The Level of Mass Media Usage in Cattle Extension Communication Network

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ABSTRACT
This research aim were: (1) to recognize the communication behavior of cattle farmers in searching information, (2) to analyze the level of farmer participation in cattle farmer communication network, (3) to explore the relationship between individual characteristics, (4) to explore interpersonal communication behavior and mass media utilization in cattle farmer communication network. The results showed that: (1) there was a significant difference of communication behavior between the advanced cattle farmers group and the less advanced one. This result informed the distinction of mass media used by cattle farmers in searching information i.e. interpersonal communication relationship in receiving and diffusing information and impersonal communication (media communication) behavior, particularly from television, broadcast and newspapers. (2) There was a significant relationship between formal education characteristic and impersonal communication behavior (television and radio and newspaper). There were significant relationship between economic class and newspaper impact behavior, between mass media ownership and television impact behavior, between education level and mass media ownership with the information search behavior. Individual characteristics of advanced farmers group have negative correlation with the information distribution behavior. Advanced farmer group were characterized by: well educated, higher economic class, more variety of mass media ownership, have more capability to select information according to their needs, profit oriented, risk taker, cosmopolites, have a communication pattern and good relationship among cattle farmer group. All of those characteristics caused un-proper of information diffusion.

Key words: mass media usage, extension communication, cattle farmer

INTRODUCTION
This article deals with the cattle agribusiness extension activities, which were supposed to be a changing in communication structure. The communication pattern usually in the form of “oil droplets” (an effort in extension to diffuse innovation speedily and broadly) extension processes. The extension activity was scheduled from top down, or relying on the visiting and training (so call LAKU). LAKU is a dynamic pattern, integrate of top down and bottom up interest by interpersonal or group communication approach. The intensity of providing extension, the improvement of knowledge and the more experiences from “farmer as partner”, will create synergism between advance technology and local traditional technology application. Farmer communication pattern in cattle extension suppose to be fully dependently on interpersonal communication.

Puspadi research (2002) exposed that there were a changing in information requirement according to farming business phases (from less to more commercial). This research intended in changing of communications channel, and the model of extension communications. Furthermore, this research to support Slamet (1995) statement was farmers have changed clearly. Higher level of the farmer education, will be more progressive in farm business, better skill, and better in impersonal communication.

The objectives of this research were (1) to explore communication behavior of cattle farmers in pursuing information, (2) to analyze the relationship between individual characteristics of cattle farmer, interpersonal communication behavior and employing mass media, (3) to develop the communication extension model.

MATERIALS AND METHODS
The respondent consist of 125 cattle farmers come from two developed cattle farmers groups (in Gedangsari District Gunung kidul Regency Yogyakarta, and Polokarto District Sukohardjo Regency Central Java) and two less develop
cattle farmers groups (in Cisitu and Surade District Sukabumi Regency West Java). Data was analyzed descriptively, correlation test of biplot and discriminant function (canonical) analysis (Scheaffer et al., 1992).

RESULTS AND DISCUSSION

Figure 1, explained that in developing a farmer group, the behaviors of searching information, clarification of new information obtained, selective exposure of television and newspaper information were better compare to less developed farmer group. Individual characteristic of farmer from developed group (level of education, economic class and access to mass media) were also better the less developed one. Among the individual characteristics, there was a positive correlation between one characteristic to the other, with high variance.

Performance of farmer group member in Gedangsari (i.e. individual characteristic, behavior for looking for information, behavior for clarify new information, selective exposure of newspaper, television program, and radio broadcast) were mostly above the average of farmer sample. Performance of farmer group member in Polokarto tends to variety.

The behavior for looking for information, and the access to mass media were above the average of farmer sample. While farmer performance in Cisitu was lower. Farmers performance in Surade, although they left behind the farmer from Gedangsari, but their behavior in propagating information were relatively high. Analysis biplot in Figure 1 informed that 78.27% of variance can be explained by explanatory data. Interpersonal communication behavior of cattle farmer in propagating information has moderate correlation with behavior to select radio broadcast exposure. The farmer behavior in propagating information, were almost stagnant, either in cattle farmer group of Cisitu and also Surade. Scuttle angle (means distributed scattered in Figure 1) indicated that the value of behavior to select radio broadcast exposure and behavior of propagating the information were above the sample average, with low variance. Farmers in Surade, more intensive in disseminating information of cattle technology was compared to other farmer group. Level of radio utilizing and behavior to clarify information of advance cattle farmer group in Gedangsari were higher than farmer group in both Surade and Cisitu. Behavior of radio exploitation by cattle farmer group in Polokarto was below the value of sample average (include Gedangsari, Cisitu and Surade). While behavior of communications to disseminate information of farmer in Gedangsari were lower compared to sample averages. Figure 1, show that mostly (cattle owner) farmer were lower intensity in reading newspaper. It was concluded that reading newspaper was less related to cattle ownership.

Behavior of interpersonal communication in receiving cattle rearing information and behavior in disseminating information in Figure 1, explain that behavior of informal interpersonal communications of less advance farmer group is higher than the advance one. Farmer behavior in obtaining information has a strong correlation with behavior to clarify information or discuss it in the group and with behavior of television exposure. While behavior of interpersonal communication in searching information and clarify/discuss information of advance cattle farmer usually done with people from outside the country or the group. According to Rogers (2003), this behavior is using cosmopolitan channel.

The discriminate function coefficient (canonical) of 10 observation variables indicate the differences characteristic between advance farmers group and less advance farmer group. In advance group, there are positive correlation between high education (X1) to activity in searching the cattle rearing information (X2), and between level of economic class (X2) to behavior of selective television exposure (X6) and newspaper (X7). The discriminate function canonical be $Y = 0.617X_1 + 0.581X_4 + 0.502X_2 + 0.440X_6 + 0.372X_7$. This relationship explains that spreading information of technical cattle rearing required both “interpersonal” and “impersonal,” extension communications in order to “fulfill the farmer requirement of technical cattle rearing information”.

Above phenomenon indicates that there were behavior frictions from personal communications to impersonal communication or media communication. More advance of farmer group, will be wider in both television and newspaper media exposure.

While behavior of listening radio, less advance farmer group will be more intensive than the advance one. For most rural community, radio is a popular media for entertainment amusement and information sources about development news.
In recent year, there are many radio stations, operate by local government, private, NGO and also by college. According to Schramm (Depari and MacAndrews, 1998), almost all societies (rich or poor societies) in developing countries, such as Asia (including Indonesia), African and Latin America, have a radio as an information source. The difference is the quality of radio. Rich man has a set sophisticated stereo radio, while the poor has a small transistor radio. Now day “internet radio” becomes a popular media for public communication. Those difference communications behavior between advance farmer group and the less advanced group means that “there is a friction in exploiting level of mass media by cattle farmer in searching the information”. Especially friction of communication pattern, from interpersonal communications (in receiving and propagates information) to impersonal communications (mostly television and newspaper). Cattle farmer more interest in selective exposure such as news, entertainment and infotainment (sport, film/series-film). There is no media provide information needed by farmers, including information of cattle rearing technology. Higher level of mass media usage by farmer will increase farmer knowledge, curiosity and awareness. The research results also prove that there were significant relationships between: (1) formal education level with television and radio impact behavior, (2) formal education level with newspaper impact behavior, (3) economic class with newspaper impact behavior, (4) mass media ownership with television impact behavior, (5) education level and mass media ownership with behavior for searching information. In the advanced farmers group, individual characteristics have negative correlation with the information distribution behavior. The advanced farmer group characteristics were: well educated, higher economic class, more variety in mass media ownership, more capable to select information according to their needs, profit
oriented, risk taker, cosmopolites. Importantly, they have a common friendly communication pattern. Some characteristics caused the information distributed stagnantly. In globalization era, as supporting facilities, the role of mass media also for educating farmer, beside as entertainment amusement and information sources (Mulyana, 2005; McQuail, 2006, Jahi, 1993). Previously, mass media are exploited only for entertainment, then for both entertainment and news. Actually mass media also can be use as supporting facilities for education (such as agricultural extension), but it was not. Therefore, cattle farmer search information from other source, including interpersonal communication network. Those sources were: farmer organization, informal leader, and farm supplier agencies.

This relationship explains that spreading information of technical cattle rearing required both “interpersonal” and “impersonal,” extension communications in order to “fulfill the farmer requirement of technical cattle rearing information”. Above phenomenon indicates that there were behavior frictions from personal communications to impersonal communication or media communication. More advance of farmer group, will be wider in both television and newspaper media exposure. While behavior of listening radio, less advance farmer group will be more intensive than the advance one. For most rural community, radio is a popular media for entertainment amusement and information sources about development news. In recent year, there are many radio stations, operate by local government, private, NGO and also by college. According to Schramm (Depari and MacAndrews, 1998), almost all societies (rich or poor societies) in developing countries, such as Asia (including Indonesia), African and Latin America, have a radio as an information source. The difference is the quality of radio. Rich man has a set sophisticated stereo radio, while the poor has a small transistor radio. Now day “internet radio” becomes a popular media for public communication. Those difference communications behavior between advance farmer group and the less advanced group means that “there is a friction in exploiting level of mass media by cattle farmer in searching the information”. Especially friction of communication pattern, from interpersonal communications (in receiving and propagates information) to impersonal communications (mostly television and newspaper). Cattle farmer more interest in selective exposure such as news, entertainment and infotainment (sport, film/series-film). There is no media provide information needed by farmers, including information of cattle rearing technology. Higher level of mass media usage by farmer will increase farmer knowledge, curiosity and awareness. The research results also prove that there were significant relationships between: (1) formal education level with television and radio impact behavior, (2) formal education level with newspaper impact behavior, (3) economic class with newspaper impact behavior, (4) mass media ownership with television impact behavior, (5) education level and mass media ownership with behavior for searching information. In the advanced farmers group, individual characteristics have negative correlation with the information distribution behavior. The advanced farmer group characteristics were: well educated, higher economic class, more variety in mass media ownership, more capable to select information according to their needs, profit oriented, risk taker, cosmopolites. Importantly, they have a common friendly communication pattern. Some characteristics caused the information distributed stagnantly. In globalization era, as supporting facilities, the role of mass media also for educating farmer, beside as entertainment amusement and information sources (Mulyana, 2005; McQuail, 2006, Jahi, 1993). Previously, mass media are exploited only for entertainment, then for both entertainment and news. Actually mass media also can be use as supporting facilities for education (such as agricultural extension), but it was not. Therefore, cattle farmer search information from other source, including interpersonal communication network. Those sources were: farmer organization, informal leader, and farm supplier agencies.

To solve the problems of extension workers and operation cost, need to entangle local institution (social capital) in implementation of agricultural extension communications program. This particular program should be continued.

By integrating social capital and management of extension communications could more productive in national development as well as in rural area, to solve their problems. On the other side, farmer experience and communications skill, could support the dynamic communication process, individually as well as group. This situation created a model to facilitate mutual understanding of extension message (Schramm & Roberts 1974). Furtherly, Rogers
and Kincaid (1981) described as a convergence model of communication.

Sumardjo research (1999) concluded that to increase farmer ability, dialogue (dyadic) and convergent extension approaches are more effective than centralized/top down linear communications model.

Research results offered several suggestion for developing communication strategy in cattle farming extension: (i) farmer individual characteristics, (ii) messages distortion and unavailability of information (including marketing, price, appropriate technology needs, farmer capacity, and access to capital), (iii) bureaucratic involved (such as: social institution as well as extension, technology producer and capital accessibility), (iv) involving opinion leader and others pertinent information source in delivering information. Extension communication techniques to be considered are (i) extension campaign continuously, (ii) utilizing traditional media and social learning through mass media interactive and multi directions; increase communication group network through enhance cattle farmer institutions. (iii) Securing participation based on local social culture.

CONCLUSIONS

There was a significant distinction in the communication behavior between the advanced cattle farmers group and the less advanced group. This difference indicates the communication behavior of farmer in usage of mass media for searching the information. The least level was interpersonal communication for receiving and diffusing information. The advance level was through media communication, particularly television broadcast and newspapers. The communication behavior of two cattle farmers group members have changed from interpersonal communication to impersonal communication (through radio and television). However, the farmer reason in using of mass media (listening the radio or watching television) dominantly for explores news and entertainment. For technical information, farmer still rely on communication network. Thus to get mutual understanding of extension message, the relevant communications models are dyadic and convergence.

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