkinson (2018) that social groups can consist of individuals, informal groups, organizations, and members of a particular social or family system. A social system in the diffusion of innovation consists of a social structure, norm system, leader opinion, and change agent and the consequences of innovation for a social system (Dibra, 2015). An agent of change is someone who influences the innovation-decision process as desired in the process of diffusion of innovation, thus an agent of change in thematic learning innovation is an individual who tries to influence others to accept thematic learning innovations. As a change agent usually uses opinion leaders to diffuse thematic learning innovations, a change agent who has the ability of an opinion leader is one who has technical skills, has social access, and a level of conformity with the norm system.

The active role of reforming agents in the aspect of developing a need for change is intended to make them feel the need to apply thematic learning, to make them aware of the need to apply thematic learning, to show them to carry out thematic learning, and to convince them to use thematic learning in Madrasah Ibtidaiyah. The active role of the next

reformer agent is to establish an information exchange relationship, namely activities to keep exchanging information about thematic learning, trustworthy in the application of thematic learning, competent in the application of thematic learning, inspiring in the application of thematic learning, and empathizing with the needs in the application of thematic learning in Ibtidaiyah Madrasa. The active role of reformer agents in order to diagnose problems in the diffusion process of thematic learning innovations which consists of activities to help diagnose learning problems that match the needs of thematic learning applications, help determine thematic learning as a solution to the learning problems being faced, and conclude that thematic learning needed in Madrasah Ibtidaiyah. The active role of reformer agents regarding creatingan intent to change in the diffusion process of thematic learning innovations which consists of activities to make changes in learning activities into thematic learning, and to make intensive thematic learning activities at Madrasah Ibtidayiyah. The active role of the reforming agent in to translate an intent into action in the diffusion process of thematic learning innovations which consists of the role of encouraging students to change learning into thematic learning, motivating them to intensively apply thematic learning, communicating intensively with you in the application of thematic learning, and give you intensive examples of the application of thematic learning at Madarsah Ibtidaiyah. The active role of reformer agents is also to stabilize adoption and prevent discontinuance in the diffusion process of thematic learning innovations which consist of activities to make sure in adopting thematic learning, strengthen to adopt thematic learning, help adopt thematic learning, and prevent to stop adopting thematic learning in Madrasah Ibtidaiyah. . The active role of reformer agents in the to achieve a terminal relationship in the diffusion process of thematic learning innovations consists of making independent activities in implementing thematic learning, helping to develop thematic learning, and encouraging updating the application of thematic learning in Madrasah Ibtidaiyah.

The active role of reformer agents in the process of adopting thematic learning innovations is a factor that determines the success of the teamtic learning innovation diffusion process in Madrasah Ibtdiaiyah and this role is mostly carried out by Madrasah heads, this means that leadership at Madrasah Ibtidaiyah supports the application of thematic learning innovations and means having leadership characteristics as described by Rogers (2003) consist of leadership characters, opinion leadership and change agent characters, so they are active, not apathetic to thematic learning innovations in the adoption of thematic learning innovations. Organizational leadership with a change agent character in the adoption of an innovation is very much needed, especially to become the first group of adopters. The adoption of thematic learning innovations by members in the social system, in this case, Madrasah Ibtidaiyah, requires the role of chage agent. Change agents are also known as linkers, between innovators and clients or potential adopters of an innovation. The success factor of the change agent in the diffusion of innovation as a linker is determined by three factors: effort, orientation, and need. On the business factor, change agents can succeed if they try hard to diffuse innovation. On the business factor, change agents can succeed if they try hard to diffuse an innovation. The level of effort in running its business as generalized by (M. E. Rogers, 2003) that the success of change agents in diffusing innovation is related to the effort in contacting clients (Generalization 9-1). The orientation factor means that the change agent has a client orientation rather than an agency orientation in diffusing an innovation (Generalization 9-2). On the requirement factor, that the change agent can successfully diffuse an invasion if what is diffused is in accordance with the client's needs or compatible with the client's needs (Generalization 9-3). Even the success of a change agent in diffusing an innovation is related to the level of empathy for the client (Generalization 9-4).

Another factor in the success of change agents in the diffusion of innovation is homophily, which means equality of socioeconomic status with clients, social participation with clients, higher formal education between clients, cosmopolites between clients, and having positive credibility in the eyes of clients (Generalization 9.5-9.10). The role of

change agents can also be successful by optimizing opinion leaders' use and increasing clients' ability to evaluate an innovation (Generalization 9-11 - 9-12). In addition, the leadership characteristic that can contribute to adopting innovation is the lead character.. This character is described by Rogers (2003) as having a positive attitude towards change, and towards new or innovative things. An organization with this leadership character can easily adopt an innovation. In the context of the diffusion of thematic learning innovations, Madrasah Principals who have leadership characteristics will of course have a positive attitude towards change or an innovation. If at the Madrasah head level has a positive attitude towards an innovation, of course, the innovation decision process can be carried out in an authoritative manner asking members of the social system in this case the teacher to implement thematic learning innovations, moreover thematic learning is diffused by the institution that is the center for managing the quality of education in Indonesia. Madrasah Ibtidaiyah.

Another leadership character related to leadership is opinion leadership. This character is described by Rogers (2003), namely the degree to which an individual can influence other people's attitudes or behavior openly informally in a manner desired by the relative frequency. This informal leadership is not a function of the individual's formal position or status in the system. Opinion leadership is acquired and managed by individuals with technical competence, social accessibility, and conformity to system norms. When social systems are change-oriented, opinion leaders are more innovative; but when system norms resist change, the behavior of leaders also reflects these norms. Through conformity to system norms, opinion leaders serve as models for the innovation behavior of their followers. The opinion leader thus exemplifies and expresses the structure of the system. Opinion leadership character can be owned by individuals who do not have social status as a leader, or someone with leader status can also own it.. If this opinion is owned and characterizes the leadership of an organization, of course, it has a positive attitude towards an innovation. In the adoption of thematic learning innovations, this character can be useful for categorizing a Madarah Ibtidaiyah as being the first adopter in a thematic learning innovation or being the last adopter.

CONCLUSION

This study concludes that the diffusion of thematic learning innovations in South Tangerang elementary schools is stated to have taken place continuously in the 2013-2019 period. The continuity of these thematic learning innovations is supported by evidence that thematic learning is an innovation with a positive level of innovation attributes for relative advantage, compatibility, trialability, and observability, as well as a low level of complexity. The communication channels section develops the hypodermic needle model which prioritizes the power of influence from the mass media, namely the use of mass communication media in the form of training and workshops as well as developing the two-step flow model which prioritizes power interpersonal channels in the diffusion process of thematic learning innovations that arise from figus attacks. Headmaster. In the part of the period, the thematic learning innovation diffusion process takes place in the innovation-decision process, which every period from 2013-2019 continues to decide to accept thematic learning innovations;meanwhile, from the number who adopt thematic learning innovations in each period from 2013-2019 it continues. Increased, and the peak occurred in 2016.

Recommendations

In the part of the social system as a group for adopting thematic learning innovations, there is an agent of change that emerges from the primary school social group itself such as the principal, peers, supervisors, and others continuously showing their role to

continue which continuously influence other social members in the application of thematic learning.

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PROFILE

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